



FACULTAD DE CIENCIAS HUMANAS Y SOCIALES

**Experiential Metaphysics:
Reality, Language and Mind as explored through Galen Strawson
and Noam Chomsky**

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Introduction:

This work presented here has one primary aim, and this is to provide an answer to W.V.O. Quine's question, 'what is there'? Though the answer he gives is straightforward ('everything'), the time has come to ask this question anew, but with a slightly different emphasis – instead of focusing mostly on the topic of 'ontological commitment', the topic considered here will be that of experience or consciousness and language how they relate to the world. If consciousness is something ontologically distinct from the rest of the world (which it is not, or so it will be argued), how is it possible to interpret the world at all? Do words help clarify what things belong in the world absent human beings? To that end, two contemporary philosophers, Galen Strawson and Noam Chomsky will be discussed in relation to the question of 'what there is'.

In the works of Galen Strawson, the focus will be to see what it is that unites everything in the universe: is there a single substance - a fundamental monism - that connects everything from quarks to consciousness? Although numerous options are considered, Strawson argues that everything that exists is physical (material) and this includes 'experience' as the one physical phenomenon people can be sure they have. As Strawson's philosophy evolves, he goes from believing that there are two possible epistemic categories the 'non-experiential' (non-mental) and the 'experiential' (mental) to arguing that the most realistic and simplest hypothesis that exists is that there only exists experiential reality. Furthermore, he argues that there is no good reason to believe that reality has any non-experiential being or existence. This work then shifts to the topic of reference, and through Strawson's essay *Red and 'Red'*, it will be argued that reference to *colour words* (i.e. 'red', 'yellow', 'blue') plays no role in the *private experience* of seeing a colour. This negative role of private experience in relation to the use of words can be generalized to most types of mental states.

The next section focuses on the philosophy of Noam Chomsky. Although not always labeled as a philosopher, Chomsky has studied and contributed to this field, particularly in the 'analytic' branch of philosophy. Chomsky's 'epistemic-metaphysics' are not as clearly defined as Strawson's own 'realistic materialism', though by interpreting his work, something rather like Strawson's materialism can be extracted, though Chomsky prefers to call himself a more neutral term: 'methodological naturalism'. One difference between Strawson and Chomsky is arguably that the latter tends to argue in a slightly more forceful manner the way the mind interprets the world, thus

more time will be spent exploring Chomsky's view on the nature and tendencies of human mental capacities. What could be called Chomsky's metaphysics will be supplemented by Immanuel Kant and Charles Sanders Peirce in a manner that attempts to show why metaphysics does not find itself flourishing in contemporary philosophy. In this respect, alongside Chomsky, instead of speaking directly about the nature of the world - as metaphysics often aspires to do - when people speak about the 'manifest image' (the world as given in ordinary day-to-day life), the objects people encounter are crucially *mind-dependent* and hence also objects of epistemic consideration which precede metaphysical facts. After discussing naturalism and the way the mind shapes reality, the topic of reference will be picked up again. Contra Quine, Chomsky argues that neither words nor proper names refer (nor do they commit us to refer) to things or individuals, what refers to them are *people*, not words. By arguing that people refer, not words, a rich ontology can be developed based on people's common mental architecture. For Chomsky, one of the ways people make sense of the world around them is not through reference, but through a property of the mind called "psychic continuity", which enables objects to be recognized as they are under human cognitive lenses. While "psychic continuity" and other mental capacities are fundamental features people use to make sense of the world, it is currently not possible to find much relevant evidence for complex mental activities in current brain science. Nevertheless, it would be incoherent and even irrational to believe that the brain plays no role in consciousness, it obviously plays an enormous role. It would be useful to see what current neuroscience can tell people about how the brain works, even if it cannot yet explain conscious experience.

Accordingly, the last part of this thesis will focus on the study of the brain as seen from contemporary neuroscience. By exploring the view certain neuroscientists have about the brain, such as Adam Zeman, Gerard Edelman and Stanislas Dehaene, one can compare how the 'scientific image' diverges from the manifest image. This section gives further evidence supporting the view that the mind/brain creates reality out of worldly sense-experience and the seamless picture people have of ordinary life is but a necessarily anthropocentric way of viewing the world. This being so, it can be the case that new sciences can be more ambitious than is warranted by the evidence, and in this regard the final parts of this section will focus on the works of neuroscientist and philosopher Raymond Tallis, who argues that neuroscience, though tremendously useful is also quite limited to a certain range of phenomena that are not always directly connect to experienced consciousness. Since Tallis has real-life experience and credentials in the field of

neuroscience, his works are often cited throughout the entire thesis. In addition to his professional experience, Tallis is one of the few contemporary philosophers who recognizes the magnitude of the problem of consciousness and thus attempts to point out what makes human beings and consciousness special, he aims to do this, in part, by “making knowledge visible” an approach he calls ‘epistogony’, which may be able to hint in a way that advances metaphysics, which is why he is referenced frequently towards the conclusion.

In the concluding chapter, uniting Strawson and Chomsky’s philosophies (with some help from Tallis) leads one to the view that when answering Quine’s question of ‘what is there’? An alternative answer may be given – one that has a different formulation than the topic of ontological commitment - and this is that consciousness gives meaning to the world out of a set of possibilities, of which only a fraction gets ‘materialized’ into lived reality. These possibilities of unrealized meaning-potentials must have rather strong limits in terms of the structure they have, after all there are things in the world that cannot exist, and there must be thoughts that cannot be conceptualized due to cognitive limitations inherent in every species. These meaning potentials are possible because human beings share the same innate mental capacities that structure each world in a very similar manner, or so it will be suggested. If metaphysics wishes to flourish again it will need to be bold, and avoid *always* giving way to the sciences, for although science is quite likely human beings’ greatest intellectual achievement, the results garnered by science need to be challenged, especially when it purports to give dubious, dismissive or reductionist answers to some of the deepest and oldest questions people have about themselves. What people know about the world is very little, limited and subject to revision – knowledge of one’s immense ignorance is in order again. Through a renewed discussion in metaphysics in relation to consciousness and language, it may be possible to articulate this ignorance and contribute to the development of metaphysics in a manner that incorporates crucial epistemic factors.

Overview of Galen Strawson

Before delving into Galen Strawson's life and his philosophical development, a brief overview of the first section will help for orientation's sake. Galen Strawson was born in England, son to the famous analytic philosopher Peter Strawson. Initially, Galen Strawson was interested in politics but got diverted to philosophy instead. Strawson's PhD thesis is related to the topic of the impossibility of free will, which he later published (with modifications) as a book called *Freedom and Belief*. He has taught philosophy in England and is currently teaching in Austin, Texas. Strawson's conception of philosophy is somewhat unorthodox compared to other analytic philosophers in that although for Strawson a good philosophy is harmonious with current scientific knowledge, he maintains that it should not be subservient or overly attached to science. The main point of philosophy, for Strawson, is a kind of "dwelling in ideas" which seek to illuminate important topics concerning the nature of reality. He is mostly interested in topics related to metaphysics as opposed to epistemology. Although Strawson has published numerous books and many articles covering a vast array of topics, there is no doubt that his main contribution in contemporary philosophy is the development of a certain strand of panpsychism. However, for the purposes of this work, there are two more ideas that should be mentioned. One is Strawson's terminological distinction between the experiential (mental) and the non-experiential (non-mental). By using the terms 'experiential' and 'non-experiential' he avoids the incoherent distinction of 'mental' as opposed to 'physical' or the slippery distinction of the 'mental' as contrasted with the 'non-mental', which he uses in his early works but less so in his more recent books and articles. These terms also play an important role in the development of his panpsychism. The other idea worth highlighting is his version of materialism, which holds that everything which concretely exists is physical. When Strawson says that everything is physical he means *everything*, including consciousness, beliefs, emotions, history, objects – everything. It is worth pointing this out to distinguish his materialism from other versions which might exclude consciousness as a physical phenomenon.

Part I: The Metaphysics of Galen Strawson

But in point of fact, there is neither spirit nor matter, but a great deal of nonsense and fancies in the world. The tendency to gravity in the stone is precisely as inexplicable as is thinking in the human brain, and so on this score, we could also infer a spirit in the stone. Therefore to these disputants [between 'spiritualists' and 'materialists'] I would say: you think you know a dead matter, that is, one that is completely passive and devoid of properties, because you imagine you really understand everything that you are able to reduce to *mechanical* effect. But... you are unable to reduce them... If matter can fall to earth without you knowing why, so can it also think without you knowing why... [I]f your dead and purely passive *matter* can as heaviness gravitate, or as electricity attract, repel, and emit spark, so too as brain pulp can it think.

- Arthur Schopenhauer

If one has not felt a kind of vertigo of astonishment, when facing the thought, obligatory for all materialists, that consciousness is a wholly physical phenomenon in every respect, including every experiential respect – a sense of having been precipitated into a completely new confrontation with the utter strangeness of the physical... then one hasn't begun to be a thoughtful materialist. One hasn't got to the starting line.

- Galen Strawson

1.0 Introduction to Galen Strawson's life and works:

The British philosopher Galen Strawson was born in England in 1952 and is one of four siblings of the late and distinguished analytic philosopher Peter Strawson. Galen Strawson went to Dragon School at Oxford before obtaining a Scholarship to Winchester College where he studied for three years and then moved to the University of Cambridge. His first two years at Cambridge were focused on Islamic studies, and then spent a year studying Social and Political Science. He planned to continue working in these fields, after having learned more about them personally (as he even travelled to the Middle East one summer), but the plans for his career were radically altered when he started to study and practice philosophy in his fourth year at Cambridge. Wanting to pursue philosophy in-depth, and under the advice of Derek Parfait (also a famous and influential philosopher) he switched careers and finished his Bachelor of Philosophy in 1977. Strawson felt that once he finished his philosophy career in college, he still did not have sufficient knowledge with the works of many important classical figures such as John Locke and David Hume, and he still wanted to learn more about moral philosophy generally. Around this time, Strawson got married, had a daughter and moved to Paris.

Strawson attended L'École Normale Supérieure as an auditor as well as a French government scholar. The university was offering courses in philosophy by the famous 'father of deconstruction' Jacques Derrida¹, a philosopher whose intellectual tradition and style was not what Strawson was interested in, which would turn out to be analytic philosophy. After having failed to learn much from Derrida, Strawson returned to England in 1978 where he took a job as an editorial assistant for the prestigious *Times Literary Magazine*. At the same time in which Strawson was writing book reviews and giving temporary college lectures, he was also working on his thesis dissertation on the topic of free will. A large portion of his doctoral dissertation would later be incorporated in Strawson's first book, which was published when he was thirty-four, called *Freedom and Belief*. Strawson would remain in England for many years, though he accepted a job

¹ Derrida belongs to a French intellectual movement that spread in France during the 1960's and the 1970's, which is called 'postmodernism', and is often at odds with the kind of questions that Strawson is interested in, not only in terms of substance, but also in terms of style. 'Postmodernism' in general has little interest in looking at the sciences for an understanding of the natural world, and often uses non-scientific means, like literary analysis, to try and interpret the world. Postmodernism falls under the umbrella of 'continental philosophy', which is a much broader field that includes other philosophical traditions such as existentialism, hermeneutics, critical theory and phenomenology, to mention but a few of the sub-fields within this tradition.

as visiting professor at various universities including New York University, Rutgers, as well as the Massachusetts Institute of Technology². However, in 2012 he joined the faculty at the University of Texas at Austin, where he became Chair in the philosophy department, and currently works.

Strawson's professional interests in philosophy are quite broad and include subjects as varied as the notion of self, causation, phenomenology, metaphysics, philosophy of mind, neo-behaviorism and most notably a materialist exposition of panpsychism, among other topics. In chronological order, after Strawson published *Freedom and Belief*, he wrote a book on Hume and the problem of causation called *The Secret Connexion*, followed by *Mental Reality*, *Consciousness and Its Place in Nature: Does Physicalism Entail Panpsychism?*, *Real Materialism and Other Essays*, *Selves: An Essay in Revisionary Metaphysics*, and *Things That Bother Me* as well as writing a few books that deal with specific topics concerning classical philosophers, in particular some of the ideas of David Hume in relation to identity and causality, and another book on John Locke and identity. This list is by no means exhaustive and does not deal with the plethora of essays Strawson has published in numerous journals and magazines, nor does this list mention the times he has edited works by other philosophers. In many respects, Strawson has remained quite consistent in his overall philosophical orientation: he does not believe that free will is possible and has always considered himself to be a physicalist or a materialist (these terms can be used interchangeably), which is the view that everything in the universe is made of one fundamental stuff, namely physical stuff or matter. This is not to say that Strawson has never changed his mind about numerous topics, he has. Before reaching his panpsychist conclusions, Strawson believed that although there is one fundamental thing (or stuff) in the universe, nature has essentially two broad aspects that characterize it: on the one hand, there is the non-mental, or, even more concisely stated, 'non-experiential' being or existence, and then there is the mental, or experiential being. However, sometime after he finished working on *Mental Reality*, in which he already considered the idea that non-experiential being might not exist, Strawson explicitly became a panpsychist and has continued to develop his theories based on the belief that panpsychism is essentially correct and thus non-experiential being may not exist and is unnecessary to postulate.

² See (Strawson, Galen. 2008: 9-11) for more detail on Strawson's life.

It would be helpful then, before delving in detail into Strawson's metaphysics, to give a brief sketch of some of his philosophical positions in order to get a more well-rounded idea of his overall thought. Once this overview is given, an evolution of his metaphysical positions will be explored, and by the end of this process, many ways of conceiving the nature of reality will be explored, at least in part, and perhaps one of these views is compatible with the way other people think about the world around them. As mentioned before, Strawson does not believe human beings have 'ultimate moral responsibility' for the actions they take because (and simplifying a lengthy argument) one cannot be responsible for being the way someone is. He thinks that the only tenable position for a defense of free will is that of 'compatibilism', which is the view that determinism³ and free will do not contradict or negate each other – he does not think that free will is possible, even if one accepts a form of compatibilism. Another position discussed by Strawson can be found in his book *Selves: An Essay in Revisionary Metaphysics*, which is based on the topic of the 'self'. Contrary to what common-sense may indicate, Strawson explores a view that suggests that the minimum requirements for a definition of a self is the concept of 'single-as-subject-as-mental'⁴. This hyphenated word is not for the sake of creating complex concepts, it is a phenomenological description of what a 'self' is: it is a phenomenon that lasts a small portion of time that is constantly 'renewing' itself and can be described from a first-person perspective (the 'I' in 'I am this person', etc.). Thus, not only is a person different one day to the next, but a person's 'self' is different every hour, every minute, and even more surprisingly in even less time, going 'down' to fractions of a second. Another contribution made by Strawson concerning the problem of the 'self' has to do with his distinction between 'diachronic' and 'episodic' modes of being. The former, 'diachronic', is probably the most commonly held view or perception most people have, which is that there is a continued presence of self – that lasts a long time - which is told in a narrative format meaning that life is told and lived like a story. The latter – namely the 'episodic' conception of self – is one in which a person does not have a continued sense in which it is the same person living from one moment to the next. Strawson considers himself an 'episodic' person⁵, as he feels no continued sense of self between different moments of his life, though he still recognizes past events and has

³ 'Determinism' is the view that every event in nature is preceded by a physical process, and this is not compatible with freedom of the will, which suggests a break from causal constraints that allow for freedom.

⁴ See (Strawson, 2009: 163-168) for an elucidation of his main points on this topic.

⁵ Strawson, G. *Real Materialism and other essays*. 2008 p.191.

no issue of fragmented memory or any type of psychological problem. There are, of course, many other essays and positions that are held, argued and defended by Strawson, but in terms of a general overview of the 'big issues' in philosophy of mind and metaphysics, these ones suffice as a broad sketch of his thought.

1.1: Strawson's Conception of Philosophy

An important characteristic of Galen Strawson's school of philosophy (or the tradition he is associated with) which is called 'analytic philosophy' is that it seeks to be at least harmonious with the natural sciences, though not necessarily subservient to it. The somewhat artificial 'split'⁶ of philosophy in the early 20th century marked by figures such as Wittgenstein, Russell and Carnap on the analytic side, and Heidegger, Husserl and Bergson on the continental side, has made it difficult to summarize or pinpoint important works in the wider field of philosophy after the mid-twentieth century. The combination of different schools of philosophy, along with a marked increase in technological sophistication of the 20th century, as well as the remarkable theoretical advances and predictive capabilities made by physics⁷ has caused philosophy to be misunderstood and sometimes vilified by important figures in contemporary science. Thus, one finds an infamous statement made by Stephen Hawking and Leonard Mlodinow in *The Grand Design*, that "Philosophy is dead,"⁸ and such comments are not uncommon. Other important scientists, such as the physicist and Nobel laureate Steven Weinberg have also spoken about the futility of the philosophical enterprise,⁹ and the physicist and science educator Lawrence Krauss has also been critical of philosophy (even if Krauss later apologized for his remarks¹⁰). All these opinions rest

⁶ For more discussion on this divide in philosophy see (C.G Prado ed. 2003) and (Chase & Reynolds: 2011, Acumen). Simon Critchley states that: "...the current divisions in the study of philosophy are a consequence of certain more or less inadequate professional self-descriptions. Both Continental and analytic philosophy are, to a great extent, sectarian self-descriptions that are a consequence of the professionalization of the discipline, a process that has led to the weakening of philosophy's critical function and its emancipatory intent, and to its progressive marginalization in the life of culture." (Critchley, 2001: 126)

⁷ One can point to, for example, the recent discovery of 'gravitational waves', or prior to that, the confirmation of the Higgs boson, as examples of the remarkable progress of physics, which require little or no traditional philosophy, for its own advancement in its respective field.

⁸ (Hawking & Mlodinow, 2010: 5)

⁹ Weinberg takes his criticism of philosophy much further than Stephen Hawking, and in an important medium for communication, the popular science book, *Dreams of a Final Theory* (1993) includes an entire chapter titled *Against Philosophy* in which he says "... I know of no one who has participated actively in the advance of physics in the postwar period whose research has been significantly helped by the work of philosophers." (p.168. Location 2470-4892). Weinberg proceeds to talk about the history and development of physics, and mostly talks about philosophy of science, through the works of Mach, Popper and Kuhn and engages in brief arguments pertaining to metaphysics and epistemology, though in all these areas, the research and arguments given do not warrant a dismissal of philosophy.

¹⁰ Krauss apologized about joking about the value of philosophy, but maintains, that "As a practicing physicist... most of the colleagues [and I] with whom I have discussed this matter, have found that philosophical speculations about physics and the nature of science are not particularly useful, and have had little or no impact upon progress in my field." See <https://www.scientificamerican.com/article/the-consolation-of-philos/> for more information concerning Krauss and his general opinion on this matter.

on a distorted view that see philosophy as a field of rather pointless speculation about questions that have no answers.

Galen Strawson would not agree with such a characterization of his field of expertise, and actually calls philosophy a science: “Philosophy is one of the great sciences of reality. It has the same goal as natural science. Both seek to give true account, or the best accounts possible, of how things are in reality.” (Strawson 2008:1) As a matter of fact, science and philosophy were not properly distinguished until the 19th century, with the word ‘scientist’ being coined by William Whewell as recently as 1833.¹¹ If both terms, ‘science’ and ‘philosophy’, used to be nearly identical, how do they differ in contemporary times? Strawson argues that “[p]hilosophy, unlike natural science, usually works at finding good ways of characterizing how things are without engaging in much empirical or a posteriori investigation of the world.” Unlike the sciences, which stick to empirical methods that are used within a framework of theoretical understanding, philosophy, is engaged in understanding the world rationally, using *a-priori* (or before the fact) arguments. “Many striking and unobvious facts about the nature of reality can be established a priori, facts about the structure of self-consciousness... or... of free will, the nature of intentional action... or the viability [of certain distinctions].” This conception of philosophy however, far from being a caricature of aimless thought as characterized by Hawking, Weinberg and others, is quite important. As Strawson puts the matter “[t]hat some matters of fact are a priori (an infinite number) doesn’t mean that they’re not real matters of fact. They’re as much facts about reality as the fact that the sun shines.” In fact, it can be argued that because of the complexity of trying to understand and pinpoint which facts are a-priori, it can be as difficult – if not more so- to do good philosophy as it is to do good science, because almost anything that could be pointed to as counting for evidence for some philosophical perspective can be argued against, which is not *as* common in the ‘hard sciences’, but this does not make this topic any less important. Without knowing what aspects or features the mind uses to understand the world, it would make little sense to say that reality has been understood, as mental reality is at least as important as the reality of the world and the universe, as one can’t have one aspect without the other. There is no *intelligible* universe without mind¹².

¹¹ <https://plato.stanford.edu/entries/whewell/>

¹² It could be said that there was a universe *before* minds existed, but if there are no minds to give significance to the universe, then the universe can’t be said to matter in any respect. It is not readily intelligible to say that there can be mind without universe without falling into a form of mysticism. In any case, it becomes rather difficult to think about the universe as people understand it absent those beings who question and understand it.

Strawson adds that “[p]hilosophy, like physics, has its own distinctive domain, but it isn’t isolated from natural science or empirical investigation. Good philosophy stays close to the science of its day and is continuous with it in certain respects.” (Strawson, 2008: 1) Some areas of philosophy overlap with science, such as metaphysics, logic and language and in these cases philosophy and science can help each other clear up confusions that cannot be solved in isolation. Other topics, like those pertaining to morality and aesthetics, are much more difficult to study from a naturalistic scientific perspective, because empirical experiments often presuppose what things like ‘beautiful’ or ‘the good’ mean, thus, in these areas, there is more room for philosophical speculation than in other more well-defined and often simpler areas of knowledge, which can be left to science.

Given that there are potentially limitless numbers of a-priori facts, they must be tampered with common sense. As Strawson puts it “[c]ommon sense is fundamental in philosophy, but it doesn’t follow that views taken to be part of common sense outside philosophy must prevail within it.” In other words, philosophy, like the natural sciences, has its own way of characterizing the world, which differs in some respects from people’s ordinary view of the world. “There’s no more reason to think that this [common-sense alone] is a condition on good philosophy than it is on good science, which is constantly overturning common-sense views of the world.” On one hand, common-sense is needed to avoid conceptual confusions and careless mistakes, on the other hand, common-sense can be an impediment to discovery and it is often put on its head and ceases to be common sense. In these latter cases ‘common-sense’ must be thought about critically: “It’s something one uses – a way of approaching things – and it’s typically common sense, exercised within philosophy or science that leads to the abandonment of opinions held to be part of common-sense outside philosophy – such as the idea that colour-as-we-experience it is an objective property of objects.” This tension of knowing how and when to apply common sense in philosophy can often result in overthrowing previous conceptions of ‘common sense’ and this could also be a temptation that leads to bad philosophy, or a philosophy that makes no progress¹³ on current issues within the field. Citing Descartes, Strawson notes that “when it comes to speculative matters, the

¹³ As has often been the case in metaphysics specifically through its long history. Susan Haack articulates this clearly when she says that “...metaphysics is a legitimate enterprise... Granted, it has all too often entangled itself in unanswerable questions. But what makes these questions unanswerable is that they rest on false presuppositions; and the way to resolve *this* problem, obviously, is not to abandon metaphysics, but to do *better* metaphysics—specifically, to trace our steps back until we identify those false assumptions, and then start again without them.” (Haack, Susan. 2016: *Reintegrating Philosophy*. Chapter 2)

scholar will take pride” in views that are far removed from every-day common sense, because, as Descartes puts it “he will have had to use so much more skill and ingenuity in trying to render them plausible.” Given that it is difficult to pinpoint exactly how common-sense should proceed in philosophy, Strawson suggests that “[s]ometimes its job is to keep thinking in track when it has started out from strange and counterintuitive premises, or when it is exploring strange possibilities...” (Strawson, 2008: 2)

So much for a-priori rationality and common sense, what else does Strawson think is the role of philosophy? He says that “[t]he fundamental philosophical activity, I think, is a kind of open, investigative dwelling on ideas.” In this respect, many areas in philosophy, unlike physics, for example, does not require much by the way of technical knowledge. Nor does this imply that philosophy is mere thinking, for the sake of it¹⁴. There is a place for good arguments in philosophy, but this should not be its primary concern as “[t]ight argument can be very fine, but it constantly degrades the quality of philosophical debate, scholasticizing it and pushing it into unimportant minutiae and fantasy.” The way to proceed then, is to delve into ideas about the nature of the world in relation to thought and try to clear up areas which were previously obscured (or not thought about) in a proper manner. It is “at its heart an essentially looser manner of redescribing things, putting them in other ways, spreading them out descriptively [and] telling stories that articulate and animate them.” (Strawson, 2008: 3) Although Strawson writes about many topics, the focus of ‘this work will be metaphysics and how it relates to the human mind as well as the role that language plays in people’s efforts to try and understand the world.

¹⁴ At least some of the current bad image faced by philosophy can be attributed to an increase of bureaucracy as well as an increase in pressure by publishers and universities for professors and students to publish at the expense of good quality work. Haack points out: “In an environment like this, an environment of perverse incentives that reward, not the truly serious, but the clever, the quick-witted, the flashy, the skillful self-promoter, and the well-connected, it’s no wonder that the very virtues that good intellectual work, and perhaps especially good philosophical work, requires—patience, intellectual honesty, realism, courage, humility, independent judgment, etc.—are rapidly eroding.” As a consequence of these actions and intellectual trends, “philosophy has become... out of touch with its own history...[it is now] hyper-specialized... fragmented into cliques, niches... dominated by intellectual... fashions: “feminist” ... “formal” everything, the enduring Kripke-cult, the recurrent outbreaks of galloping Gettieritis, the vagueness boom, the virtue epistemology bandwagon, the social epistemology blob”, Given all these compounding factors, analytic philosophy appears to be “pretty close to intellectual exhaustion” (Haack, Susan. *Free Inquiry* vol 37 issue 6. pp.40-41). For a critique of certain trend in ‘naturalization’ of philosophy, see ‘Other ‘forms’ of Naturalism’, in Chomsky’s section, below.

2.0 The Fundamental Distinction

Instead of speaking about the “mind-body” problem, it will be useful to employ a different terminological distinction that will make it easier to speak about the mental and the non-mental ‘physical’ in contemporary philosophy. Strawson will employ the word ‘experience’ for conscious qualitative mental activity¹⁵ of and will use the term ‘non-experiential’ to designate everything else which is usually thought of as being ‘physical’ or containing no mental content or conscious activity. Using this distinction, one can see a wide and vast array of experiences that signal a complex and very sophisticated mental life, which includes such easily overlooked things such as ‘understanding-experience’ or things as wide as the experience of seeing the stars in the night sky, or something trivial such as experiencing the sun touching one’s skin. Everything that is *not* experience in this manner, would be termed ‘non-experiential’. The non-experiential would include things such as ordinary objects like sidewalks, trees, benches, cars as well as all the processes in the brain which are not part of conscious experience. In a simple and straight-forward manner, there is far more non-experiential stuff in the universe, than there is experiential stuff, though the non-experiential is by no means less complex or sophisticated than experience. Ordinary physical objects, dispositions to certain behaviors and beliefs are all extremely complex phenomena that are non-experiential, according to Strawson. Instead of a ‘mind-body’ problem, the issue is better stated as the ‘experiential- non-experiential problem’. Although to start the argument going this distinction is very important, it makes little sense to stress this distinction too strongly, as the transition from non-experience to experience could, in some cases¹⁶, be a gradual affair.

¹⁵ Strawson goes on to clarify “[The terms experiential phenomena and experience]... refer to the part or aspect of reality one has to do with when one considers experiences specifically and solely in respect of the experiential qualitative character they have for those who have them...” (Strawson, 2008: 21) It’s important to point out that so far as one is able to discern, many animals have experience too, such as dogs, monkeys, dolphins, etc. When it gets to the case of insects or fish or anything less complex, it’s hard to tell if these creatures have experience as there is no good scientific evidence that could decide this question at the moment.

¹⁶ The cases where experience is gradual are cases where a creature can be said to be conscious. There is a difference in the intensity of experience between a recently woken up creature and a fully alert creature. Having said this, it is likely that having experience as opposed to not having it, is an abrupt and sudden affair.

2.1: The Experiential and the Non-Experiential

The area of prime concern in this work, as mentioned above, is metaphysics, which deals with the broadest questions in human existence, or as Strawson says: “They say that the name metaphysics is almost accidental, it was just the book by Aristotle that came after the book called ‘*Physics*’, so it doesn’t really have a meaning, but it’s not very difficult to say what it is, it’s just the attempt to study the most general characteristic of what is or may be and what must be”.¹⁷ As with almost every topic in philosophy, this definition given for ‘metaphysics’ can be debated or refined in many different ways, though for the purposes of discussing *Mental Reality* as well as Galen Strawson’s later work, it will suffice. When talking about the nature of the most general aspects of ‘what there is’, a crucial and arguably necessary starting point has to be the issue of consciousness. However, to avoid delving into yet another discussion in the never-ending debates concerning the nature and status of consciousness, Strawson makes a terminological change concerning things that are called ‘mental’ and things that are called ‘non-mental’. However, these words are also quite slippery and potentially confusing and even though they are used in *Mental Reality* quite often, Strawson also employs a clearer vocabulary: namely that which is ‘experiential’ for the mental, and that which is ‘non-experiential’ for the non-mental. Strawson’s use of the word ‘experiential’ is much broader than what may at first come to mind with the normal use of the word, which will be explained below.

In Strawson’s case, ‘experience’ is a broad concept and constitutes virtually anything that can be used to point out conscious mental awareness. His employment of the word ‘experience’ is, on one interpretation the single most useful contribution Strawson has made in philosophy (panpsychism aside), so it will need to be explained as clearly as possible. First, one must do away with the common conception and common usage as well as most connotations the word ‘experience’ usually has in ordinary life. Experience is usually taken to be something memorable, so if one finishes university, the common meaning of this terms is to think or say, that ‘the time spent at the

¹⁷ See PBS’s <https://www.closetotruth.com/series/metaphysics-vs-materialism#video-4141> for a general overview of Strawson’s conception of metaphysics. It’s worth noting that Strawson’s view are subject to dispute. In fact, metaphysics has changed its scope over the years, largely due to the discoveries made in the sciences. Things once considered metaphysical, no longer fit into a conception of the natural world, like the concept of soul or spirit as traditionally used. Even the topic of God, which was a tremendously important metaphysical topic in the Middle Ages, is considerably less lively today. Having mentioned this, ‘metaphysics’ in this portion of the work will focus on Strawson’s conception of it, which is clear enough.

university was an amazing experience'. Similarly, going skydiving or working many years at a specific job or training very hard in martial arts or in any sport is commonly associated with the word 'experience'. With Strawson, again, anything that involves explicit mental awareness - whether the focus of attention be big or small - can be called 'experience'. Trivial things like looking at a wall in the morning (or at any time) is an experience, but there is also the experience of seeing the color red, of walking on the sidewalk on a sunny day, there is the experience of listening to a person take a shower, or the experience of someone raising their eye-brows, one can also experience the taste of salt, sugar or vinegar and one can also experience the smell of smoke or the smell of rain, in short, everything that is normally thought of as having a mental 'what-its-like' qualitative feel is experience. Feeling sleepy, hungry, excited or seeing a gun, watching paint dry, touching a soft surface, thinking intensely (or not intensely) about a novel, sensing an itch on one's legs and closing and opening one's eyelids are all experiences. Experience need not stay in the present tense, for remembering events (of any kind) is also an experience. Being in a boring event and imagining one's day at work or thinking about how fast one should push the pedal in one's car or thinking that it is necessary to mow one's lawn tomorrow - or next week - is also an experience in this use of the word. Experience thus defined does not stop at the human level, for there is dog experience, horse experience, whale experience, mockingbird experience, and so on¹⁸. There is even something that Strawson calls "understanding-experience", which is a simple concept that can be easily overlooked precisely because it is something so familiar. As he puts it: "To talk about understanding-experience... is not to postulate anything suspect or mysterious in the world.... The point is simply this: there is in the normal case something it is like, experientially, to understand a sentence, spoken or read." (2010, 6-7). It's also important to keep in mind, that understanding-experience as defined, is not a type of process "[c]ertainly understanding is not something one does intentionally", in fact, "it is something that just happens" (Strawson, 2010: 7). Reading this sentence at this moment is a perfect example of what understanding-experience is. Listening to a friend tell a story about how her day went at work is a simple act of understanding experience and is an occurrence that happens automatically.

¹⁸ The case of plants is perhaps even more obscure than the case of instincts, and people's intuitions about plants may differ from person to person. It appears very doubtful that plants have experiential qualitative feels but there is currently no scientific evidence that could decide this question. As more research is done, it might be possible to find out if plants have any qualitative experience.

The second aspect in Strawson's philosophy of mind and metaphysics is the concept of the 'non-experiential'. It is important to get an initial idea of what the non-experiential is, in order to get the full picture of the whole metaphysical project as presented by Strawson. It will be useful to point out the instances in which Strawson talks about non-experiential phenomena in *Mental Reality* and try to elucidate and expand on it. Besides admitting that there are experiential phenomena, he states that "... on the other hand there are *dispositional, non-experiential* mental phenomena like beliefs and pro-attitudes." Strawson asks his readers to "Consider Louis, a representative human being. He may be in a dreamless sleep at time *t*, and possess no experiential properties at all, at *t*, while possessing hundreds of thousands of non-experiential, dispositional mental properties, such as the property of believing that life is extraordinary, or of being able to interpret chest X rays, or of preferring Busoni to Beethoven, or of being uneasy in the presence of horses." (Strawson, 2010: 14) And so on down the list, of all types of different beliefs, propensities (or dispositions) to act in a certain way in a vast range of specific and general situations. The list of non-experiential things in the world at any specific time vastly outweighs any experiential features of the world at any specific time, as it is simply not possible to focus on many things simultaneously.

There may remain some doubts as to what, exactly, is non-experiential reality, if anything, other than dispositional states or certain types of beliefs. Later in '*Mental Reality*' Strawson says that "Only experiential phenomena (including brain processes that can be, at least in part, identified with experiential phenomena) should be counted as mental phenomena. *Everything* else is merely physical, and ultimately [a] 'nonmental' [or nonexperiential] process. [One] may offer an analogy: plays are not possible without a great deal of activity behind the scenes, but none of this activity is, strictly speaking, part of the play." (Strawson, 2010: 152. Emphasis mine.) Based on this example, the non-experiential is simply whatever is *not* conscious (exclusively mental) and although there is a distinction here, Strawson adds a comment that is reminiscent of Charles Sanders Peirce's notion of "synechism", namely that instead of looking for sharp breaks in the natural order of things, people should try and find continuities in nature¹⁹. Strawson states that:

¹⁹Peirce states it the following manner: "The tendency to regard continuity, in the sense in which I shall define it, as an idea of prime importance in philosophy may conveniently be termed *synechism*... Logical analysis applied to mental phenomena shows that there is but one law of mind, namely, that ideas tend to spread continuously and to affect certain others which stand to them in a peculiar relation of affectability. In this spreading they lose intensity, and especially the power of affecting others, but gain generality and become welded with other ideas." (Buchler, 2012: 340)

“... it is indeed only a question of what we find natural, and our intuitions are not grounded on any precise criterion that makes a clear cut between the mental and the nonmental.” At this point in Strawson’s career, there was not a strong emphasis in his thought that the non-experiential being may not exist. His panpsychism would be fully stated in his essay *Realistic Monism*, though it is mentioned in his discussion of panpsychism in *Mental Reality*. Non-experiential reality then, is anything that does not have experiential reality, such as tables and chairs and water, statues, buildings, plastic and all such things that are taken to be intuitively, as having no mentality, or experience – this includes many parts of the brain. Again, it is best to think of mental and nonmental as experiential and non-experiential for the clarity’s sake.

To understand one of Strawson’s main contributions to the field of metaphysics, it is helpful to distinguish (in as much degree as possible) experiential features from non-experiential features when talking about all kinds of things or objects, whether these objects belong to the phenomenal world (relating to appearances) or the ‘manifest image’ as contrasted with the ‘scientific image’ as per Wilfrid Sellars’²⁰ distinction. The scientific image which belongs mostly to physics (though also chemistry and biology) and aims to be, in as much a degree as possible, a description of the mind-independent world. Beginning with the manifest image, the world of appearances, in which ordinary books and chairs, and television sets as well as people and cars and everything else that is perceived from a “naïve-realist” view, Strawson argues that all these everyday objects have an experiential character depending on how people interact with said object. So, when a person is looking at a chair, there is an experiential act, associated with watching any chair, a “what-its-like”²¹ to see a chair. In the case of objects all relevant human sensory faculties have a different capacity to be affected by any specific ordinary object. Thus, a chair can be heard if it falls, it can also be touched and be maneuvered into a specific location, a chair may have a particular smell (whether a wood or metal-related scent) and so on. All these aspects have an experiential character

²⁰ See Sellars’ *Philosophy and the Scientific Image of Man* (Sellars, Wilfrid. *Science, Perception and Reality*. Ridgeview Publishing. Company. 1963. pp.7-43.)

²¹ The concept of ‘what-its-likeness’, though potentially useful when working in philosophy of mind, is also a term that, curiously has an English specific locution. Although there are more or less similar phrases in other languages, none of them really manage to capture what ‘likeness’ means, which suggests an approximation and a range of sensations when thinking about a vast range of issues. Its significance can vary a great deal depending on the context it is used. So, for example, what-its-like to be in pain is very different from what-its-like to have a birthday part, or what-its-like to get an ‘A’ in an exam, which is markedly different from what-its-like to break the law and not feeling bad about it. For more discussion of the semantics of this term see Daniel Stoljar’s *The Semantics of What-its-likeness and the Nature of Consciousness* (2016) in the journal *Mind* (Vol.126. Issue 502).

that may well vary in terms of *specific* sensation from person to person, though the very fact that these sensations are experiential features simply highlights the universality of experientiality for sentient creatures, especially human beings. Granting that there are important distinctions between man-made objects like tables and chairs and objects that are *not* man made²², like trees and rocks, there is a clear sense in which, even if it is admitted that a great deal of objects – at least in part - cause experiential reactions, these objects themselves are not experiential. Rocks and trees have no experience *in* them (rocks and water do not perceive light, nor do they understand anything), though these ordinary objects provide experientiality for human beings. A different thing altogether is to say that these things are composed in some obscure way of experiential components. So, it could be the case that rocks and trees have some *kind* of experientiality, but this experience is not self-referential, that is, ordinary objects do not have reflective experience in any way. Later on, Strawson will provide an argument as to how it is possible to argue that experientiality is an intrinsic characteristic of everything, as he changed his mind concerning the reach of experience after *Mental Reality*. These ideas will be explored later in the essays *Realistic Monism* and *Panpsychism?* For present purposes, these objects are typically thought to have no experience whatsoever and thus are non-experiential. Furthermore, arguing that there is such a thing as ‘what-its-like’ to be a stone (or a tree, or a puddle of water) is not coherent, because there is nothing it’s like to be a stone. Using everyday intuition as a starting point and in accord with common sense it is assumed that ordinary objects are not self-experiential, nor are they attributed with any mental aspects. In this view, trees, rivers, stones, clouds and all other phenomena are potentially ‘natural kind’ things that do not contain experience either inwardly or independent on the way these objects interact with our minds.

Of course, there will always be the skeptical position that people cannot be completely certain of anything, including the objects currently under consideration, whether these objects are made by

²² Susan Haack’s metaphysical view, called Innocent Realism, elaborated in *The World According to Innocent Realism*, (see Haack, Susan, 2016: *Reintegrating Philosophy*. Chapter 2) makes a useful distinction between the brutally real and real-as-socially-constructed, which can help clarify how all naturally occurring phenomena can be categorized. The brutally real is independent of peoples conceptions of it, so scientific laws and other facts about the world do not depend on people’s beliefs about them, in so far as they are the way are, even if people did not exist. The-real-as-socially-constructed refers to all kinds of objects, ranging from ‘chairs’, ‘computers’ and ‘knives’ all the way to social constructed laws and legal institutions. The topic of experience, at least as it refers to consciousness can be considered to be brutally real. The real-as-socially constructed is closely related to beliefs, culture, context, interests as well as language.

people or whether they are natural objects. Under the assumption, and it is an assumption, non-experiential being would not exist in the manner that it does, were it not for human beings' conception of it, because non-experiential things would have nothing interpreting them to give them any meaning. The central argument is that the 'experiential' aspect of the mind, 'conscious awareness' as the neuro-scientist Gerald Edelman uses the word, will *perhaps* forever remain unexplainable by analysis and knowledge of non-experiential phenomena through the 'scientific method'. The idea that there is non-experiential reality will be challenged by Strawson when he develops his views on panpsychism in his latter works, but for the moment, and quoting from '*Mental Reality*', he says: "I believe that experience is not all there is to reality. I believe there is a physical world that involves the existence of space and of space-occupying entities that have nonexperiential properties." (Strawson, 2010: 105)

2.2: Agnostic Materialism

Having attempted to clear up the distinction between the experiential and the non-experiential, it is time to go into Strawson's metaphysical views in *Mental Reality*. Although experiential and non-experiential reality are extremely important features of the mind and of the world, it's important to know what is being talked about when we talk about the world. As a preliminary remark, W.V Quine's opening question is, in his influential paper *On What There Is*, quite succinct: "A curious thing about the ontological problem is its simplicity. It can be put into three Anglo-Saxon monosyllables: 'What is there?' It can be answered, moreover, in a word-- 'Everything'--and everyone will accept this answer as true."²³ This may look trivial, nevertheless it is worth registering, as there is a lot – indeed *everything* - to consider when talking about metaphysics. What is included in everything? Giving a list of various things may be attempted, although the effort will no doubt end in failure. Nonetheless the following things can be pointed out as belonging to such a list: books, particles, horses, dragons and cigarettes, countries, cream and politics and rain, stars, galaxies, people, mosquitos, music, bricks, Shakespeare, smartphones, grass, plastic and cows, dragons, pencils, dirt and clouds and much, much more. Since giving a complete list of everything is impossible, it would be at least helpful to try and organize a coherent question: what do all these things have in common? What is it, in short, that people *must* invoke when they talk about *anything*? To this question, Strawson would reply by saying: 'the physical' or 'matter'²⁴. Lest it be thought that Strawson is some type of reductionist, or someone who subscribes to some form of "scientism" – the view that every problem in the world is solved or could even explained by the natural sciences – it should be stated that this is far from the case, as he is more ambitious, and in many respects more realistic than people who subscribe to either reductionism or scientism. For Strawson the point simultaneously while *seemingly* trivial is actually quite profound: *everything that is*, (and emphasis on the word 'everything' is critical) is physical.

²³ (Quine, W.V. 1980: 1)

²⁴ In *Things That Bother Me*, Strawson says that: "I'm...going to take it that physicalism and materialism are the same thing, though there is more to physical reality than matter." (Strawson, 2018: 154) By this he means matter as defined in contemporary physics.

Strawson states that: “Serious materialists have to be outright realists about experience... So they are obliged to hold that experiential [or ‘mental’] phenomena just are physical phenomena, although current physics cannot account for them... Experiential phenomena are realized in the brain... But this assumption does not doesn’t solve any problem for materialists.” Rather, “it obliges them to admit ignorance of the nature of the physical- to admit that they don’t have a fully adequate idea of what the physical is or what sort of thing the brain is.” (Strawson, 2010: 81) It is difficult to know with complete certainty anything, and it’s certainly not easy to know or be able to point out what is the fundamental nature of matter is. This is further complicated by that fact that at least in an ordinary-everyday ‘manifest image’ understanding of the world, there seems to be two distinct substances or attributes that people claim to have: namely a material body which is somehow in contact with an immaterial mind. Further reflection on this issue reveals considerable difficulties in holding to this kind of ‘substance dualism’. One obvious difficulty has to do with the nature of causality, and that is: how does something immaterial like the mind, manage to come into contact with something material like the body? This has been a concern for philosophers for centuries, going back at least (if not much more) to the famous distinction made by Descartes of *res-cogitans* (thinking thing) and *res-extensa* (extended thing or corporeal substance). This issue of a fundamental ontological difference is known in philosophy as the “mind-body” problem, which continues to stir much debate. For Strawson, as is the case for other 20th century thinkers like Noam Chomsky, Bertrand Russell and Martin Heidegger to mention only three, there is no ontological ‘mind-body’ problem and thus can be cautiously labeled as monists.

One important precursor to Strawson’s and Chomsky’s views regarding materialism, as well as the untenability of substance dualism, comes from the British chemist and philosopher Joseph Priestley. Priestley argued, in his overlooked, but important book *Disquisitions Relating to Matter and Spirit* that: “It is said that we can have no conception how sensation or thought can arise from matter, they being things so very different from it, and bearing no sort of resemblance to anything like *figure* or *motion* ; which is all that can result from any modification of matter, or any operation upon it.” However, it need be pointed out that “...this is an argument which derives all its force from our *ignorance*. *Different* as are the properties of sensation and thought, from such as are usually ascribed to matter, they may, nevertheless, inhere in the same substance, unless we can shew them to be absolutely *incompatible* with one another.” But ignorance should not persuade people to believe that there are two substances, however difficult this may be to intuitively grasp:

“this argument, from our not being able to *conceive* how a thing can be, equally affects the immaterial system: for we have no more conception how the powers of sensation and thought can inhere in an *immaterial*, than in a *material* substance.” Priestley continues by saying “...in fact, we have no distinct idea either of the *property*, or of the *substance* of mind or spirit. Of the latter we profess to know nothing, but that it is not matter; and even of the property of *perception*, it seems to be as impossible that we should fully comprehend the nature of it, as that the eye should see itself.” Given that it is ignorance that makes people say that mind is not matter, Priestley states that “I, therefore, admit of no argument for the *spirituality* of the soul, from the consideration of the *exquisiteness*, *subtlety*, or *complexness* of the mental powers, on which much stress has been laid by some; there being in matter a capacity for affections as subtle and complex as any thing that we can affirm concerning those that have hitherto been called *mental affections*” (Priestley 1777: 82-83) Although Priestley is correct in pointing out our ignorance about these matters and also that there is no reason to suppose thought is not a phenomenon of matter, it is not clear he would endorse the kind of physicalism that Strawson has defended throughout his career in all its panpsychist implications.²⁵

The first time Strawson goes on to elaborate his materialist views at length is in *Mental Reality*, and while his views are somewhat modified by the time he writes *Real Materialism*, Strawson begins by calling his view ‘agnostic materialism.’ Strawson says that the “[b]elief in the truth of materialism is a matter of faith and needs to be tempered with agnosticism...In arguing for this view, I will start with a fairly general discussion of monism.” Again, one cannot be certain of anything, outside of the fact that there is thinking going on, thus a necessary step for claiming that the fundamental aspect of the universe is ‘X’ or ‘Y’ should be tempered with a belief in agnosticism or, stated differently, there is no definite proof that the universe is entirely material, for reasons which will be explained shortly. In talking about the issue of monism – the view that there is, at bottom only one kind of stuff - Strawson wants to say that this stuff is physical in *every* respect, however, as with any philosophical position, there are bound to be complications: “But questions about how many kinds of stuff or things there are ... [is] relative to a particular point of view or interest... What point of view is so privileged that it allows one to say that it is some sort of metaphysical fact that there is only one kind of thing or stuff in reality? Materialists call

²⁵ See Chomsky, 2016: 116-177.

themselves monists, for they think that all things are made of one kind: the physical. But many of them also believe that there is more than one kind of *elementary* particle.” (Strawson, 2010: 43-44). Right away it becomes evident that almost every metaphysical view about the nature of reality is filled with technical ambiguities that have ontological and epistemic consequences which are not the result of *mere* semantic disputes or formulations, nor are they ‘pseudo-questions’²⁶ as the logical positivists argued. It may be held, along the lines of Daniel Dennett, who calls himself a materialist, that everything that exists in the universe is material, though consciousness is a kind of illusion that is *yet* to be explained by the natural sciences²⁷. Whether it is possible to coherently defend the position that consciousness is some type of illusion remains a dubious view, but such a perspective hints at the possibility that there may be some unknown physical particle(s) or facet in physics which is yet to be discovered that eludes our *current* understanding that could one day show consciousness to be a kind of illusion. These types of materialists consider the physical to be the ‘physical-as-described-by-physics’ (to use Strawson’s term). The argument from these

²⁶ The most famous and influential of the Logical Positivists was Rudolf Carnap. Carnap argued in his *The Elimination of Metaphysics Through Logical Analysis of Language*, that statements are to be divided along the following lines: there are statements about the world can either be meaningful or meaningless. In the case of meaningful statements Carnap makes a further distinction, sentences can be meaningful but false “... persons A and B are each a year older than the other.” Such sentences are really meaningful, though they are pointless or false; for it is only meaningful sentences that are even divisible into (theoretically) fruitful and sterile, true and false. In the strict sense, however, a sequence of words is *meaningless* if it does not, within a specified language, constitute a statement.” (Thomson/Wadsworth. 2005: 980)

The logical step ensues, that metaphysical claims are entirely meaningless, because the words they employ are empty. This is a strong statement, and because of this, ample evidence should be given for each case. Carnap goes as far as to claim that “... the verdict of meaninglessness also hits those metaphysical movements... that is *realism*...and its opponents: subjective *idealism*, solipsism, phenomenism... What remains for *philosophy*, if all statements... are of empirical nature and belong to factual science? What remains is not statements, nor a theory, nor a system, but only a *method*: the method of logical analysis.” (Carnap, p.988). Metaphysics can be set aside on this view, for it does not accomplish anything.

²⁷ In his most famous book Dennett says that “I *am* denying that there are any such properties [qualia]. But... there seems to be qualia.” A bit later on Dennett states that, concerning colors and their subjective effects “colors...are: reflective properties of the surface of objects...” (Dennett, D. 1991 p.372) Qualia, in contemporary analytic philosophy are instances of subjective experience. The subjective aspects of qualia are according to Dennett, due to evolution: “...there were various reflective properties of surfaces, reactive properties of photopigments, and so forth, and Mother Nature developed out of these raw materials efficient, mutually adjusted “color”-coding/”color”-vision systems, and among the properties that settled out of that design process are properties we normal human beings call colors.” (p.378) Using an analogy based on things that people would consider ‘lovely’, such as a day on the beach, seeing a puppy or an attractive partner, or seeing a well cleaned hotel room, for ‘secondary qualities’, Dennett says “...lovely qualities cannot be defined independent of proclivities, susceptibilities, or dispositions of a class of observers, so it really makes no sense to speak of the existence of lovely properties in complete independence of the existence of relevant observers.” (p.380) While it is true that subjective properties don’t exist independent of observers, it does not follow that qualia does not exist or that they are - at least - an illusion. It is difficult to argue against someone who seems to downplay the importance of subjective states, that these are quite different or incompatible from what the brain does, but it must be regarded as the most evident of all facts, that there are such things as subjective experiences and qualia.

eliminativist materialists goes along the lines of thinking that since physics covers a vast range of phenomena, and since science has progressed immensely in the 20th century, the problem of experience will one day be solved by science²⁸. Strawson's agnostic materialism is much broader, and in many ways intuitive, than this reductive view: "But to be a materialist is to believe that the experiential is as much of a physical phenomenon as electric charge. It is to hold that there is no more ontological difficulty in the idea that physical things can have the wholly physical property of having experience, as well as the physical properties currently discerned by physics, than there is in the idea that physical things can have mass as well as extension." (Strawson, 2010: 58) Instead of trying to fit contemporary understanding of physics to the experiential (conscious) features of the mind, Strawson argues that the experiential *is* a completely physical phenomenon, which is not "... saying such things as...'Experience is just neurons firing" nor is Strawson stating that "all that is really going on is what can be discerned and accounted for by current physics." (Strawson, 1994: 58-59)

In fact, what Strawson wants to try and spell out, in developing his 'agnostic materialism' is, in part, trying to dissolve the traditional mind-body problem, which may be viewed as incoherent - it cannot be properly stated without falling into the error - or else it is simply unintelligible. However, there is a way in which the 'mind-body' problem can be stated in a contemporary

²⁸ The following quote by Patricia Churchland is common: "Impressed by our ignorance, some philosophers have expressed certainty that *no* answer will be forthcoming- we will never know how the brain gives rise to thoughts and feelings... [this] argument embodies a very strong prediction: no one will ever solve the mystery- not ever, no matter how science develops." She mentions other problems that were thought to be unsolvable by the sciences, "The nature of light was such a problem... What happened?... James Clerk Maxwell had explained light as a form of electromagnetic radiation... So the prediction...was flat out wrong. It hardly needs noting that it is preposterous to infer that something is *unknowable* simply because it is *not known* - especially when the science is in its very early stages." (Churchland, P. *Touching a Nerve*. 2013. p.56-57)

There is plenty of material here to disentangle, though it suffices to point out that, although it is possible that there could one day be a scientific theory of consciousness, it would not explain subjective experience in any manner that would ease the continued pursuit of questions concerning meaning and subjectivity. There is also the issue of what is meant by 'understanding' in this case, scientists can work in quantum physics, for example, but few would claim that they *understand* what it means. Physics deals with very simple phenomena, like particles. Mentality deals with *all* mental life, there are huge leaps in complexity once particles are left behind, and the things being studied, like liquids in chemistry or cells in biology pose nowhere near the problems that are faced by experientiality.

Until people can understand why particles behave in a certain manner, it is very doubtful, if not impossible, that a science of consciousness will ever be reached. There is also one final point that should be registered, and this is quite simple, human beings belong to the biological realm, all biological creatures have limits to what they can see, hear or generally sense. The cognitive limits people have is what allows people to do science and philosophy in the first place, otherwise there would be no need for scientific theories or intricate novels that explore facets of society and thought.

manner²⁹ that does not entail a problem between the mental aspects of the brain, and the rest of the body. To do this, one simply must replace the words ‘mind’ and ‘body’ with the terms ‘experiential’ and ‘non-experiential’ respectively. The question that can now be formulated is: How can the experiential come about from a largely non-experiential world, granting that both the experiential and the non-experiential are wholly physical aspects of reality? Or to use Strawson’s own words “... what is the relation between *experience* and *matter*? What is the relationship between the reality of experience as we have it from moment to moment and physical reality as we take ourselves to know it in everyday life and in science? This question about experience is the difficult question. I think that it is really all there is to the mind-body problem...” (Strawson, 2010: 44). It is once again important to repeat the point, ‘experiential’, as Strawson uses the term is concerned with the qualitative aspect of experience, the “what-its-like” to having an experience. Strawson’s use of “what-it’s-likeness” is closely related (if not the same) as Thomas Nagel’s use of the term in his famous paper “*What is it like to be a Bat?*” (1974), who is credited with having popularized this term, however unlike Nagel, Strawson does not focus on the traditional formulation of the ‘mind-body’ problem. Given that any metaphysical position that argues that the whole of reality consists in X, it is by definition monistic. It will be necessary to look at different varieties of monism, before arguing that physicalism is the view that most makes sense - if - such an argument can be given.

²⁹ Chomsky points out that “Galen Strawson develops the first option [giving a definition of the physical] in an important series of publications. Unlike many others, he does give a definition of “physical,” ... [that] permits [a] formulation of... a “mind-body problem,” in a post-Newtonian version.” (Chomsky, 2016: 120) Although Chomsky is discussing Strawson’s *Realistic Monism*, an arguably better formulation of Strawson’s physicalism is his *Real Materialism*, discussed below.

2.3: Types of Monism

Monism, in the philosophical tradition, is the view that there is fundamentally one kind of substance in the universe. One of the first philosophers to make a monist argument was Thales of Miletus, who believed that everything is made of water. Human knowledge has grown considerably (in certain areas), since the time of the Ancient Greeks, but the topic of monism remains as lively as ever. Just what is the whole world is made of? How can a single thing or substance be at the root of so many apparently different types of phenomena? Is it possible that monism is simply a way to escape complex and subtle distinctions that are hard to articulate? These are all difficult questions, and Strawson considers four contemporary versions of monism. He states that “[m]onists assert that there is a fundamental sense in which all things are of the same single type, in spite of all the variety of the world... they may hold any of the following positions: [1] There is a fundamental sense in which reality is only physical. [2] There is a fundamental sense in which reality is only mental. [3] There is a fundamental sense in which reality is neither mental nor physical, as we understand these terms. [4] Reality is, in its essential single-substanced nature, both mental and physical, both experiential and physical.”(Strawson, 2010: 46) The first two types of monism are classical positions in the history of philosophy, and Strawson gives the title of ‘materialism’ to view [1] and ‘idealism’ to view [2]. The third option is called ‘neutral monism’ and a few of its most famous proponents are William James and Bertrand Russell, and more contemporary adherents includes the likes of Philip Goff, Christof Koch and Donald Hoffman among many others. Option four is less well- known, and has no traditional name, though he will call it ‘mental and physical monism’, abbreviated here forth as M&P monism.

The most common objection to materialist stems from the supposed fact that somehow physicalism cannot account for the mental, but if Strawson’s argument is pursued, this reply is not correct because experience just is physical, like a table or a chair or bacteria are physical. How do contemporary materialists, those who think that there are two separate ontological aspects in the world, the experiential on the one hand, and the non-experiential on the other, attempt to explain the existence of the mental? Strawson says that “...standard materialists are committed to the *asymmetry thesis*. That is, they are committed to the idea that there is a crucial asymmetry in the status of mental and physical phenomena given which it is correct to say: [1] that the mental is based in, or realized by, or otherwise dependent on, the physical...” (Strawson, 2010: 56) The

topic of symmetry (or asymmetry) can become quite complex, but for present purposes it suffices to know that there are two discernable metaphysical aspects of the world, the experiential and the non-experiential. The question now becomes how does one of these aspects depend on the other? From here, views vary in that one needs the other to exist, or that both experience and non-experience exist on equal footing, and so on. One such claim would be that experience depends on the non-experiential, as this would be a materialist claim. Monist arguments based on idealist philosophy may be given, so long as one reverses the terminology, from materialism to idealism, all that would change is the sequence of arguments, which now becomes that the non-experiential depends on the experiential³⁰. It is then a question of seeing how plausible each view is. If the option is between materialism and idealism then either everything is material, or everything is made of ideas. If everything is based on ideas, one would have to explain how seemingly concrete objects emerged from something idea-like, which, though plausible, is not easy to explain. After all, whatever is seen or touched (among other senses) is interpreted by the mind in some way. If objects exist that share no properties that are common to the mind *at all*, then it follows that these things could not even be discovered by mathematical formulas or the sciences, much less by common-sense.

The other two monist views presented by Strawson are “*equal-status theories*”, in that neither the experiential nor the physical (non-experiential) are above or dependent on one another. The first in the list of varieties of equal-status monism is ‘neutral monism’. Strawson states that: “I take [neutral monism] ...to be the view that although the universe is indeed composed of one fundamental kind of stuff, this stuff is neither mental nor physical. Or rather, it is neither mental nor physical *as we currently understand these terms.*” (Strawson, 2010: 97 emphasis mine). Bertrand Russell and William James argued for a variety of neutral monism, though James never used this terminology for his own view. Another crucial figure in the history of philosophy who also espoused – briefly - a kind of neutral monism, though he does not refer to it under any term, was Kant. As Strawson observes “... Kant may have also be said to take up a neutral monist position when he claims that what “underlies outer appearances” and “inner intuition” is not “in

³⁰ One on version of idealism. Many other types of idealisms can be developed. After all, Berkley’s empiricist idealism is not that same as Cudworth or Kant’s rationalistic idealism which in turn differs from Fichte’s particular articulation of absolute idealism and so on through many versions of idealism. This is of course, putting aside the many ancient eastern traditions which defend a type of idealism.

itself matter or a thinking being”, rather it is “a ground (to us unknown) of the appearances which supply to use the empirical concept of the former as well as the latter mode of existence (Kant 1781-87, A380; see also B427-B428).” (Strawson, 1994: 97) One may speculate that the reason Kant held this view had to do with Kant’s belief that reality “as it-is-in-itself” went beyond people’s mode of understanding and there is *no way* people could comprehend it.

Neutral monism is an attractive position for various reasons. One of the main reasons is that since the nature of reality is so strange, and human knowledge can be so radically mistaken as to what exists, it can then be quite natural to believe that the fundamental constituents of reality are so construed as to be fundamentally different from our common-sense knowledge of the world. A convenient and logical outcome of adopting this view of the world is that many distinctions, including the traditional mind-body problem are dissolved, since it is not possible to differentiate between what these two substances consist of, because whatever there is, cannot be understood by appealing to these traditional terms, the mental and the physical. Adherents to neutral monism may doubtless have other reasons for adopting it, but Strawson gives some reasons to think view is mistaken. By stating that the nature of reality is fundamentally different from people’s conceptions of it, they are overlooking a seemingly trivial point, namely, that human beings are acquainted with a portion of reality, however small it may be, in *simply having* the experiences people have, in their ‘what-its-like’ qualitative feeling. It becomes rather difficult to say that reality is so radically different from *any* conception people have about it, because people are in the world and can manage to interpret at least some of it successfully. The very fact that a fundamental property of experience allows us to interact with the world, in however limited or partial way, should be argument enough to say that people cannot be *completely* wrong about the nature of existence, unless one accepts extreme skepticism, but such a position is hard if not impossible to defend.

Furthermore, Strawson elaborates why the word ‘neutral’ in neutral monism ought to be replaced: “...it seems clear that our belief in the reality of experience cannot be a complete error or illusion. Hence the term ‘agnostic monism’ is preferable to the term ‘neutral monism’: if acknowledgment of our ignorance drives us to agnosticism, we should also be agnostic about the extent of our ignorance.” (Strawson, 2010: 98) Although it is correct to say that people’s belief in the reality of appearance cannot be a complete mistake or error, one should be cautious in thinking that this experience can give people knowledge of reality “as it is in itself”. The Kantian phrase “as it is in

itself' is complex to sort out in detail, in part due to the technical nature of this topic within the context of Kant's philosophy. The general point can be made that in many respects it appears that people do not have access to things as they are 'in themselves' because of the simple fact that people's minds actively shape the world in a way that is intelligible to human beings, and not dogs, nor eagles much less hypothetical aliens like Martians. This notwithstanding it is very difficult to make sense of the idea that people have absolutely no correct representation *at all* about the world, because some sciences, specifically physics, appears to give people a reliable explanation of some of the phenomena of the external world - subject to continued modifications. Besides the accuracy of physics, it makes no sense to say that experiences of trees or houses are misleading or illusions because there is nothing these experiences can be compared to in order to see how accurate or inaccurate they may be. It is now possible to see why Strawson considers himself to be an *agnostic* materialist, at least in *Mental Reality*: "Insofar as I am any sort of materialist, then, I am an agnostic materialist: our current conception of the physical is *incomplete* on its own terms ... it is commonplace that there is a sense in which our ordinary concepts of space, time and matter are...partial representations of the nature of reality..." (Strawson, 2010: 98) Full representations of the nature of the world are not possible, because, like any other creature, human beings have a given biological nature, which can be called human nature, which differs in many respects to the nature of other creatures, like dogs or elephants, yet no one would deny³¹ that dogs or elephants have limitations in what they can understand with the cognitive apparatus they have. The same must be true for people, who also belong to the natural world, though this statement does not in *any way* deny the fact that people possess certain qualities that are not seen in any other species in the animal kingdom, like language, creativity and the ability to think about the future and plan accordingly, among many other things.

³¹ Though perhaps this statement is too rash. There have been plenty of philosophers that have argued that human beings have no innate human nature. Probably the most famous, in modern philosophy, comes out of the French postmodernist movement of the late 60's and 70's. One of the most prestigious of the postmodern philosophers was Michel Foucault who claimed that: "If you say that a certain human nature exists, that this human nature has [the following properties] doesn't one risk defining this human nature which is at the same time ideal and real, and has been hidden and repressed until now – in terms borrowed from our society, from our civilization, from our culture?" See (Chomsky & Foucault, 2006: 43) for an in-depth conversation on the topic. Foucault is claiming that the concept of 'human nature', is in large part, a social construction. If this is true, and there is no reason to believe that it is, then it could be argued that human beings have no internal structure. In other words, if there is no human nature, a human being can be made to have *any* property simply by mere assertion. Then again, such a view would make science impossible. More on this topic can also be read below, in Chomsky's section.

Before moving on to the strictly mental metaphysical positions, it is worth looking at the last of the traditional monist positions that Strawson signals out, namely mental-and-physical monism (M&P for short). M&P monism argues that both mental and physical phenomena interact in such a way that "...[r]eality is irreducibly both experiential and non-experiential (both mental and nonmental), while being substantially single in such a way...that we do not fully understand" (MR. p73). It could be argued, that in certain respects, M&P monism is opposed to neutral monism in one crucial aspect, which Strawson mentions, namely that M&P monism is a "...*positive* equal-status monism because it says that reality is both experiential and non-experiential" (Strawson, 2010: 72). Neutral monism, on the other hand, can be construed as making a negative statement, because for them, reality is neither mental nor physical as these terms are currently understood. Arguably the most puzzling aspect of M&P monism is the view that there are two aspects of reality that are inherent in nature and the 'mental', and the physical, yet both the mental and the physical are part of the same stuff, or substance³², which goes against people's common sense intuitions. However, Strawson notes that if one grants this asymmetry thesis (asymmetry in this case simply meaning, dependent upon.) then "... one must reject the irreducibility thesis. And vice versa: given the asymmetry thesis, and materialism, it seems that experiential physical properties must be reducible to nonexperiential physical properties..." (Strawson, 2010: 68) The problem with this, on Strawson's account of materialism, is the one that has been stated previously, namely that experientiality is out-and-out material (physical): if one claims that the non-experiential gives rise to the experiential then one cannot give a proper account of experientiality at all using non-experiential terms: "...it amounts to the claim that when you have all there is about a segment of the world (say, a person) in non-experiential terms, there is a fundamental sense in which you have described everything there is to describe." (Strawson, 2010:68) Not only would this last statement be ridiculed, it's also impossible to have any intuitive (and some³³ may say theoretical) account of how experience arose out of matter. The concluding thoughts and M&P monism are as follows: "...equal status monism...come[s] up against our deep ignorance of the nature of relation between the experiential and the non-experiential..." (pg. 74) One could also add that it's extremely

³² Chomsky, for example, when tracing the history of the mechanical philosophy, states "mental processes are properties of certain kinds of organized matter". In this view, there is no machine, just mental and physical properties of nature. For more information on this topic see: https://chomsky.info/201401__/

³³ See (Nagel, Thomas 2011: 58 & 61:62) and (Tallis, Raymond. 2011: 357-358) for more information.

difficult to say with anything remotely resembling certainty, where nonexperientiality ends³⁴ and where experientiality begins, thus M&P monism is difficult to comprehend, unless, perhaps one claims ignorance in the face of trying to understand how the mental and the physical are both part of the same fundamental stuff.

³⁴ When studying animals and insects, it is very difficult to determine or point out, a line that separates conscious creatures from creatures which are not conscious. The Psychologist Thomas Suddendorf points out that, while some insects and animals look intelligent (and intelligence is something that should be attributed to conscious creatures), appearances can be deceiving "...innate mechanisms look clever, but the lack of foresight involved becomes clear when circumstances change. A classic example is the digger wasp. The wasp always inspects the nest before dragging its prey inside to feed its larvae. If in the meantime a mischievous human moves the food a few centimeters, the wasp will regather the food, and repeat the sequence again..." This issue is not limited to wasps, as Suddendorf points out "...various animals hoard food for the winter without necessarily understanding why they do it. Young squirrels, for instance, will hoard nuts even if they never experienced a winter." (Suddendorf, 2013: 107) So even in cases where it would seem relatively obvious that there is experience, complex processes appear to occur non-experientially. For more information on the dividing line between the non-conscious and the conscious brain states see: <https://www.psychologytoday.com/us/blog/theory-consciousness/201704/consciousness-in-other-animals>

2.4: Mentalism and Idealism

In order to try and comprehend why materialism may be the most plausible account as a metaphysical stance, it will be necessary to consider a wide variety of views that are not materialist. The way to proceed is to put aside the arguments (for the time being) given for ‘agnostic materialism’ and start anew. This will minimize as much terminological confusion as possible. The terms “mentalist”, “idealist”, “immaterialist” and “panpsychist” (in ancient Greek ‘pan’ stand for the word ‘all’ and ‘psyche’ means ‘soul’ or ‘mind’, so this term literally mean all-mind, though Strawson’s formulation requires more elucidation than a mere definition) should be taken as each word appears to imply: ‘mental’ for mentalism, ‘idea’ for idealism, ‘immaterial’ for immaterialism and ‘mind involving’ (or, more accurately ‘experience-involving’) for panpsychism. As the argument proceeds, some minor technicalities may be introduced as necessary for each metaphysical position. Most of these mental-related views overlap in significant areas, and materialists of all types can find something worthy in idealism, mentalism and vice-versa. This is not to say that these terms are identical – they are different in many respects too, but it should be clear that the views elaborated here will be *an interpretation* of Strawson’s considered views and *not* a direct interpretation of classical philosophers’ position on these topics.

Some clarifications will be helpful in establishing how these ideas overlap and in what areas they diverge. Given that these words appear to entail similar things, what is the relationship between mentalism, idealism and immaterialism? (panpsychism will be dealt with last and can be put aside for now) Strawson’s argument is as follows, there are “six suggestions” for the possible relationship between these terms, “[s]trict mentalism appears to entail idealism,” because by definition, ideas are things that spring from the minds that contemplate them. This covers all types of objects like computers, people, cups, trees, giraffes and so on. Mentalism also “entails immaterialism, given that there cannot be material phenomena without there being nonmaterial [non-experiential] things.” This is not the end of these connections as “it looks like idealism (as ordinarily understood) entails immaterialism.” Ideas, in this case does not only mean whatever is ordinarily meant when one claims that someone has an idea, but also in the way objects external to the person are perceived. Thus, one can have a car-idea or a lake-idea or an idea of the universe –and all these *ideas* necessarily have content. On the other hand, “immaterialism does not entail [idealism] ... Berkeley is an immaterialist, but he is not a strict idealist, because he does not think

that everything is made of ideas.” Curiously, it also appears to be the case that “...immaterialism [does not] entail mentalism (for one can believe in immaterial stuff, or “soul substance,” without thinking that it is itself intrinsically contentful or that it [the stuff the world is made of] is entirely mental in every respect.)” Clearly, these views depend on how much force and emphasis is attributed to each aspect of the world, as it is possible to think that the world is almost completely empty, that is immaterial, but that ideas in the mind are not empty. One final point pertaining to the interaction of these terms, as discussed in *Mental Reality*, is that, although it appears that mentalism entails idealism, idealism does not entail mentalism... “for one can be an idealist about the external world and believe in immaterial stuff without thinking that this immaterial stuff is mental in every respect.” (Strawson, 2010: 110) Apparently, some immaterial stuff, under this last consideration, need not be affected by the mind in order to exist. It is clear that these terms are not rigid, and thus can overlap, which can create a good deal of confusion or can lead to talk about terminology only. These confusions, if they are pursued for centuries, as has been the case in the history of philosophy, can lead many intelligent and distinguished philosophers, like Carnap, to believe that these kinds of debates and arguments are “meaningless” – literally without any meaning or significance³⁵. Although this position may seem alluring and comfortable even, it does not remove the problem of the nature of reality, thus each of these terms deserve elucidation before they are rejected, accepted or modified.

The first term under consideration, then, will be ‘mentalism’. According to Strawson, “*Strict mentalism...* is the doctrine that absolutely everything is mental, including everything that we ordinarily think [of] as physical... The existence of mental goings-on [activity] does not involve

³⁵ Though not only Carnap, but other important figures like Peirce, who personally contributed to metaphysics, at one moment said, of the metaphysics of his time, that “...in its present condition it is... a puny, rickety and scrofulous science.” (Buchler, 1955: 314.) Though critiques of metaphysics do not stop with philosophers, even Charles Darwin pointed out that “[h]e who understand baboons would do more towards metaphysics than Locke.” (Darwin, 1838) And even prominent academic and skeptic, Robert Todd Carroll, who, in his *The Sceptics Dictionary*, under the entry of metaphysics says that “[s]ome consider metaphysics to represent what is highest in human nature, the drive to know and understand the nature of the universe in which we find ourselves while we move towards our inevitable end. Others consider metaphysics, specifically speculative metaphysics about non-empirical and transcendent realities, to be, more or less, bunk.” (Carroll, Tod. *The Sceptics Dictionary*. Wiley. 1993) Finally, there is the famous Portuguese poet, Fernando Pessoa, who in his poem *The Tobacco Shop* says, with considerable irony that “...metaphysics is a consequence of not feeling very well.” To be sure, ‘metaphysics’ can be abused, and much debate in metaphysics cannot be settled appealing to empirical evidence, but to argue that speculative metaphysics is “more or less bunk”, is missing the point. As Strawson points out: “Those who think speculations like this are enjoyable but not really serious haven’t really begun the task of being a materialist: they haven’t understood the strangeness of the physical and the extent of our ignorance.” (Strawson, 2008: 44)

the existence of any nonmental goings-on [non-experiential activity] of any sort.” Mentalism, on this definition does away with any conception of the non-experiential. On this view, there is no matter, but there are mental things. The problem here is that it is very difficult to know what the mental amounts to. Strawson continues to say that “[a]mong mental phenomena, there are experiential phenomena, occurrent experiential episodes, like sensations, perceptions, consciously entertained thoughts, emotional feelings, and so on. And then there are, dispositional, nonexperiential states, like beliefs and desires.” (Strawson, 2010: 108) Serious questions arise if the ‘mental’ is taken to mean that objects like paper and crystals have anything remotely like beliefs and desires, or dispositional attitudes. So far as is observed, only certain kinds of organic creatures have any mental properties whatsoever and one is left with the problem of what to do with inorganic things, which take up the vast majority of space in nature. These qualms aside, mentalism, as with almost any term, need not be a *monist* theory, as dualism can always remain an option in virtually any school of thought, thus, “partial mentalists...can be mentalists about the mind: they can hold that the existence of mental goings-on does not involve the existence of any physical goings-on, even though physical phenomena exist.” (Strawson, 2010: 109) If mentalism is to be argued as belonging to a dualist metaphysical conception, then it is on the one hand easier to argue that certain sentient creatures have mental properties, and the rest of the world has no mental properties. On the other hand, it’s not clear if these mental properties are attributable to every aspect of sentient creatures (the whole brain, for example), nor is it clear how to explain how this mentality works in different states, such as being in state of dreamless sleep, nor how it is possible for the nonmental (non-experiential) to interact with the mental if these substances are distinct metaphysical categories. Having mentioned some of these problems it is not at all clear how such dualist approaches to mentalism would work out. So much for mentalism as a metaphysical position. The ‘mental’ as a reference to the mind as studied within a naturalistic framework, is an important and complex topic that will be discussed later on, in the section that deals with Chomsky’s philosophy of mind³⁶.

If one had to choose a traditional opposition to any materialist doctrine, then idealism would have to be the most natural and obvious candidate. The biggest difficulty with idealism is that there are many varieties of this doctrine, and it would be almost impossible to divide all the possible forms

³⁶ See Chomsky section 3.0, below, for more information on these topics.

of idealism into neat, non-overlapping divisions. It will follow then, that some very important varieties of idealism, such as the Kantian and Schopenhauerian ‘transcendental idealism’ will not be considered here. As with the case of mentalism, it will be most helpful to start off with the strongest possible version of idealism, namely ‘strict idealism’. Strict idealism “is the doctrine that everything (but everything) is constituted of ideas – or perceptions in Hume’s idiom, or thoughts in Descartes’s idiom, or experiences or mental goings-on in a seemingly more neutral idiom.” Although Strawson talks about Descartes in this passage, an easier way to get a conception of the role of the mind so far as *strict* idealism goes, the view that emerges is an empiricist conception of the mind, in which the mind is a type of tabula rasa. What is the empiricist conception of the mind? Generally speaking, it is to be “committed to the bundle theory of mind, according to which minds as well as everything else are constituted entirely of or experiences.” (Strawson, 2010: 111) On this account of the mind, everything that exists are ideas and this process of associating ideas with other ideas is what constitutes knowledge. This leaves little room for the mind to do anything other than associating ideas, and although this could help explain, in an obscure manner, how people can be different from each other in many respects, it at the same time, misses a larger and arguably more important topic, namely, the question as to how is it that human beings, given the vast array of sense-data and limitless experiences they have, are so similar to each other in so many respects? Whether strict idealism is true or not cannot be refuted, although it is safe to say that the bundle-theory of mind as a theory that can account for *human learning* (though its status as a *metaphysical position* can still be articulated), as well as the conception of the mind as a blank slate has been thoroughly³⁷ refuted by empirical evidence. Where Descartes is relevant to an idealist position is when Strawson uses the term “Cartesian Thoughts” as a form of strict idealism, Cartesian Thoughts can be taken to be the view that “... Thoughts process or experience process is all that exists, so far as the mind is concerned. It is the substance...where there is a mind.” (Strawson, 2010: 111)

³⁷ There is too much literature on this topic that only a few sources will suffice, see Baars and Cage *Fundamentals of Cognitive Neuroscience* (2013), for example Chapters 1,3, 6, and 10 offer solid empirical evidence showing that the brain is actively working is shaping the data we receive from the external world. See also, Dehaene (2014) to get an idea as how the vast majority of information the brain receives is unconscious and never makes into consciousness. Also see Chomsky’s (2012) for much discussion about the role of biology plays in the acquisition of knowledge. It’s important to note that although the *bundle theory* of mind is not plausible given current understanding of the mind/brain, this does not refute idealism, for it could still be the case, irrespective of empirical biological evidence, that everything that exists are ideas, and ideas therefore form the fundamental ‘building block’ of the universe. Such is the pervasiveness and inescapability of metaphysics.

A brief mention should be made for a particular type of ‘dualist idealism’ which was espoused by one the important figures of British empiricism, George Berkeley. Berkeley’s idealism - which Strawson calls ‘active principle idealism’ (on his interpretation of Berkeley) - is that “...there are mental *acts*, of willing, thinking, and so on – that are not themselves “passive”, as ideas are in Berkeley’s view, and that are therefore not themselves ideas... more important[ly], there is the mind itself, conceived as the source of these mental acts – as an “active principle” that, in itself, is entirely mental in character and ontically distinct from its ideas.” (Strawson, 2010: 113) In Berkeley’s view then, which is not monist, the mind actively interferes with the world through various acts of mental intention. However, everything else outside the mind is immaterial, and now the problem lies in explaining how immaterial things can interact with an *active mind* of some kind. Although dualist tendencies can be difficult to grasp, they aren’t completely remote from a certain type of interpretation of modern astronomy and cosmology. It is well known that the universe is, by far, mostly empty space³⁸ – ordinary material (non-experiential) objects are mostly made up of atoms³⁹ which do not touch each other, and hence are almost completely empty. However, ‘almost completely’ empty is not the same as completely empty, so problems with objects taking up space remain, on this view. Although this cosmological picture of the world goes the opposite direction of common-sense, Berkeley’s idealist philosophy is not too exotic given the current view of the universe, it is arguably only incomplete in some respects.

³⁸ Neil deGrasse Tyson and Donald Goldsmith point out that “...stars amount to tiny specks, only a few light-seconds across, that float in a vast ocean of nearly empty space, occasionally passing close by one another like ships in the night.” (DeGrasse Tyson & Goldsmith, 2014: 150) A light second is a little over 186,282 miles, in an almost empty space. The ‘almost’ is important, because, strictly speaking ‘nothing’ *may* not exist. As Lawrence Krauss points out: “...if I take a region of space and get rid of everything within it – dust, gas, people, and even the radiation passing through, namely absolutely *everything* within that region – if the remaining space *weighs something*, then that would correspond to the existence of a cosmological term such as Einstein invented... For any fourth grader will tell you how much energy is contained in nothing, even if they don’t know what nothing is. The answer must be nothing... For when one incorporated the results of Einstein’s special theory of relativity into the quantum universe, empty space becomes much stranger than it was before” (Krauss: 2010: 58) Other than being aware than Einstein wanted to give an account of the total energy found in the universe, the technical details need not be of concern. For present purposes, a common idea is that the universe is mostly empty space, in this respect some variety of immaterialism could be articulated.

³⁹ Though physicist Art Hobson is emphatic about pointing out that “... many things aren’t made of atoms. Light is one example. Radio, infrared, X-rays, and other unseen *radiations*... similar to light but invisible, are not made of atoms. Other things are not made of atoms include electric currents, the magnetic field surrounding every magnet, and Earth’s gravitational field.” (Hobson, 2017: 18) Elsewhere Hobson states “...[t]he Universe is made of Quanta is far more accurate than “[t]he Universe is made of Atoms”...but it needs...qualifications... quanta are ripples in the quantum vacuum field that fills the universe.” (Hobson, 2017: 22). For more info see Hobson, 2017.

The next-to-last idealist view that Strawson considers in *Mental Reality* is a view he calls ‘stuff idealism’, which he attributes to both Berkeley and Locke, though Strawson mentions that he doubts that Berkeley would have accepted such a label, though the possibility for such an interpretation remains legitimate. Locke, as Strawson points out: “Contrary to Descartes...holds that Thinking is not an essential property of a mind...there may be times which there is no Thinking going on at all...Thinking...stands to mind as motion, rather than extension, stands to the physical body...” (Strawson, 1994: 113). Stuff idealism is hard to tease out from “active principle” idealism due to the semantic connotations held by these terms. One tentative statement that can be said about the differences between these two views is that the ontological status of the “active principle” of the mind is unclear, whereas in the case of stuff idealism, the mind is considered as an idea: “that this realizing ground [of the mental] cannot possibly be physical: physical substance, matter in motion, just isn’t the sort of thing that can be the basis of neural-goings-on. It follows...that the realizing ground must be non-physical, or immaterial... this immaterial thing cannot itself be wholly mental in character.” (Strawson, 2010: 115-116) The reason why this realizing ground can not be mental in character is because it would make no sense to claim that the thing one is seeking to explain must be explained by reference to itself: one cannot explain that the mental came about by saying that something mental caused it. There is no foundation for the mental on this view, and this creates problems in trying to give a naturalistic account of how the mind works. So, contrary to ‘active principle idealism’, which postulates an unclear ‘active principle’ in terms of ontological status, ‘stuff idealism’ is the view that what is called the ‘mental’ is based on ideas, as is all our experiential activity. In ‘stuff-idealism’ the world is in some fundamental sense immaterial, and the connection between the immaterial and the mental (experiential) has not been explained, merely stipulated, and stipulations are not arguments. Strawson says that stuff idealism is “...perhaps the view that is most commonly (if obscurely) thought as being “idealist”.” (Strawson, 2010: 116)

The last partial-idealist view that Strawson briefly mentions is also one of the more exotic options. He calls it ‘vat idealism’ (which is quite likely based on Putnam’s classic essay *Brains in a Vat*), but it could just as easily be called ‘dream-idealism’ or some such variation of a similar theme. In this curious version of idealism, what is considered ‘idea-like’ has to do with the external world, that is the world outside the mind, so anything that is being looked upon, touched, sense or heard, etc. is product of an electro-chemical stimulation in the brain. “Obviously, it is part of the brain-

in-a-vat hypothesis that the story of Louis [a hypothetical real person] comes to have the experience he has *may be given in materialist terms.*" (Strawson, 2010: 117. Emphasis mine.) This version of idealism argues that the brain is a material thing - an ordinary brain as commonly understood. This brain is then wired to a machine which is made up of wires, metals, plastic, and other materials that could be found in complex, refined and sophisticated future technology. In this experiment the machine is directly stimulating the brain in such a manner that the world that is presented to that brain at any moment is a mental projection. It is a pure construction of the mind given the appropriate stimuli and is not analogous to any contemporary movie or video game machine, or any current technology that stimulates the mind in a less direct manner. This machine creates a perfect duplicate of the entire world. In this scenario, there is no possible way to tell the difference between the real world and the simulated world. Whether such a machine is actually possible is beside the point, which is that such a partial-idealist argument is that it cannot be refuted. It *could* conceivably be the case that this is what is actually happening to everyone at this very moment. Nevertheless, if it is then argued that the brain can be explained in materialist terms and mechanisms, then the usual dualist problems remains, in which there can be no satisfactory theoretical account, as to how matter (the non-experiential) comes into contact with the mental (the experiential) in such a way that experience could be explained. It is important to point out an issue that may cause some confusion: just because this material machine can interact with a material brain, the experiential (mental) outcomes in terms of *subjective character* and the 'what-it's-like' qualitative character of experience is not explained by such an interaction. Even if it were possible to recreate the exact same circumstance in a simulated world for different brains, the exact same experience would be difficult, though in principle not impossible⁴⁰, to replicate. Even if these brains could somehow 'communicate' their experiential states, and it was discovered that some experiences were very similar, it would be extremely difficult, if not outright impossible to get two experiences to be *exactly* alike. The bigger problem of trying to explain these experiences in neurophysiological terms remains untouched⁴¹.

⁴⁰ See Strawson on supervenience, below, for more information.

⁴¹ Strawson deals with these conceptual confusions in a very convincing manner in *Mental Reality* in a section titled *The Impossibility of an "Objective Phenomenology"* pp.62-66.

2.5: Immaterialism and Early Panpsychism in *Mental Reality*

The last of the non-materialist positions to be considered by Strawson is ‘immaterialism’, which has been mentioned above, and will now be considered apart from any ‘active principle’ of the mind. It would be normal, given all the ‘mental’ related views that have been described, to think that immaterialism would be a positive-contributory term, but this is not that case. All immaterialism “... means is ‘not material’, and there is no good reason to think that anything nonmaterial [non-experiential] is ipso facto mental.” (Strawson, 2010: 118) *Strict* immaterialism is - as opposed to active principle idealism - means that everything in the universe is immaterial, including ideas in the mind. Whereas active principle idealism as defended by Berkeley at least posits some action to the brain (on Strawson’s interpretation), that is separate from the ‘immaterial external world’. Immaterialism would seem to entail that everything mental is immaterial, and no separate activity of the mind would be an exception. Since immaterialism makes no positive affirmation about the nature of the world, Strawson mainly compares this position with mentalism and some varieties of idealism: “...many immaterialists have supposed that the immaterial stuff...is...entirely mental in every respect, and have...taken themselves to be true mentalist.” (Strawson, 2010: 118) However, in the case of mental activity, positive assertions about the nature of the mind have been given, and this revolves around the idea that mental goings-on (activity) is “mentally contentful...experiential goings-on, ideas or experiences: thoughts, willings, decidings, dreamings, and so on. So, if we suppose that there is any *other* kind of mental thing, that is, immaterial substance, we have to grant that there is a sense in which we know nothing of its nature.” (Strawson, 2010: 118) This account appears to run into incoherence, for it makes no sense to argue that the mental activities that go on in the mind of individuals, and which are *felt* as something certain and at least partially known, are completely unknown because they are made out of something whose nature is utterly mysterious. However, since part of the nature of the mental is known, immaterialism now seems to be saying something positive about the nature of reality, for “as soon as one suggests that the existence of mental substance...ha[s] some sort of unknown “real essence,” one really has no defense against someone who says that its real essence...may not be wholly mental and may indeed be material.” (Strawson, 2010: 119) The complexity of the immaterialist view, whether monist or dualist seem to Strawson to be acknowledged by the likes of Berkeley, Descartes and Locke. In fact, Strawson argues that “[a]t one point, at least, Berkeley suggests that there is an inescapable sense in which the ultimate nature

of the mind is unknowable, insofar as it is distinct from [occurrent-experiential] ideas...even if we can know that it exists and what it does.” (Strawson, 2010: 120) It seems then, that this is the most constructive thing that can be said about immaterialism, which remains a negative claim, though this conclusion is not necessarily vacuous and empty, it at least can serve as a ‘pointer’ about the extent of our ignorance about the fundamental nature of the world, though one would be hard pressed to find many people defending this view given people’s contemporary understanding of the world.

By far, the most famous idea elaborated by Strawson are his views concerning panpsychism, which at first may sound exotic, but in fact has a long tradition in western thought. Panpsychism as such does not necessarily fit in smoothly with other idealist theories because panpsychism is not necessarily or inherently idealist – about ideas. The basic premise behind panpsychism is that mind is everywhere, such that experientiality is part of the universe – in this regard, panpsychism sets the experiential as a fundamental ontological fact of existence. Having said this, it could be an idealist view or a materialist one, depending on how it is articulated and what terminology and framework one has in mind. It could perhaps be most conservatively defined as an equal status view as Strawson suggested at the time he wrote *Mental Reality* (Strawson, 2010:.75). This double aspect description of panpsychism, in which the experiential and the non-experiential both exist simultaneously, would evolve by the time he published his other works, notably *Consciousness and Its Place in Nature* as well as *Realistic Monism*, where he explores panpsychism as a single-aspect monist view, and argue that experience is a fundamental feature of matter, and hence a materialist view of the world. In this new formulation, everything is matter, but since experience is also matter- the most certain aspect of the universe that is known - then everything has experiential components as a matter of ontological fact. Strawson’s latter views on panpsychism can be called ‘materialist panpsychism’, which sounds like an oxymoron, but makes sense once it is known that experience is a material phenomenon. This, however, will be explained later in greater detail. For the moment, it will suffice to see how Strawson first introduces his early panpsychist ideas.

To begin Strawson asks his readers to, “[c]onsider the version of panpsychism that holds that there is a material universe, and that a fundamental and universal (and not at all understood) property of all matter, from the smallest portion up, is that it is *experience-realizing* or *experience involving*.”

(Strawson, 1994: 76) Essentially, matter is so constituted as to have as an inherent property - experience - reside in it. This does not help clear out - if it even makes sense to talk about matter in these terms - what portion of matter has experientiality. Are all the constituents of matter experiential? How can matter, which is commonly considered to be a non-experiential phenomenon be experiential? And, most importantly, how can one go about in thinking about these issues? Strawson acknowledges this when saying that "... the panpsychist claim that all matter is experience-*realizing* preserves the asymmetry theory. It preserves the idea that there is some fundamental asymmetry in the status of experiential reality and nonexperiential reality given which it is correct to say that experience is based in or realized by...nonexperiential reality and incorrect to say [the opposite]." (Strawson, 2010: 76) He would then classify this view as a form of *asymmetrical materialism*. However, what if one considers that matter is so constituted as to argue that it is equally both experiential and non-experiential? This seems to offer an equal-status solution to the 'mind-body' problem, as an equal part of what constitutes human beings and the universe is experiential and non-experiential. On this view there is a fundamental ontological 'ground' in which mind and matter co-exist in a way that the mind-body problem can be put aside, and the question of metaphysical dualism does not arise. On the other hand, this view encounters a few difficulties: "Is equal status monism...necessarily a form of panpsychism? ... it seems that answer is 'No'. Equal-status monists need not be panpsychists, for they do not hold that all nonexperiential reality is intrinsically experience-involving. Equal-status monists can hold that some parts of matter are experience-involving and others are not..." furthermore one could get more technical and argue "that some particles come in two types...indistinguishable by physics, some of which are experience-involving and some of which are not." (Strawson, 2010: 77) In other words, one can argue that some parts of matter involve experience in *some* cases, whereas in most cases it does not constitute experience, while reality remains in some respects equally experiential and non-experiential. But this view is rather strange, if not outright incoherent, unless one defends a bizarre type of 'neutral monism' (which in this case would not be talked about as an equal-status view at all, as mentioned above) in which experience as such is not conscious as the term is currently understood. What necessarily follows from this argument, is that, if experience exists in a manner that is *completely alien* to one's conception of it, what sense does it make to say that experience is a fundamental aspect of the universe? After all, the only way conscious experience is known, is the fact that one is aware of it, in simply having ordinary conscious thoughts. This

asymmetrical claim seems to force two uses of the word ‘experience’, one is a technical term ‘experience-involving’ which exists in the word, in an utterly incomprehensible form, and then there is experience understood as human consciousness⁴². But this is confusing, because what can be said to be *equal* to what? For if experience exists in some cases, and non-experientiality exists in most cases, then this is not a comprehensible equal-status claim. Strawson notes an inconsistency in the view that equal-status monists cannot be panpsychists. “‘Dual-aspect’ theorists may consider themselves to be equal-status monists, but it is not clear that they can plausibly claim that experiential properties are to be found only in some cases-e.g. only when nonexperiential properties of the sort initiated by things like brains are also found – while denying any sort of dependency of the experiential on the nonexperiential. If they are really equal-status monists, there is pressure for them to be panpsychists...” (Strawson, 2010: 77)

Furthermore, there could also be other varieties of panpsychism which could be called something like ‘universal-consciousness’ panpsychism. Such a view could look like this: everything that exists is utterly out-and-out conscious, and this is the one thing that cannot be rationally doubted, as consciousness is everywhere, because it is the foundation of all forms of existence. The term ‘matter’ as commonly understood is misleading, and it should be replaced by ‘experience’ or “consciousness”⁴³. There is no need to postulate matter as non-experiential because it cannot be proven to exist, it is at best a conceptual confusion, and it is based on an illegitimate inference in the first place: thinking that the non-experiential exists. The brain cannot be said to be a form of matter, in this view, because any time any brain has ever been seen outside of a body, it has been seen by a person who is conscious. Thus, it is misleading to say that any specific organization of matter is experiential: trees, rocks, cars and everything else are conscious in a manner that is familiar to peoples’ mode of understanding this term. Such a view gives human consciousness a unique insight into the nature of the universe, as all things share the same type of experientiality that people have, though the existence of such experientiality is not explained. Are airplanes as

⁴² Strawson could be interpreted as saying that there are properties in objects which allow the mind to comprehend them, such properties are also found in the mind in such a manner that the properties of the objects and the mind are able to interact. Otherwise claiming that experience exists as a matter of fact or theoretical utility is difficult to make sense of.

⁴³ Though one would be hard pressed to find a contemporary philosopher literally say that tables are conscious or have some sort of awareness of the environment around them. David Chalmers offers a thought experiment on how an argument remotely similar to this might proceed. See (Chalmers, David. 1996: 293-297) in a section titled *What’s it like to be a thermostat?*

experiential as cars, and are they less experiential than water? All these ordinary objects have consciousness much in the way people are conscious. How this process would work out in detail, remains very obscure. It seems to be an extreme speculation, to seriously entertain the idea that ordinary objects have any kind of experience that matches or even comes close to approximating human mental life, and even non-human animal awareness. Strawson does not talk about this type pansychism in *Mental Reality*, but such a view should be at least registered as an alternative.

This portion on panpsychism in *Mental Reality* would later be developed to become Strawson's most famous argument. His latter version of panpsychism is not mentioned under the *terms* of 'materialist panpsychism' (though he uses the term 'asymmetrical materialist monism' for a variety of this view). *Mental Reality* is the one book in Strawson's entire oeuvre in which he considers all these metaphysical positions in such depth and detail, and he even discusses all the possible coherent combinations that could be developed under the title of 'monism' and 'dualisms'⁴⁴. One can see in detail how all these views can combine and in what ways they are inconsistent or in what way they compliment with each other. Much of this depends on the intended use of a specific metaphysical terminology, and what assumptions or inclinations are associated with the use of these terms. It is useful to be systematic in the development of a metaphysical position, as each step in the argument is liable to be dismissed (though not concussively so) if terms are left too ambiguous, and other viewpoints are not at least considered to some extent. Thus, the point of 'agnosticism' in 'agnostic materialism' is important to remember, indeed is crucial, because any metaphysical view can be adopted depending on one's beliefs, and it is not possible to refute the idea that human beings came into existence at this very moment, and that all history is simply an illusion. It is even possible to argue that one's current state of existence is due to a brain being stimulated by a complex machine. This does not mean that two metaphysical views are possible at the same time, it is not possible - or at least it is incoherent - to defend, for example, 'Vat-idealism' and 'immaterialism' at the same time, but besides some exceptions, most types of arguments are possible to articulate, and none of them are refutable, thus each metaphysical view should be tampered with agnosticism. However, for present purposes, it is not necessary to point out all possible combinations, as these views do not contribute to Strawson's evolution on his

⁴⁴ See *Mental Reality* pp.120-144 for information on all the possible combinations of each metaphysical view, including a useful chart found on p.121.

views of physicalism, and more importantly, his development of a fresh and tightly argued version of panpsychism, which has revitalized much debate in contemporary metaphysics⁴⁵. The following section will attempt to sketch out Strawson's more mature, and contemporary views on the issues that concern his more developed metaphysics, and this turn will go from 'agnostic material' to real or realistic materialism, which will be explored next, though the 'agnosticism' is never far removed from his mind at any moment.

⁴⁵ One can point to the works of David Skrbina, particularly *Panpsychism in the West* (2005), and one can also look at the numerous replies by various philosophers in relation to Strawson's 'realistic monism' *Consciousness and Its Place in Nature* (2006), as well as Philip Goff's *Consciousness and Fundamental Reality* (2017), among others.

3.0 Introducing Real Materialism

After having looked at different varieties of monist views, as well as looking at Strawson's early agnostic materialism, it is now time to consider Strawson's more elaborate and comprehensive metaphysical view, which he calls "real materialism." Simply stated, real materialism is the view that *everything* that concretely exists is physical. By 'everything' one should have in mind *every possible thing in existence* to be physical. One of the more important aspects of real materialism, the reason it has the word 'real' in its name is that it takes experience to be the most well-known and obvious fact about human beings. Anyone who doubts that experience is not a completely physical phenomenon would not be a real materialist, in Strawson's use of the term. It also will not do to consider everything that exists to be part of physics, for this would extend physics far-beyond its domain of applicability and would thus completely distort reality. When one looks at what physics is, what one discovers is simply a set of mathematical equations, and these mathematical equations only describe the structure of certain phenomena, leaving the inner intrinsic nature of reality untouched. Strawson, taking Russell as his guide will argue that physics is mathematical, precisely because people know very little about the nature of the world, not because they know a lot about it. Nevertheless, physics is obviously the most successful science by far, and it is an indispensable description of reality. Real materialists consider the experiential components and the non-experiential components which constitute the brain, as they are both equally real aspects of total reality. Nevertheless, Strawson hints more strongly at what would eventually become his panpsychist views when he says that the existence of non-experiential reality is only an assumption, with no evidence to show that such a thing exists.

Galen Strawson's 'real materialism' is one of the most ambitious and comprehensive arguments in favor of a particular style of physicalism given in contemporary philosophy⁴⁶. It will also lead

⁴⁶ Other materialists, namely eliminativists like Dennett, Patricia Churchland (mentioned respectively in footnotes 27 and 28) believe that consciousness is either a kind of illusion, as Dennett seems to say, or either beliefs and experiences are liable to be dismissed as a type of 'folk psychology' in the case of Patricia Churchland. Contemporary eliminativism, though not necessarily labeled as 'materialist' or 'eliminativists', continues to be a popular view in modern philosophy as the works of Ross and Ladyman in *Everything Must Go: Metaphysics Naturalized* (2009) as well as Alex Rosenberg's *The Atheists Guide to Reality: Enjoying Life Without Illusions* (2011). Not that Ladyman, Ross or Rosenberg all share the same views (neither is the case with Dennett and Churchland), but the essential perspective that everything has a more *fundamental* reality, namely that which the scientific world-view gives human beings, is of *greater value* than other kinds of knowledge, is never far from what these philosophers argue. The difference between these authors and Strawson is substantial: Strawson takes experience to be the most evident and obvious fact of existence, and at no point even considers claiming that consciousness is either 'illusory', or that

to the elaboration of his panpsychist arguments that require some serious consideration before adopting whatever position one takes regarding the nature of reality. It is also, in terms of tone and force of argumentation, more forceful and arguably more persuasive than the ‘agnostic materialism’ found in *Mental Reality*. So, what does Strawson argue when he puts forth his doctrine of ‘real materialism’? He starts off by saying that “Materialism is the view that every real, concrete phenomenon in the universe is physical.” (Strawson, 2008: 19) ‘Phenomena’ here should be taken to mean anything that exists, without giving any privileged ontological status to anything else. There is no experiential over and above the non-experiential, or using a slightly different terminology, there is no mental, *over and above* the physical. ‘Concrete’ in this sentence simply means not being abstract – Strawson mentions the word ‘concrete’ because it has been held by many philosophers and mathematicians that numbers are perfectly real things, whose nature is abstract. Another, more popular view about contemporary conventional materialists is that it takes the descriptions of physics to be everything that there is⁴⁷. However, as Strawson notes “... it seems unwise to burden materialism – the view that every real concrete phenomenon in the universe is *physical* – with a commitment to the descriptive completeness of *physics* more or less as we know it. There may be physical phenomena which physics (and any non-revolutionary extension of it) cannot describe, and of which it has no inkling...” (Strawson, 2008: 19) This comment suggests that ‘realistic materialism’ is as large in scope as even the most extreme forms⁴⁸ of reductionist philosophy may be, as everything (and this means *absolutely everything*) that exists is completely physical, but *not everything that exists can be described, and much less understood,*

beliefs are a part of ‘folk science’ or are in some sense secondary to physics, and less still that physics or the sciences generally will ever explain everything there is to now about the nature of reality.

⁴⁷ Rosenberg, for example, goes very far in this assertion when he states that “[a]s for the rest of reality above the subatomic, all we need to know is what things physically composed of and how the parts are arranged in order to explain and predict their behavior to equal detail and precision. That goes for people too. Physics is *causally closed* and *causally complete*... *The physical fixes all the facts.*” (Rosenberg, 2011: 24-25) It seems as if physics will soon be able to explain the great works of literature, though how to proceed in doing this, is not terribly clear.

⁴⁸ Probably the most extreme version of reductionism is Alex Rosenberg. To take but one example of many Rosenberg asserts that “Scientism shows that the first-person [point of view] is an illusion. Even after scientism convinces us, we’ll continue to stick with the first person. But at least we’ll know that it’s another illusion of introspection and we’ll stop taking it seriously. We’ll give up all the answers to the persistent questions about free will, the self, the soul, and the meaning of life that the illusion generates.” He continues by stating “The physical facts fix all the facts. The mind is the brain... The fact that the mind is the brain guarantees that there is no free will.” (Rosenberg, 2011: 194-195) In this context it is important to keep in mind that by “physical” Rosenberg can be taken to mean “non-experiential” as used throughout this work. Rosenberg implies that non-experiential, quantifiable physics facts explain everything about existence. There is, of course, some arguments that Rosenberg offers to reach these conclusions, but these arguments aren’t very persuasive.

by the terms and concepts used in physics. “Physics is one thing,” however “the physical is another.” Physical, then, is a “natural kind term – it is the ultimate natural kind term...” Natural kinds, in analytic philosophy, have to do with kinds, or types that can be found in nature. Thus gold, H₂O, planets, *Canis lupus familiaris* (called ‘dogs’ in ordinary life), *Cocos nucifera* (technical name for a palm tree), and similar things are all found in nature, independent of people’s conception of them (though the extent of the truth of this claim is not too clear) and *could*⁴⁹ be considered natural kinds at least provisionally, pending new scientific discoveries. So, when Strawson talks about ‘physical’ being the ultimate natural kind term, he simply means that everything that is found in nature *is* physical, but as Strawson suggests, people do not know what the limits of the natural are⁵⁰.

Without matter there wouldn’t be things in nature, because everything in nature is - by definition – modifications or configurations of physical stuff. This does not mean that things that are considered ‘artificial’ (made by human beings) such as plastic, tables and laptops are not physical, they are, it is only that all things are derived from ‘natural kinds’ and modified in a specific way as to constitute something artificial. Another way of putting this point would be to say that something artificial is something which is natural in origin, that has been modified for practical use, as is the case with technology, broadly defined⁵¹. The argument that all that exists is physical is not the same as implying that physics explains (or will be able to explain) everything, because “[c]urrent physics is profoundly beautiful and useful, but it is in a state of chronic internal tension”. This tension has to do with the apparent incompatibility between the theory of general relativity and quantum physics, which is one of the most difficult problem in contemporary physics. While admitting the usefulness and accuracy of physics, and putting aside its chronic inner tension, one should be aware that “...although physics appears to tell us a great deal about...the general structural or mathematical characteristics of the physical, it fails to give us any further insight into

⁴⁹ Though the topic of animal species being ‘natural kinds’ can be debated. As phenomena increase in complexity, the harder it becomes to determine whether they can be called ‘natural kinds’ or not.

⁵⁰ Chomsky says something similar: “[t]here’s no boundary to what’s in chemistry. There’s no boundary to what’s in philosophy.” (Ludlow, 2011: 189) Naturalism is a precursor to science, and one cannot know beforehand what the limits to naturalism are, though this is not to say that naturalism is limitless. One can attempt to study how chemicals in the brain contribute to certain emotions, but it might not be possible to create something like a science of human nature, due to the complexity involved in such a feat.

⁵¹ See *The Referential Doctrine*, below, to see how technologies are not fixed entities in the natural world, and almost any object can be considered to be ‘technological’, such as a hammer or a door, etc.

the nature of whatever it is that has these structural or mathematical characteristics...” (Strawson, 2008: 20) The reason for which physics is directly responsible for many of the most important discoveries in history, in terms of giving a descriptive account of how the world works, is that it outlines the structure of whatever may exist in the external (mind-independent) world, and gives us a description of that structure, but no more. These equations cannot explain, nor get anywhere near, the nature of whatever it is that is being described by mathematical formulas.

In *Real Materialism* Strawson is more explicit in the terminology he uses, as he adopts the term ‘experiential’ and ‘nonexperiential’ more than he did in *Mental Reality* and does not slide as often to ‘mental’ and ‘nonmental’ talk, which can be slippery terms. In talking about terminology, the following question naturally arises, why does Strawson refer to his version of materialism as ‘*real* materialism⁵²’, instead of ‘agnostic materialism’ as he did in *Mental Reality*? There is no textual evidence that suggests that Strawson does not still think that any metaphysical views must be tampered with agnosticism. Rather, the shift in emphasis is meant to emphasize that ‘ordinary (contemporary) materialists’ are *not* real materialists when it comes to the mind. However, the question still persists: what is the use of the word ‘real’ in ‘real materialism’ supposed to convey? It is the view that “Realistic materialists – realistic anybody – must grant that experiential [mental] phenomena are real, concrete phenomena, for nothing in this life is more certain. They must therefore hold that they are physical phenomena.” That *nothing* in this life is more certain than conscious awareness was already discussed by others, notably Descartes in the seventeenth century, though he came to formulate his metaphysics in a dualist manner, unlike Strawson. It may sound weird to go against common sense intuition, which frequently can have a dualist outlook as a default position of matter and mind being separate qualities. As Strawson points out “[i]t may also sound odd to use ‘physical’ to characterize mental phenomena like experiential phenomena: many materialists talk about the mental and the physical as if they were opposed categories. But this...is like talking about cows and animals as if they were opposed categories.” Presumably, this mental physical talk is meant to “[try] to distinguish, within the realm of the physical [what is ‘mental’ and what is not]” (Strawson, 2008: 21) It is *this* question, the relationship between the

⁵² Though Strawson has even used the term ‘Adductive materialism’, as opposed to ‘reductive materialism’ because “the physical must be something more than we ordinarily conceive it to be...” (Bayne & Montague, 2011: 288). One can at least be certain that experience is something wholly physical, whatever else the physical may be. However, for present purposes the term ‘real materialism’ is the most consistent term for Strawson’s metaphysics.

experiential and the non-experiential, which is how the ‘mind-body’ problem can be reformulated in a coherent manner. Again, lest it be suggested that Strawson is drawing a picture that takes the form of an obscure substance dualism, it is important to remember that *both* the brain and experience (which covers consciousness) are physical, one (the brain) is no more physical than the other (experience): “Realistic- real -materialists must agree that the total physical existence and activity of the brain of an ordinary, living person, considered over time, is *constituted* by experiential phenomena (if only in part) in every sense in which it is constituted (in part) by non-experiential phenomena characterizable by physics.” (Strawson, 2008: 22) There is a further question that can be posed: must materialists in Strawson’s sense necessarily be monists, considering that what is being postulated consists of experientiality and non-experientiality? He seems to allow for this option when he states that “[m]any would say Yes, on the grounds that it is not remotely realistic to suppose either that there is, or might be, no non-mental or non-experiential being at all...For the purposes of this paper I will *assume* [that this is the case] ...But it is at best an assumption.” (Strawson, 2008: 23) This statement should serve as a note of caution, in that this assumption *may not be true* because there is no way to know that non-experiential matter exists, which is not the case of experience, which is immediate and indubitable.

One could ask why Strawson, as he himself asks, would take such a version of materialism and use the word ‘mental’ (or experiential) *as a positive descriptive term* within this metaphysical framework, as opposed to the non-mental (non-experiential) ‘physical’. There is a solid argument that can be given for this decision: “The terminological reason is simply that we do not have a convenient positive term for the non-mental... The philosophical reason is very old: it is that we have direct acquaintance with – know – fundamental features of the mental nature of (physical) reality just in having experience in the way we do, in a way that has no parallel in the case of any non-mental features of (physical) reality.” (Strawson, 2008: 25) Strawson further argues that Bertrand Russell, in his book *The Analysis of Matter* (1927), was essentially correct when he said that we have no knowledge of the intrinsic nature of the non-experiential (Russell talks about ‘matter’), except in so far as they are captured in experience, which is a property of the experiential (mental). This is not to say that experience is the *only* aspect of the mental, it is very likely that there is more to the mental than experience, but it the fundamental feature of human awareness. The only point in which Strawson disagrees with Russell is that “...the spacetime character of the world *is* part of its intrinsic character” and that, because of this, “we may have some knowledge

of this spacetime character.” (Strawson, 2008: 25) In other words, whatever knowledge people have of nature - in so far as much of it is provisional and subject to being modified- as described by physics, it is only through mathematical formulas that this knowledge is attained, and furthermore, this knowledge is attained by virtue of how mathematics works as it is only a description of the structural properties of the world and not its inner character. However, in already knowing something about mathematics as applied to the world, some knowledge of the character of fundamental reality is known, however slight it may be. The claim that in having experiences the way people do, there is a sense in which the knowledge which is attained about the nature of reality “as it is in itself” is somewhat complex but could be expressed in the following manner.

The basic argument is that the human mind is structured in such a manner as to filter the sense-data of the external world in such a way that the external world is made intelligible to human beings specifically. A person can see certain wavelengths of light and can hear certain sounds - so long as they remain within a certain light and decibel range respectively. Reality will be different for a dog, which can't see many of the colors human beings see, and octopuses cannot hear, as they lack the necessary auditory capacity and presumably a hypothetical alien species could have some senses or abilities that are completely inaccessible for human being. Although the main point of human intellectual and conceptual limitations was well established by Kant (with some antecedents⁵³), it is also defended by contemporary philosophers such as Chomsky⁵⁴ among others. However, Strawson does not think this is an impediment to understanding at least some of the aspects of reality as it is in itself: “To be is to be is to be somehow or other... And the way

⁵³ While Kant is famous for making the distinction between the world of appearances (the world of phenomena), on the one hand, and the external world (the noumenon, the world as it is in itself, outside the realm of human senses), it is a mistake to think Kant was the first one to make such a distinction. There is good evidence that the 17th century British Platonists, in particular, Ralph Cudworth was already talking about such a difference, in a somewhat similar terminology. The historian of philosophy, Arthur O. Lovejoy challenges Kant's claim to originality. Cudworth's philosophical contributions are not well known in philosophy, and his ideas are rarely presented. See *Essays Philosophical and Psychological* (1908) pp. 263-302. The following is an excerpt from Lovejoy's essay, where he cites Cudworth: “It is plain that there comes nothing to us from bodies without, but only local motion and pressure. Neither is sense itself the mere passion of those motions, but the perception of their passions in a way of fancy. *But sensible things themselves* (as, for example, light and colors) *are not known and understood either by the passion of the fancy of sense, nor by anything merely foreign and adventitious, but by intelligible ideas exerted by the mind itself, that is, by something native and domestic to it...*” from this, Lovejoy concludes, with much plausibility that “Here then, we find the Kantian doctrine that even the presented object of sense is what it is because it gets its constitution from the constitution of the mind that apprehends it...” Lovejoy (1908. pp. 273-274)

⁵⁴See *Chomsky and His Critics* (2003) pp. 255-263 for more information on this view. For a brief outlook on Chomsky views on how we perceive reality, see Magee 1978 pp. 173-193.

something is just is how it is in itself... We acquire no reason to think (incoherently) that photons [or anything else] do not have some intrinsic nature at any given time So we may talk about reality as it is in itself. Such talk involves no (allegedly dubious) metaphysics of the Kantian kind.” (Strawson, 2008: 26) It is not a trivial matter to work out how such an argument could be laid out, because the way the external world is perceived by the mind is only the way people understand reality as human beings, and not some other creature. It is not outside the realms of possibility to think that the way human beings understand the world is not the *only* way to understand it, in a theoretical manner⁵⁵. Having stated this, Strawson is far from being the only philosopher that does not think that there is a problem in relation to the question⁵⁶ of whether we have knowledge of reality “as it is in itself.”

So much for the experiential and the world ‘as it is in itself.’ Can something be said about the term ‘nonmental’ (nonexperiential) that gives some *positive* content to a description of reality, as the term ‘mental’ (experiential) does? It’s hard to see how this is possible⁵⁷. Strawson adds that “[o]n one reading, Russell thinks not: the science of physics is our fundamental way of attempting to investigate the non-mental [non-experiential] being of physical reality ... ‘Physics is mathematical’, he says, ‘not because know so much about the physical world, but because we know so little...’ Is Russell right? ... It is potentially misleading...” (Strawson, 2008: 27) For one thing, Strawson is cautious when philosophers make metaphysical distinctions too quickly “I am not sure that the distinction between structure and quality is clear, or fundamental...”. What sense can be made in arguing that mathematics is so different from ordinary life as to claim that it has no positive contribution to make in our understanding of the world? While it is certainly true that the reason physics works so well is due to the applied use of mathematics, and this is because

⁵⁵The idea here is that, a hypothetical alien intelligence which possesses a much more complex and sophisticated brain, could have some innate capacity that allows it to understand the world theoretically in a way that it explains the world from a theoretical perspective in a much richer manner than current physics would ever be able to accomplish. This is speculation, but it could be plausible.

⁵⁶ Charles Sanders Peirce’s reading of Kant is more sympathetic, for Peirce states that “This third moment [of Kant’s thought] consists in the flat denial that the metaphysical conception do not apply to things themselves. Kant *never* said that. What he said that is that these conceptions [of the mind] do not apply beyond the limits of possible experience. But we have direct experience of things themselves.” Peirce. *Collected Papers* (1934) 6.96. Kant’s thought is the subject of much literature in philosophy. Whether Peirce is correct in stating that Kant never said that people do not have access to ‘things themselves’, the main question, namely do people have access to reality ‘in itself’, is debatable.

⁵⁷ In his more recent essay *Mind and Being* Strawson finds a word describing non-experiential being in a positive manner “I propose ‘hylal’, derived from the old Greek word for wood, which came to be used as a general term for matter conceived of as something entirely nonexperiential (consider Berkeley “Hylas”)” (Strawson, 2017: 88)

people know so little about the world, it does not follow that this ‘structure specifying’ content of physics does not add definite knowledge of some (however small) aspect of intrinsic reality. “One might dramatize Russell’s idea by saying that physics can be thought of as a formal system which remains, in a particular sense, an *uninterpreted* formal system, even though we know that it *applies* to something... we may suppose that the universe has features that are structurally isomorphic to the structures delineated in the equation of physics but we have no account of the non-structural nature of the thing that has the structure(s) in question.” (Strawson, 2008: 28) However this argument creates a cleavage in nature that need not exist, and as already stated, Strawson argues that the very fact that some description of the structure of the universe can be given, then this constitutes a fact about the nature of the universe. This makes sense, after all, human beings belong to the natural world, as do non-human animals, and it would be quite difficult and perhaps impossible, to say that people have no contact *at all* with the external world, unless one believes in solipsism of some kind, or takes some version of ‘vat idealism’ to be true. Although this last point cannot be definitively refuted, as skepticism and the skeptical attitude are not prone to dismissal from arguments alone, if one seeks a path forward in understanding reality, then one must grant a point of contact with the external, mind-independent world – mathematics would be such a contact, and perhaps, in some cases, natural language as well, as will be shown in the referential doctrine, below.

3.1: The World ‘In-Itself’: Conceiving Reality

What needs to be clarified is the question of how much of the world are we acquainted with, and this is by no means a trivial. At least in *Real Materialism*, Strawson believes that some people have a decent grasp on *some* of the fundamental aspects of the world, and so argues against Russell: “I am tempted to hold up my hands... and consider... the space- by which I mean spatial extension- between them and say: ‘This is space (spatial extension) ... I know its nature, in some very fundamental respect, whatever else I do not know about it...’ On this view the ordinary concept of space...has correct non-structural descriptive content.” (Strawson, 2008: 29) This is a strong claim, as there is a crucial difference between human experiences *of* space, and the nature of space *itself*. In fact, some of the German Idealists, most notably Kant, thought that space and time provide people with sensible intuitions, “which are principles of a priori knowledge...”⁵⁸, thus it is not possible, in this view, to step outside of space and time to judge them ‘objectively’, as they are always already given. To talk about knowing space ‘intrinsically’ outside of the mind is misleading, as it is only possible to talk about space within human cognitive capabilities. One could be right in claiming that an experience is a correct experience ‘in-itself’, in so far as it is human experience, while doubting that the total nature of space itself is the same one people have experience of. For present purposes, it is worth continuing to see Strawson’s argument as he articulates it, in order to try and understand ‘real materialism’.

Strawson is aware of such criticisms about the nature of reality ‘in itself’ and argues that some of the people who may disagree with him on this topic, specifically Russellians, suffer from “excessive empiricism.” He continues by arguing that: “They (Russellians) take it that the notion of spacial extension – or indeed shape – that we possess is... informed by the character of our sensory experiences of specific kinds are necessary for the acquisition of concepts like SHAPE or

⁵⁸ Space and time, for Kant, form part of the ‘transcendental aesthetic’ which are the conditions of possibility of sensibility, whereas with ‘transcendental logic’, Kant says that “we isolate the understanding... and we take from our knowledge only that part of thought which has its origin solely in the understanding.” Furthermore, Kant adds that “The use of this pure knowledge has as its condition that objects to which it can be applied are given in intuition. For without intuition, all our knowledge is without objects, and therefore remains entirely empty.” (Kant, 2007: 93). Whereas the transcendental aesthetic affects people’s sensibilities (space and time), Kant’s ‘transcendental logic’ is concerned with what thought *alone* does with the objects it is presented to. There could be no knowledge of the world if empirical objects did not fit in with Kant’s logic, as it would not be possible to discriminate what the external world is presenting to the mind. The important point here, is that both in the case of Kant’s aesthetics as well as his logic, it is not possible to know these faculties ‘by themselves’, as they are the starting point for all people’s sensibilities and knowledge.

SPACE, in the case of beings like ourselves.” There are, clearly, other categories that could go in into the sensory experiences that are used to understand the world, such as TIME, SOLIDITY, EXTENSION and so on. However, Strawson elaborates on what he views as conceptual errors when he says “[i]t suffices to point out that exactly the same concept of shape – that is, *the* concept of shape, for there is only one – can plausibly supposed to be masterable by two different creatures, A and B, on the basis of experiences in entirely different sensory modalities familiar to us – sight and sound. One has to endorse a crude form of meaning-empiricism [to defend this view.]” (Strawson, 2008: 30) The point is that whatever concepts are used to understand the world can vary to some extent between different creatures, and because these conceptions can vary the understanding of the world is shaped or conditioned by the way each creature may interpret it⁵⁹. It is correct to say that different *animals* have different sensory modalities, but in the case of human beings - so far as necessary a-priori postulations are concerned - they must have *essentially* the same understanding of the world, as they belong to the same species, though superficial differences might remain⁶⁰. Other, perhaps more abstract qualities, such as color, taste and smell, (what are sometimes called ‘secondary qualities’⁶¹) can vary, and often do, but this would not affect in any significant way the shared understanding of the world people have in terms of its essential characteristics.

⁵⁹ This raises important questions about the foundations of people’s knowledge. It could be the case that another intelligent creature has not discovered Newtonian physics, whereas they might know about natural selection. Likewise, following this line of thinking, a different creature might know quantum physics in much greater detail than humans do, or they may have an even more foundational science that human beings can’t imagine. These are mentioned just for the sake of elucidating the importance of a creature’s cognitive structures.

⁶⁰ This is not to suggest that superficial differences in the case of human beings are not important. The difference in perception between a person who has poor vision compared to a person who has normal vision may make no practical difference to the external world itself, but it could be quite informative in understanding how the mind interprets the surrounding world. The same goes for people who are extraordinarily gifted, these special Individuals may discriminate more colors or smells, and although this does not affect the nature of the external world, a lot of discussion of ‘secondary qualities’ (see below) ensues as a result.

⁶¹ This famous distinction was made by John Locke in his famous *An Essay Concerning Human Understanding*, besides secondary qualities, such as those mentioned, there are primary qualities such as solidity, extension, motion, number and other features. The main distinction between primary and secondary qualities is that primary qualities are essential to the object whereas the secondary qualities are not essential and are produced by the primary qualities in the first place. For Locke’s discussion on these issues see *An Essay Concerning Human Understanding* Book II Chapter VIII ‘*Some Further Considerations Concerning Our Simple Ideas of Sensation*’. The bigger picture, at least since Kant’s views have become widespread, is that even primary qualities are merely the way the world *appears* to human beings, and need not be in the things-themselves, so properties like numbers and motion are the way the world is represented, not the way the world *is*. Things like individuation of the external world, and arguably, motion, are the ‘lenses’ in which we must see the world, given the creatures that human beings are. Some of the properties that fall under primary qualities are debated by Strawson, though even these qualifications can subject to dispute.

It becomes difficult to talk sensibly about people's a-priori concepts, as they are *presupposed* in talking about the world: "it is precisely because pure form is such a *very* 'abstract affair', as Russell says, that the concept of shape or space that A and B can have in common in spite of their different sensory experiences cannot be supposed to be a matter of pure form. To think that it is a matter of pure form is to miss out on the spatiality of space. [Thus] it is, precisely a concept." (Strawson, 2008: 30) One can put aside the important issue that Strawson is discussing here, that of the conception that other species may have of the world around them, which at the very least serves as a reminder of the ignorance human beings have of the external world, and still find plenty of conceptual difficulties that require elucidation. This is especially the case when the topic under discussion is the nature of certain non-experiential features of the world because, evidently, it is much more difficult to talk about negative features of the world, than positive ones. Strawson acknowledges this by stating that "Obviously, questions arise about the precise nature of the non-structural content of concepts like SHAPE and SPACE, about what it is, exactly, to grasp the spatiality of space, given that SHAPE and SPACE may be fully shared by A, B, superbats, and others. But in the present context I am inclined to hold up my hands again." The example given by Strawson of looking at the space between his hands⁶² can serve to elucidate the way people may try to think about the various concepts that allows for any type of understanding whatsoever. It would be reasonable to think that there is something essentially correct about the way people view the world. This raises the question of what it would mean to say that the way human beings ordinarily see the world is in some respects constituent of the way the world actually is. The fact that most people take for granted a naïve realism as a starting point in examining the world, does not mean that this starting point shows the world as it actually is. This topic has important consequences related to epistemology that has had a significant impact in the way human beings attempt to understand the world through science. It is quite likely that in many features, the way the world is represented to human beings is radically limited and distorted by the very organs that allow the world to be seen in the first place.

Strawson grants this essential point: "I am not claiming that we do know something about the non-structural nature of space, only that we may... This claim allows, as it should, that there may well

⁶² This is of course, a reference to G.E. Moore's arguments given in *Proof of an External World*, where Moore uses his hands as an example against certain strands of skepticism and idealism.

be more to space than we can know. SPACE, like PHYSICAL, is a natural kind concept, and there are some atrociously good reasons for thinking that is more to space than we know or can fully understand.” (Strawson, 2008: 32) Many of these points are well supported by discoveries and advances made in physics during the 20th century. The strangeness of quantum physics, for example, points⁶³ to a world that is extremely different from the ordinary world of tables and chairs in which people live their ordinary lives. Even in less complex physics (such as Newtonian physics) common-sense understanding of the world does not suffice for intuitive explanations of the world, as common sense does not capture the way the world works, it simply lacks the correct tools for an intuitive grasp of the relevant theoretical knowledge. But even granting this picture of the world given by physics, it is quite plausible that there are aspects of reality which people simply cannot know. It is hard to transmit knowledge when it comes to physics, as the domain which is studied by this field focuses on the very small, and it is not the type of ‘world’ people are used to dealing with. Similar things can be said of other, so called ‘hard sciences’, as is the case with chemistry or biology, which are extremely complex⁶⁴. Strawson for one⁶⁵, agrees: “I

⁶³ As if Newtonian Mechanics were not strange enough already (compared with the ‘mechanical philosophy’- see Chomsky’s section ‘*Mysterianism: the limits of Cognition*’, below.), consider the following quote by physicist Bruce Schumm, in relation to how quantum field theory is not at odds with the classical understanding of fields: “Where do the photons come from that are exchanged between the two electrons as they repel each other? They come from nowhere. They are created (thrown) and absorbed or annihilated (caught) for the sole purpose of transmitting the force. Before and after their brief passage between the electrons, they did not exist.” (Schumm, B. *Deep Down Things*. 2004. p.56) The precise technical details need not be of concern, what should be shocking is the idea of something coming out of *nothing*. As science has progressed, common-sense understanding of the world has had to be refined. It’s important, however, to stress that just because common-sense does not explain the world in terms of physics, it does not mean that common sense is either false or illusory. Different domains of knowledge require different branches of knowledge to solve.

⁶⁴ The reason for the difficulty in more complex sciences such as chemistry, biology and especially psychology is that the issues that are dealt with are much more complex. Physics deals with very simple and small things like particles. Once biology enters the picture, the things that are being examined are organisms, and these have many more variables and properties that need to be taken into account. Once we leave behind biology and enter into psychology – the study of human behavior and mind, it’s even arguable that what is being talked about is not science, in the sense that physics or chemistry are sciences, though this does not imply that there is no good work in the social sciences in general, there clearly are, but the subjects are simply too big for systematic theories to be consistently discovered.

⁶⁵ Another, crucial work on a closely related issue, epistemology, called *Evidence and Enquiry: A Pragmatist Reconstruction of Epistemology* (Expanded Edition. 2009) by Susan Haack, concludes (on an attached essay called “Know is a Four-Letter Word”) (see pp. 301-329), “...[what] I most want to stress is the desirability of shifting attention from the (as I have argued) hopeless question, what the “correct” definition of knowledge is, to the (as I believe) merely difficult question, what makes a person more or less justified in believing something.” In other words, instead of arguing whether something is known or not known, attention should be focused on how is it that anyone is *justified* in believing that something constitutes better or worse evidence for believing something. However, the main point remains, it’s not possible to have, capital K “KNOWLEDGE” on practically any issue. And while Haack does not directly state this, it’s safe to conclude that this is related with the inherent difficulty of overcoming our ignorance about the world.

can't for one still can't fully understand how space and time can be interdependent in the way they demonstrably are. We are also told on very good authority that gravity is really just a matter of the 'curvature' of space, and that string theory is an immensely promising theory of matter... that entails that there are at least ten dimensions..." (Strawson, 2008: 32). However, counter-intuitive these results may seem when compared to common-sense observations and understanding, there is a silver-lining than can be extracted from these advancements in the understanding of the nature of the physical world: the traditional 'mind-body problem' dissolves. It's not tenable to maintain such a distinction when the *physical* world is so strange and bizarre. To state that there is something *other than* physical - the mental - which has properties that are incompatible with the material, becomes an incoherent argument – as Priestley points out, which is based entirely on ignorance.

What other concepts could people have in mind that could also be considered as also belonging to the world 'in itself'? There are plenty, but Strawson considers particularly the non-experiential topics of spin, mass and charge: "I think that our more particular spatial concepts of shape, size, position, distance and local motion...*may* also get something right about reality as it is in itself, and so contribute to the non-structural content of our general theoretical conception of the non-mental..." (Strawson, 2008: 33) It must be the case that at the very least *one* of the general concepts that the mind uses to interpret the world is accurate to at least some small degree, otherwise it would be quite difficult to justify a good portion of the success physics has had in recent human history. At the very least, it seems probable that distance between things in the world is an actual property of the world, irrespective of how the mind comes to understand it, otherwise much of astronomy seems to be no better than astrology or mere guess-work, but this is not the case. Strawson is aware of many of these difficulties and he cautions that "... one will have to bear in mind that our grasp of these things – any grasp of them over and above that which is conveyed by their intimate relation to concepts of space and time – is expressed merely in equations." (Strawson, 2008: 33) Again, Russell's philosophy is put forth, as they serve as a reminder of the way in which people can come to a direct connection with the world around them, in some theoretically coherent way, even if, to repeat, this says very little about the world. Nevertheless, it is something to have some mathematical knowledge of the world than none, and this mathematical connection with the world seems to be part of its intrinsic nature, which has allowed for very sophisticated technological developments and innovations, particularly in the 20th century where

cars, airplanes, the internet, and all other kinds of convenient things have been developed as people become more capable of manipulating certain aspects of the world.

An immediate objection that is likely to occur to someone who thinks that philosophical work is idle or not of much use, would be to argue that there are many a-priori elements employed in daily life which are irrelevant for science, but are of fundamental importance for everyday activity. Claims about a person seeing another person, or perceiving a tree, knowing that one is walking on the street, or knowing that the building in the corner is made of stone or that there is a screen in front of one's eyes are self-evident claims, and require no experiments⁶⁶. It is certainly not necessary to recur to mathematics in order to know that the events mentioned are things in the manifest world. This is correct, and is admitted by Strawson, who raises yet another point regarding these types of objections: "I agree that we know many such truths, but I take it, as a materialist, that hens are wholly made of the fundamental constituents of matter that physics discusses, and that when we consider our knowledge of these fundamental constituents we encounter the crucial and general sense in which we know nothing... about the [intrinsic] nature of matter." (Strawson, 2008: 34) A quick response to a comment such as this would be that there is knowledge, not only of the *mathematical* nature of the world, but there is also knowledge of carbon, hydrogen, quarks and so on, the things, or properties that make up everything that exists. One could also add that things, specifically biological things, from worms to cats to primates all the way 'up' to human beings, are not merely a summation of the scientific properties that make them up, and this would be true, as Strawson admits: "...but the present claim is not that a concrete phenomenon must be more than its properties, but that it *must be more* than its purely formal or structural properties... A concrete phenomenon must be more than its purely formal or structural properties, because

⁶⁶ Even so, the belief that science is the only thing that describes 'real reality', and that ordinary perception is mostly illusory or mistaken overlooks the fact that perception is what allows for science in the first place. As Raymond Tallis points out "... we have no good reason for believing that we have escaped from the illusion of perception into a world of objective, absolute, true-from-any-angle knowledge. For measurements which may have looked like the super-perception that led the way out of fallible and even illusory perception to true knowledge of the world, have seemed to transcend knowledge only by mislaying it." Furthermore, one should keep in mind that "Quantitative science deals either with primary qualities (which are expressed as empty abstract quantities) or secondary qualities reduced to quantities and the relation between quantities... Measurements are less super perceptions than non- or terminally thin perceptions... The 'view from nowhere' threatens, as we move to ever higher-order equations, to become a 'view of nothing'. (Tallis, 2005: 85) Science can only be enriched by 'ordinary perception', not impoverished or misled by it, for it is necessary for any appreciation of science (or anything else) whatsoever.

these, considered just as such, have a *purely abstract* mathematical representation, and are, concretely, nothing- nothing at all.” (Strawson, 2008: 35. Emphasis mine.)

So much for the structural component of human knowledge. It has been argued that our knowledge, in scientific terms, is essentially mathematical in nature, it has also been argued that the conceptions of nature which that do not enter into mathematics are essentially spatio-temporal and it has been said that there probably is much more to any of the conceptions than can be accounted for in scientific formula's, given people's mental limitations. So, what, then, is the point of sticking to any version of real materialism? Is it all empty and vacuous? No. For there is a crucial aspect of Strawson's view that must be remembered, namely, that experience, experientiality, the what-it's-likeness phenomenon of consciousness *is fully physical too*. This is put forcefully, when he states that “experiential phenomena...are as real as rocks, hence wholly physical, strictly on par with anything that is correctly characterized by physics. They [experiential phenomena] are part of fundamental reality, whatever is or is not the case.” (Strawson, 2008: 35). The following statement cannot be stressed enough: experience is as material as physical else that is considered physical, such as tables or trees⁶⁷, if this is denied then one is not a real materialist.

⁶⁷ This is not to say that because everything is material, everything must be the same way subjectively, this is clearly not the case. Experience certainly feels extremely different from non-experiential things ranging from tables and trees, though one cannot step outside one's mentality to compare it with anything else, the essential point remains untouched, given our ignorance of the material, and seeing no good reasons to introduce separate substances, experience is the single best example of materialism there is.

4.0) Consequences of Real Materialism

The central claim of Strawson's real materialism is easy to state: *everything* is physical. The consequences of such a view, however, are enormous. It is not enough to just think about the topic briefly and agree that everything that exists is physical, one should also get a feeling of vertigo and utter amazement at the view that the very thoughts one has about one's favorite novel, grabbing a stone from the earth, swimming in the river or listening to one's favorite musician are all manifestations of the same fundamental stuff: the "physical". It is essential, for Strawson, to feel bewildered at the realization that consciousness produced by one's brain is a completely physical phenomenon. This realization should also make one realize just how strange the physical is, and how ignorant people are regarding its nature. Most explanations eventually stop at a "that's just the way things go" level, but even though this is true, all it does is reveal the extent of human ignorance, which though being impossible to quantify, must be absolutely enormous. A bit of reflection is necessary before continuing. Real materialism, contrary to idealism, mentalism or any form of substance dualism argues that everything, *absolutely everything*, including these letters that are being read, and whatever thoughts may be passing through one's minds, the background noise that may or may not be present at this time, all of literature, film, history, medicine, emotions such as love, hate, pleasure and pain – *all* of it is out-and-out physical. Following Strawson's own advice upon encountering the idea that experience is matter too, he states that "[n]o one who doubts this is a true materialist. Partly for this reason, I think that genuine, reflective endorsement of materialism is a considerable achievement for anyone who has had a standard Western education," furthermore this must "at first provoke a feeling of deep bewilderment in anyone contemplating...the nature of the physical...". There is also a warning, which may seem to be issued too strongly for people who may be sympathetic to this version of physicalism, but who do not see why all of this should be surprising "If one has not felt a kind of vertigo of astonishment, when facing the thought, obligatory for all materialists, that consciousness is a wholly physical phenomenon in every respect, including every experiential respect – a sense of having been precipitated into a completely new confrontation with the utter strangeness of the physical... then one hasn't begun to be a thoughtful materialist. One hasn't got to the starting line." (Strawson, 2008: 36) This may well seem to be overstating the point, but here one would have to agree with

Plato, when says “Wonder is the only beginning of philosophy.⁶⁸” Nevertheless, with considerable mental training, it is possible to become a genuine materialist⁶⁹

It is no doubt hard, if not downright impossible, to maintain this type of attitude for extended periods of time, nevertheless, as the metaphysical thesis now stands, there are no other realistic alternatives. As Strawson points out, this whole process “involves a profound reseating of one’s *intuitive* theoretical understanding of nature” (my emphasis). The word ‘intuitive’ is quite important for the next point (indeed for explanations of *any* kind) because - this is a point that Strawson does not raise as many times as it could be raised - “...what we think of as real understanding of a natural phenomenon is always at bottom a certain kind of *feeling*, and it is always and necessarily relative to other things one just takes for granted, finds intuitive, feels comfortable with. This is as true in science as it is in common life.” (Strawson, 2008: 37) A good deal of the conceptions people have, whether they are refined, scientific conceptions or less-reflexive ‘folk-psychology’, end in a kind of feeling of understanding a ‘this explanation can go no further’ type of sensation. Common examples can suffice such as seeing a dog jumping playfully with its owner or a child kicking a rubber ball, one does not need a complex theory to understand that this is simply a case of a dog playing with his owner or what trajectory the ball will take once it is kicked, this much is understood. If this kind of feeling were not held for most of the situations in daily life, then *nothing* would be understood, and people would find themselves in a state of constant anxiety and uncertainty. Even for very complex scientific theories, there comes a point in which one must simply say, for example, that light interacts with a black hole in X manner, and nothing further can be said about it. However, one must be careful in reaching these conclusions too hastily as there are many differences between the ordinary world and the scientific image of the world. In fact, numerous times the conceptions people had of the ordinary world turn out to be way off the mark, in relation to the scientific explanation of the phenomena in question.⁷⁰ This is recognized by Strawson as well: “But in this case [billiard balls hitting each other] there is

⁶⁸ See Plato *Theaetetus*

⁶⁹ To be fair, one can accept Strawson’s basic formulation under a different label, so long as one can defend the view that there is only one type of thing which all things are made of. A person who would also fit the label of a materialist would be Chomsky, though he calls himself a ‘methodological naturalist’. See Chomsky, *New Horizons in The Study of Language and Mind* 2000, pp.79-83

⁷⁰ To mention but one example of how discoveries in science overturn common-sense conceptions and vague notions relating to the mind/brain, see Raymond Tallis’ *Aping Mankind* pp.29-37.

already a more accessible sense in which I don't really *understand* what is going on,...and If I were to ask for...an explanation, in terms of impact and energy transfer...this would [lead to]...further question...[that would] end with a reply that is not an explanation..." (Strawson, 2008: 37) and, inevitably, the final answer would be that this is the way these phenomena work. All this talk about how explanations work, may help someone understand Strawson's peculiar form of materialism. It is a form of acceptance and humility about the nature of the world that brings forth the extent of the ignorance people have about the nature of reality.

4.1: Non-Experiential Reality in Real Materialism

If this all seems too abstract, it may be tempting to look at the most successful of the sciences, physics, to see if it can help shed some light on the phenomena of experience, after all, the brain is made of the same particles that make up the universe. However, this does not seem to help, especially when quantum physics, the most successful branch of physics is investigated: "It is often said that that quantum physics is deeply counterintuitive...but no one seems to find it puzzling to suppose that it deals with wholly physical phenomena." Having granted this, "when we try to integrate conscious-experience terms with the terms of physics (and common-sense physics), we find that they entirely lack any such felt theoretical homogeneity, or non-heterogeneity." (Strawson, 2008: 38) In other words, given that quantum mechanics is entirely a physical (non-experiential) phenomenon, how is it that tiny particles in peoples' brain 'give rise to' evidently experiential phenomena? This difference between experiential and nonexperiential phenomena could lead one to adopt an experiential-and-non-experiential type of monism (see M&P monism, above) or a form of substance dualism, but this may be too hasty. As Strawson notes "...there is nothing inimical [hostile] in the possession of non-experiential being [existence of things] that we know to be intrinsically inimical to the possession of experiential being: we simply do not know enough about the nature of non-experiential being to have any good reasons to suppose that this might be so." (Strawson, 2008: 39) It is clear that Strawson is using an argument similar to Priestley's which is based on people's ignorance to point out that it may be mistaken to think that there is any sort of clash between the conception of the experiential (mental) and the non-experiential (physical), there may be no reason to suppose that non-experiential being isn't mental (experiential), in some respects. The important thing to be aware of is that "Substance dualism may have looked like a plausible response to the mind-body problem...for classical

mechanistic materialism, according to which the physical world consists of entirely of small, solid, intrinsically inert particles in motion, [which] was then the dominant view [of the world] ...” (Strawson, 2008: 40) This *specific kind* of mechanistic view of the world is no longer held today by contemporary scientists, due primarily to the paradigm shifting discoveries made by Isaac Newton, whose importance for the contemporary understanding of the physical world is immense⁷¹. Strawson points out that the “strict mechanistic understanding of the physical world was fatally undermined in 1687, when Newton published his *Principia*.” With the publication of Newton’s *Philosophiæ Naturalis Principia Mathematica*, came the discovery of the laws of motion and gravity, which showed that the world does not work like a machine⁷² and that forces that cannot be seen, much less intuitively understood, govern the way the world works. Despite this monumental achievement in human thought and intellectual history, many contemporary thinkers continue to hold the view that people have a good grasp of the nature of the nonexperiential (physical) and that this understanding remains quite natural from a common-sense perspective, but scientific and philosophical problems do not advance based on common sense conceptions – in fact, the opposite is often the case, as common sense have been proven to be wrong time and time again, when talking about certain aspects of the external, mind-independent. In any case, Newtonian mechanics shows that the world works in a non-mechanical manner, despite the misunderstanding that Newton showed the world to be mechanical.

The point of highlighting one’s ignorance of the nature of non-experiential reality is that realistic materialism “... requires draining one’s conceptions of the non-experiential physical of any element that, in a puzzling world, makes it seem especially puzzling that the experiential is physical.” What is so important about stressing the nature of the ignorance people have regarding the nature of the non-experiential (the physical)? It is because it has become fashionable to try to do away, or minimize the role of the experiential, and explain it exclusively from a non-experiential perspective, so in the end everything is explained away in terms of neurophysiology,

⁷¹ For a look at the impact that Newton had not only in science, but also philosophy and how the distinction between the two came about, see E.A Burt’s *The Metaphysical Foundations of Modern Science* 2003 pp.15-25 and pp-207-279. Also see how Strawson fits into the philosophical landscape in a post-Newtonian philosophical scene below in *Chomsky on Galen Strawson Realistic Monism*.

⁷² For more information on this very important and misunderstood topic see pp.175-186 below.

using terms borrowed from neuroscience.⁷³ These philosophers “think we have to drain our conception of the experiential of any element that produces special puzzlement, leaving our existing conception of the non-experiential [physical] in place.” But, since there is no good conception of the non-experiential at all, and all that remains if one puts the non-experiential aside is the experiential, then Strawson states that “no substantial draining can be done on the experiential side.” An immediate argument, that is somewhat technical, arises rather soon. If the experiential is looked at in trying to give an account for it from a non-experiential perspective, then it can be argued that most of the things seen and perceived are mere appearances. Colors, tastes and sounds, among other things, are not necessary for the existence of the world. In fact, so the argument goes, these appearances tell us nothing about the actual nature of reality. However, this argument completely misses the point about experiential reality for “The way colour-experience [or sound, or pain or any experience] is experientially, for the subject of experience who has it, part of its essential nature – its ultimate reality – as a physical phenomenon.” (Strawson, 2008: 41)

It is one thing to say that color is not an intrinsic property of the mind-independent world, it is a whole other issue to deny that any *private* experience, whether of color, pain, joy or anything else is not a part of the natural world. It’s *evidently* part of the physical world as presented to human beings, and nothing is more certain than these phenomenal qualities. There should be absolutely no need to argue for the existence of experience. Whatever else may be true or false about the world – even in the extreme case of a dream-like ‘vat-idealism’, the physical reality of these ‘secondary qualities’ cannot be doubted. Another problem altogether is *why* is it not possible to explain these experiential (mental) phenomena with non-experiential facts (concerning the way the brain functions in terms of neuro-chemical activity.) So far, there has been no progress on the question as to how to measure or explain subjective experiential facts from non-experiential observations. There comes a point in which if certain natural phenomena seem *too* obvious, then it makes no sense to doubt it, and to doubt the single thing which one can be certain of, would be

⁷³ Which is not to deny that neuroscience, and the cognitive sciences as well play an extremely important role in understanding how the brain works, though much is still unknown about the brain. An obvious, though often overlooked distinction is between what the brain does and what *people* do. Brains do not see, taste, smell or experience pleasure, *people* do. For discussion on this issue see Raymond Tallis and the limits of neuroscience, below. Another book that deals with these topics is *The Philosophical Foundations of Neuroscience* (2003) by M.R Bennett and P.M.S Hacker

that experiential phenomena exist. In fact, to doubt this begs the question, because one then begins to doubt the very thing that allows for observation and questioning of any kind to occur. If this remains problematic from a theoretical standpoint, then too bad for theories – the domain of the mental may be outside the scope of science. This may be an area which will remain in obscurity so long as human beings remain human beings and may forever be outside the domain of explanations.

An inescapable phenomenological fact, a fact pertaining to lived conscious experience that is central to realistic materialism, that the world is viewed in two ‘spheres’, roughly speaking. It is not possible to live life without a constant stream or pulse of experiential episodes, after all, this is the aspect of human life which is the most obvious fact of existence. On the other hand, one is well aware that a massive amount of the world is non-experiential. All kinds of inanimate objects, as well as human and non-human body processes occur all the time and people do not assume that these processes have experience. How then, does one proceed into trying to clear up, or reconcile, this conceptual muddle of two seemingly disparate properties? One way to proceed in trying to avoid feeling overwhelmed by this issue is to consider following a simple progression in thinking about Scandinavian cheese, as Strawson suggests: “At first...one takes it that is simply solid stuff, non-particulate...Then...one learns that [this cheese] ...is composed of distinct atoms - particles that cohere more or less closely together to make up objects.” However, there are still plenty of surprises, so far as discoveries go because “...one [goes on] to learn that these atoms are themselves made up of tiny, separate particles, and full of empty space themselves.” Furthermore, “[o]ne learns that a physical object like the earth or a person is almost all empty space. One learns that matter is not at all what one thought.” (Strawson, 2008: 42) The bigger, slightly more paradoxical view remains, concerning the nature of the non-experiential. Although physics says that solid objects are, at bottom⁷⁴, quite removed from any ordinary conception of what ‘concreteness’ usually entails in ordinary thought.

⁷⁴ The cosmologist and physicist Sean Carroll says that “Particles and forces are reasonable guesses for what the world is made of, the fundamental stuff that the quantum theory of reality describes. And that’s almost true, but not quite.” The picture of the universe now posits something else, instead of particles and forces as being more fundamental “Our best theory of the world... takes unification one step further, to say that both particles and forces arise out of *fields*. A field is a kind of the opposite of a particle; while a particle has a specific location in space, a field is something that stretches all through space, taking on some particular value at every point.” Furthermore, Carroll states that “Modern physics says that the particles and forces that make up atoms all arise out of fields. That viewpoint is called *quantum field theory*.” See Carroll, 2016: 172-173). See also the whole of chapter 22 for more information on the Core Theory.

From a phenomenological perspective, all ordinary objects seem to remain solid and dense, if one does not pause to consider the elementary particles that constitute ordinary objects. And in a sense, this type of conception of solidity is very useful, because even though there are atoms, these atoms appear as “miniscule, grainy bits of ultimate stuff that are in themselves perfectly solid... And one may say that these, strictly speaking, are matter: matter as such.” This idea of a fundamental solidity that composes all the smallest of particles remained pretty much the standard view in physics, until the beginning of the twentieth century. Then something important was discovered that changed this whole worldview: “its most dramatic blow [came about with] ... quantum mechanics, in which neither the nucleus nor the electron of an atom are straight-up solid objects, and are much more naturally thought as fields.” However, quantum theory is still even more complex than the image given so far, especially when compared to common-sense⁷⁵, because what Strawson has called “... ‘empty space – the supposed vacuum – ...is understood to be simply the lowest energy state of fields like the electron, proton, and photon fields. It turns out to be something which ‘has structure...’ and can do work.”

It has been remarked numerous times that quantum theory is very complicated and because of this, not much is understood about it, but the discovery of this complex area in physics can certainly be called the final nail in the coffin for ‘classical materialism’ which conceives of the world as something essentially solid, in many or most respects. In fact, “...matter is a form of energy, and [is] interconvertible with it... To put it dramatically: physics thinks of matter considered in its non-experiential being as a thing of spacetime-located forces, energy, fields, and it is only natural to conceive of consciousness...as a spacetime-located form or manifestation of energy, as a kind of force...” (Strawson, 2008: 43-44). This latest view of the universe, however, does not stop people

⁷⁵ This view is not held by all scientists, as quantum physics leaves open a rather large room for interpretation of the data. One such scientist who holds that quantum theory, is on the whole actually intuitive, according to Henry Stapp “Schoolchildren need to be *taught* that the solid-looking table [consists of]... mostly empty space, in which tiny atomic particles are buzzing around... [but] [h]ow do our subjective experiences of the visible properties emerge from this conceptually and causally self-sufficient classically conceived reality? ... human intuition is not the immediate grasping of the classical-physics-type character of the external world. It is rather that one’s own conscious subjective efforts can influence the experiences that follow. Any conception of nature that makes this... intuition an illusion is counterintuitive... What is ... intuitive is the continually reconfirmed fact that our conscious effort can influence [some] experiential feedback. A ... scientific theory needs at the very least to explain this connection in a rational way to be in line with intuition.” See *Information and the Nature of Reality* (2010) p.144. Davies, Paul and Henrick, Niels. Ed. This quote is likely influenced by information-theoretical conceptions of nature in which ‘yes’ and ‘no’ questions can be posed to nature and an answer can be received. This doctrine is called ‘it from bit’ which originated from American physicist John Archibald Wheeler.

from thinking in a type of fundamental duality, though this need not be substance dualism. What needs to be kept in mind and repeated until it becomes 'common-sense' is that "[w]e just don't know enough about nature of matter considered in its non-experiential being; and doubtless *there are things we don't know about matter considered in its experiential [mental] being.*" (emphasis mine). A crucial - indeed fundamental - aspect of all this talk about the nature of the physical must be stated. After all, if the topic of discussion is a type of monism which takes matter to be the all-encompassing 'stuff' out of which everything is made and one still wishes to use this term to discuss - however briefly - an important metaphysical position then one must acknowledge its seriousness and importance. As Strawson says "[t]hose who think speculations like this are enjoyable but not really serious haven't really begun the task of being a materialist: they haven't understood the strangeness of the physical and the extent of our ignorance." (Strawson, 2008: 44) Well-grounded, and thoughtful speculations about the nature of the world is not idle curiosity, it is a necessary activity for those who seek to understand the world with as much clarity as can be attained by finite and fallible creatures like human beings. Since science can only go so far, there is no better way than to take the results of the sciences in order to get a philosophical grasp of the world, however limited in may be.

4.2) Real Materialism and The Brain

What then is one to make about the organ through which thoughts emanate from? It seems quite likely that experiential phenomena come from the brain⁷⁶, at least in part. And it has already been argued that there is a difference in ‘common-sense’ perception between the experiential and the scientific understanding of the non-experiential aspects of the brain. Still, is there any way in which physics can help us understand the brain? Strawson would say yes: “...physics comes to our aid: there is a clear sense in which the best description of the non-experiential in *non-technical, common-sense terms* comes from physics...what...in common-sense terms, does physics find in the volume...occupied by a brain? [It is] not a sludgy mass, but an astoundingly (to us) insubstantial-seeming play of energy, and ethereally radiant vibrancy.” (Strawson, 2008: 44) There are indeed important things that physics tells us about the brain, not only is the brain quite insubstantial, from a physics perspective, it is also contrary to what would be expected from a ‘common-sense’, ordinary perspective. Instead of the brain being a solid chunk of concrete mass, physics tells us that most of the brain is actually almost completely insubstantial (and is like any other piece of ordinary matter in this regard) but it’s also brimming with activity. If one inspects even further, more bizarre discoveries about the brain-as-a-physical-object are discovered: “...this particular physical object...[has] remarkable properties: all the sweeping sheets and scudding clouds and trains of intraneuronal and interneuronal electrochemical activity which physics (in conjunction with neurophysiology) apprehends as further level of extraordinarily complex intensities of movement...” Surely the brain is as bizarre a piece of matter as anything else that has been studied by human beings, if not more so. However, this should not lead anyone to think that the brain is some kind of object that has properties that go against the laws of nature, as Strawson states “[should we be surprised] at the thought that the experiential is physical [material]? I do not think so. Brains are special, but they are not strange.” It can be quite difficult not to think of the brain as something strange, but on reflection, this would be a mistake. Because if the brain is looked at from a naturalist perspective, and one takes it merely as another part of nature, then it follows that nothing is *inherently* strange. Only people make judgements about anything being

⁷⁶ Though it is worth noting that Strawson does not consider consciousness to be deeply mysterious, for him consciousness is matter and is also the most secure type of knowledge available to be people. What is mysterious, on the other hand is the non-experiential. See: <https://www.nytimes.com/2016/05/16/opinion/consciousness-isnt-a-mystery-its-matter.html> for more information on this specific view.

strange and if strangeness is judged by ‘common sense’ conceptions, then virtually everything is strange. In so far as the brain is special this is because when it is compared with other chunks or objects of matter it has many properties that are not shared with other objects – including mental phenomena. Strawson who is referencing Gilbert Ryle’s famous book, *The Concept of Mind*, says “[t]he ghost in the machine is special, but it is certainly a machine, and the machine, like the rest of the physical world is already a bit of a ghost...”. (Strawson, 2008: 45) The phrase ‘the ghost in the machine’⁷⁷ is based on a critique of metaphysical dualism, where the ghost is taken to be some bizarre mental property that inhabits the machine which is the physical body. The problem is, as has been shown, what has been ‘taken out’ of this phrase is the *machine*, not the ghost, in so far as the body does not resemble a mechanical object. And these ghostly properties turn out to be experiential coming from a (largely non-experiential) body.

What are the apparent tensions that remain, when we consider the brain as the physical object and the mind-body problem, which continues to resurface? Strawson will briefly talk about three of big topics that occupy philosophers, and some scientists, when it comes to these issues. These three topics include ‘materialist eliminativism’, ‘the easy and hard problems of consciousness’ and ‘philosophical zombies. All these issues appear to attack or at least complicate the current picture of physicalism as has been stated so far, but, as will be shown, all three ideas, to different extents suffer from conceptual confusions regarding the nature of matter. Materialist eliminativists make a radical suggestion about the nature of experiential reality: these philosophers argue that materialists ought to ‘eliminate’ aspects of the experiential. According to people with eliminativist⁷⁸ tendencies, what is certain is that the world is that it is non-experiential (physical), and those things deemed ‘mental’ are either illusory or confused conceptions that fit into a misleading account of what is called ‘folk psychology’, namely, the view that ordinary, ‘common sense’ understanding of the world is wrong in so many respects that these beliefs should attempt

⁷⁷ Chomsky would disagree with Strawson’s phrasing here and would state quite firmly that “It is commonly believed that Newton showed that the world is a machine, following mechanical principles, and that we can therefore dismiss “the ghost in the machine,” the mind, with appropriate ridicule. The facts are the opposite: Newton exorcised the machine, leaving the ghost intact.” See: <https://chomsky.info/201401/> / On Chomsky’s exploration of these topics, the conclusion would be that world is ghostly, not machine-like. The difference between the world being a machine as opposed to it being a ghost, is substantial so far intelligibility is concerned.

⁷⁸ Once again, the people whom are called ‘eliminativists’ may not use this label on themselves, but the basic idea of focusing only on the non-experiential and downplaying mentality is a unifying theme. Churchland, Dennett, Ross and Ladyman as well as Rosenberg are all candidates for Strawson’s critiques..

to be reduced to mechanical processes in the brain. Never mind that human beings have only very recently developed or discovered science in its modern form, but those who think that the mental can be ‘reduced’ to the physical are quite mistaken as to what the physical is. In this respect “...eliminativists make the same mistake as Descartes – the mistake of assuming that they understand more about the nature of the physical than they do... They are so certain that the physical excludes the experiential that they are prepared to deny the reality of experiential in some (admittedly unclear) way...” For Strawson, this amounts to “...the most ridiculous claim ever made in philosophy”. (Strawson, 2008: 46). For whatever flaw there may be in the theoretical understanding of the nature of the experiential, it is impossible to doubt that it is the most certain knowledge there is, whatever else may fall or not fall within the scope of scientific investigation.

A second misconception about the brain as a as a physical (non-experiential) object can be attributed to the philosopher David Chalmers, who, in 1996 published a book titled *The Conscious Mind* which develops an idea which Chalmers had already been working on, in an essay titled *Facing Up to the Problem of Consciousness*. One famous distinction Chalmers made when talking about consciousness is the distinction between the ‘easy’ and ‘hard’ problems of consciousness. The ‘easy problems’ are related to the topics that are usually studied by neuroscience, such as when can one say that a brain is sleeping or when is it awake, the ability to discriminate sense-data within the brain and how information from the world is integrated in the brain, among other such topics. The ‘hard problem’, on the other hand, is how can an ‘objective’ non-experiential and physical thing like the brain give rise to a subjective and thus experiential account of the world. Is it even possible to measure objectively, subjective sensation and perspectives? In short, the ‘hard problem’ of consciousness is the problem of experience⁷⁹. The trouble with this distinction is that “It can be seriously misleading to talk about [this distinction] ... for this suggests that the problem is clearly posed. It is not, as Chomsky has observed.” Like the framework set up by the materialist eliminativists, the problem of Chalmers’ distinction between problems, is that “we have no

⁷⁹ Chalmers, now famous remark is “[t]he easy problems of consciousness are those that seem directly susceptible to the standard methods of cognitive science, whereby a phenomenon is explained in terms of computational or neural mechanisms. The hard problems are those that seem to resist those methods.” Some of the so-called ‘easy problems’ are ‘the reportability of mental states’, ‘the deliberate control of behavior’ and ‘the integration of information by a cognitive system’, among other topics. Chalmers, David. *Facing Up to the Problem of Consciousness Journal of Consciousness Studies* 2(3):200-19, 1995. It’s not at all clear that any of these ‘easy problems’ are ‘easy’, nor is the ‘hard problem’ more difficult than other problems concerning mentality, but Chalmers nevertheless states “The really hard problem of consciousness is the problem of experience.”

substantial positive fix on the non-structural nature of non-experiential reality, apart ... from its spatiotemporal characteristics.” (Strawson, 2008: 46) It turns out the easy problems are not easy to solve, nor is the hard problem possible to pose in any clear manner due to the difficulty that accompanies talking about the physical characterizes of the world.⁸⁰

The final issue relating to problems raised by the non-experiential character of the brain concerns a discussion in the philosophical literature that has to do with the thought-experiment of ‘philosophical zombies. This argument is developed, among other things, to try and show that there could in principle exist an indistinguishable-from-human-being ‘zombie’ that had no experiential character at all. If this could happen, then it can be claimed that either experientiality is not a fundamental property of human beings or that experience is not a particularly special aspect of matter. This type of argument could be taken to be an argument in favor of a variety of eliminativism. However, the first criticism of the zombie argument is not related to the nature of the non-experiential, but instead is focused on the problems with the idea of conceivability. If something is conceivable, then it is possible in principle, or so the argument goes, but there is no reason to believe that this is true “PHYSICAL is a natural-kind concept, and since we know that there is much we do not know about the nature of the physical, we cannot claim to know that an experienceless PDD [perfectly physical duplicate]... is even conceivable...” (Strawson, 2008: 47) The same problem recurs time and time again, the intrinsic knowledge about the nature of the physical is not well enough known to claim that Zombies are possible, in fact, empirical evidence points to the opposite conclusion.⁸¹ Another objection would be that it would be very difficult to determine if something behaves like a zombie, that it is in fact something with no experience, it is quite possible to have a creature with a rich mental life that does not behave in an observably intelligent manner.

After everything has been said about Strawson’s realistic materialism, does it even make sense to call such a view “materialism”? It has been argued that matter is mostly empty and is far removed

⁸⁰ For an in-depth article about the successes and failures of David Chalmers’ *The Conscious Mind*, see *Reflections of a Metaphysical Flaneur* (2014) by Raymond Tallis. Specifically look at chapter five ‘*David Chalmers Unsuccessful Search for the Conscious Mind*’. pp. 93-125.

⁸¹ See Edelman *Wider than The Sky* (2005) chapter 7 for some arguments as to why zombies are not possible given our current understanding of brain science. It’s also worth noticing that certain states that human beings have, such as sleepwalking or being in a drunken stupor, can mimic zombie behavior to some extent, for external activity can be seen by others, but these experiences only last for a period of time, and they are not sustainable. These exceptions though, do not suggest that experientiality is something human beings can do without.

from any ‘common sense’ conceptions people may have about it. That experientiality is a physical phenomenon on par, or even above the certainty that a rock is a physical phenomenon, is a persuasive point in realistic materialism. But a question still persists, if ‘materialism’ covers both the experiential and the non-experiential, doesn’t this cause a somewhat confusing form of equal-status monism? Strawson argues about these terminological issues that “...I’m not too troubled [about it]. In some moods I am prepared to call myself an experiential-and-non-experiential? -ist and think no more about the word ‘monism’. The expression ‘? -ist’ is a clever terminological invention, and is, in many respects quite accurate, when it is acknowledged how obscure the nature of reality is for human beings, as it reflects the deep bewilderment that should accompany inquiry into metaphysics. Strawson’s last argument on this whole topic is succinct “At the moment...the physics idea...that everything is made of some ultimate stuff – that the deep diversity of the universe is a matter of the same fundamental *ens* or *entia* – that...there is only one substance...[that is modified]...seems to me compelling as it is remarkable...” (Strawson, 2008: 51) What is important about real materialism is not so much that the topic under discussion is matter, but that the whole of the universe is a single, differentiated kind of stuff, which is a monist argument. The issue now is how does this monism lead Galen Strawson to postulate the necessity of panpsychism, and it is this topic that will be explored next.

5.0) The Scope of Strawson's Panpsychism:

When considering the nature of reality, at bottom, there are two fundamental properties that could be pointed to, either nature at bottom (in things called "ultimates") has experiential components, or it has non-experiential components, or it has both. What Strawson want to put into doubt is the view that deep-down things there is something *totally* and *completely* non-experiential in nature. But the problem soon becomes apparent, if there is at bottom only *completely* non-experiential phenomena, how is it that a new phenomenon, experience, can arise? For if there is nothing in virtue of which experiential phenomena can arise from completely non-experiential phenomena than the emergence of experience would have to be miraculous, meaning, not susceptible to naturalistic (nor any other type of) enquiry. Strawson points out that emergence cannot be brute or radical, there must be *something* about non-experiential stuff that allows for emergence of experiential stuff, there must be a metaphysical reason as to how experience can arise from non-experiential stuff, otherwise one is talking about magic or miracles, not naturalism or rational investigation. Given these difficulties, why commit oneself to the view that non-experiential phenomena exist? There is no evidence that such a thing exists in nature. If one admits that there must be something about non-experiential matter that makes is suited for experience, then one has already conceded the main point, that completely non-experiential matter does not exist. One could even go as far as trying to describe the biological phenomenon of life from a completely physics, chemistry and biology-based approach and get a full comprehensible explanation of things while leaving the problem of experience untouched. One must then deny the view that *completely* non-experiential phenomena exists or accept brute or radical emergence as an aspect of reality.

Panpsychism, or the view that there is mind everywhere, or specifically, in Strawson's case, that matter has experiential properties, or stronger still that matter is experientiality, is certainly Strawson's most ambitious and debated metaphysical view. Strawson wasn't always a panpsychist but had already started to think about this view while writing *Mental Reality*. Sometime later he adopted this view because he saw no better alternative to explain the phenomena of experience. It is worth noting that the shift in argumentation between *Real Materialism* and *Realistic Monism*, is rather strongly stated⁸², in that in the former, as well as in *Mental Reality*, non-experiential being

⁸² The first published version of *Real Materialism* came out in 2003, in a collection of essays dedicated towards Chomsky, titled *Chomsky and His Critics*, which came out 3 years prior to the publication of *Realistic Monism* which

posed no significant problem as a postulate of the things that make up the essential stuff of the universe, other than some remarks about the extent of human ignorance concerning the intrinsic nature of the physical. However, in *Realistic Monism* there is a simultaneous increase in the arguments for the ignorance of the non-experiential as well as an increased confidence that experiential reality is the only thing that can be known for certain, and not only in the case for human beings. Strawson begins his ‘realistic monism’ by pointing out the different ontological categories between the experiential and the non-experiential, so these details need not be explained again.

What is different this time around, is that Strawson introduces two new concepts, and these concepts Strawson calls ‘ultimates’ and ‘emergence’ respectively. ‘Ultimates’ can be considered for the sake of argument and illustration, to be the most basic constituents of reality, they can be postulated and argued for (or against), on whatever merits these arguments may have. Ultimates could be what makes up atoms, or they could well be simple particles that have certain characteristics, or maybe even the Higgs boson⁸³ particle. It is difficult to be sure given how far down ultimates may lie due to the continuous expansion of physics. Emergence, on the other hand is quite common in science and refers to an arising of new properties that did not exist previously in nature. Probably the most common case of emergence would be the case of liquidity arising from hydrogen and oxygen particles combining to ‘give out water’, but there are many quite surprising cases, for example, the case of human language⁸⁴, which appears to have arisen quite quickly, and such phenomenon was absent prior to its emergence. What do ultimates and emergence have to do with the physical and the mental? These questions will be put aside for the moment but will be returned to further down this work.

was published in 2006 in a collection of essays discussing the merits and problems of panpsychism, called *Consciousness and its Place in Nature*. The version of *Realistic Monism* that is being referenced here belongs to Strawson’s collection of essays *Real Material and Other Essays* from 2008, which contains minor updates in terminology. Although there are significant nudges towards panpsychism in *Real Materialism*, the arguments used in that essay do not hint at the extent towards which Strawson would argue for panpsychism, especially in his last second essay found in *Consciousness and Its Place in Nature*, titled *Panpsychism?*

⁸³ <https://www.scientificamerican.com/article/what-exactly-is-the-higgs/>

⁸⁴ Chomsky observes that, concerning the acquisition of language: “Somewhere along the line a mutation took place that led to a rewiring of the brain... mutations take place in an individual, not in a society, so what must have happened at some point is that that mutation took place in one person and then it would be transferred to offspring, or some offspring, at least. It was a pretty small breeding group. So it could be that if it gave you selectional advantage, they’d dominate the breeding group... maybe in a few generations.” (Chomsky 2000: 43)

Strawson restates the experiential and non-experiential arguments, but from a different, more in-depth perspective. He says that most people who call themselves physicalists (or materialists or non-experientialists) “are committed to the thesis that [NE] [Non-experiential] physical stuff is, in itself, in its fundamental nature, something wholly and utterly nonexperiential. I think that they take it... that ultimates are in themselves wholly and essentially non-experiential phenomena.” (RM. p. 60) That is, the fundamental things in nature whatever they end up being are by their very nature nonexperiential, so elementary particles or energy do not have any experience. This is the standard view held by most people, as it is also what common sense appears to show is the case in ordinary life. Strawson, however is not so clear about this “I do not...see how physicalists can leave this commitment unquestioned, if they are remotely realistic in their physicalism...” (Strawson, 2008: 60) because, as had been argued, experience is physical phenomena. What is the problem in believing in experiential and non-experiential phenomena? “The puzzle, for me, is that... [people who are] realistic physicalists...subscribe to NE [nonexperiential phenomena] – even when they... [agree] with Eddington that physical stuff has, in itself, ‘a nature capable of manifesting itself as mental activity’, that is as experience of consciousness.” (Strawson, 2008: 60) Is this position the one that was argued for by early-Strawson that of believing in two fundamental constituents of the universe, the experiential and the non-experiential actually plausible? At first glance, it does seem to be for the following reason: “Experiential phenomena are *emergent* phenomena. Conscious properties, experience properties, are emergent properties of wholly non-conscious, non-experiential phenomena.” (Strawson, 2008: 60)

This is the most plausible and commonly accepted view of consciousness not only in philosophy but in the sciences as well. But if one think about this issue for a bit, there seems to be a problem, or at least an inability of *theoretical* understanding of experiential phenomena arising out of non-experiential phenomena⁸⁵. If emergence is true, *wholly* and *completely* nonexperiential phenomena give rise to *wholly* and *completely* experiential phenomena. Strawson asks “Does this conception

⁸⁵Thomas Nagel gives a similar suggestion, but is skeptical about the explanatory power of panpsychism: “If we imagine explanation taking the form of an enlarged version of the natural order, with complex local phenomena formed by composition from universally available basic elements, it will depend on some kind of monism or panpsychism, rather than laws of psycho-physical emergence... However, it is not clear that this kind of reductive explanation could really render the result intelligible [understandable] in the way that particle physics or something comparable ostensibly renders the character and cosmological history of the nonliving material world intelligible. The protopsychic properties if all matter, on such a view, are postulated solely because they are needed to explain the appearance of consciousness at high levels of organic complexity.” *Mind and Cosmos*. (2012) pp.61-62

of emergence make sense? I think it is very, very hard to understand what it's supposed to involve. I think it is incoherent... [and this view is accepted] because it has been appealed to many times in the face of a seeming mystery." The argument used to explain a supposed parallel case of emergence, is the well-known case in which H₂O molecules, which are not individually liquid, combine in such a way as to give rise to liquidity. Another way of putting the same point is to say that ultimates are not intrinsically (in themselves or for themselves) liquid, so emergence is the only way to explain this phenomenon. Would this not be the same in the case of experience arising, or coming out of nonexperiential matter? Strawson doesn't agree: "I don't think so. The emergent character of liquidity relative to its non-liquid constituents... seems easy to grasp. We can easily make *intuitive* sense of the idea that certain kinds of molecules are so constituted they... give rise to... the phenomenon of liquidity." (Italics mine). 'Intuitive' is a crucial word here because given some knowledge of physics and chemistry, it is possible to make intuitive sense of how molecules give rise to liquidity. All that needs to be done is to find the correct circumstances and have the relevant information and it is possible to understand *theoretically* the phenomenon of liquidity, or so Strawson argues: "In... these cases, we move in a small set of conceptually homogeneous... physics notions with no sense of puzzlement. Using the notion of reduction in a familiar loose way, we can say that phenomena of liquidity reduce [to its constituent particles]. We can see that the phenomena of liquidity... *is wholly dependent on*, phenomena that do not ... involve liquidity at all." (Strawson, 2008: 61) The important point here is to have some kind of theoretical understanding of the issue of ordinary emergence in the natural world.

What should be kept in mind in all this discussion of emergence is a point that was touched upon above, is the idea of 'total dependence' on something that does not - or at least appears not to have - any of the properties that come out of the following state. It would be helpful to think about emergence in a more abstract manner: "It seems plain that there must be a fundamental sense in which an emergent phenomenon, say Y [phenomena], is wholly dependent of on that which it emerges from, say X [phenomena]. It seems, in fact, that this must be true by definition of 'emergent'..." (Strawson, 2008: 62) Any phenomenon, call it W, is wholly and completely *dependent* on (at least) some property or facet of phenomena D. In the case of liquidity D would be the individual particles and W would be liquid, so that when D's coalesce in a particular way, what arises is W. In the case of the brain what Strawson is arguing against is the idea that elementary particles E could combine in such a way as to create experientially in the brain or EB.

There is nothing in the nature of E, that is intrinsically mental or experiential. It is the ‘dependent on’ part that Strawson finds implausible when talking about how mentality can come arise from matter: “...the dependence requirement...causes problems when it comes to relating the supposedly emergent phenomena of experience to...wholly nonexperiential phenomena... For now it seems that if experiential phenomena [like color] ...really are somehow wholly dependent on non-experiential phenomena, as they must be if...they are truly emergent from them...” (Strawson, 2008: 62).

The problem with emergence in the case of experience has no theoretical analogy to anything that can be found in the natural sciences, including the case of liquidity. There is a fundamental sense in which experience cannot arise from *wholly* and *completely* nonexperiential phenomena, for it makes no sense, theoretically or intuitively⁸⁶. It is also difficult to consider the possibility that nonexperiential phenomena are *not* completely nonexperiential in *every* respect, because it would make no sense to call these phenomena completely nonexperiential. An analogy may be helpful in trying to grasp why the experiential cannot arise from the nonexperiential “[s]uppose that someone... proposes that all ultimates, are ... wholly unextended [do not take up any space] entities: that there is *no* sense in which...they [ultimates] are extended... [Then it is argued] that when collections of these entities stand in certain... relations, they give rise to extended concrete entities... in this sense [unextended ultimates are] emergent properties [that constitute extended entities].” (Strawson, 2008: 63) This argument would literally make no sense. These ‘ultimates’ are opposing phenomena, they are the *opposite* of each other. A similar argument can be given in the case of experientiality arising out of the nonexperiential making absolutely no sense. Someone who doubts this account may respond by saying that the case of unextended entities giving rise to

⁸⁶ Although Whitehead in his ‘process philosophy’ develops what could be considered a precursor to Strawson’s panpsychism, which was based on the science of his day. To the extent that Whitehead takes science seriously, an argument could be made that his panpsychism tries to be intuitive, in some respects. In *Process and Reality* Whitehead states that “The reformed subjectivist principle adopted by the philosophy of organism... states that it belongs to the nature of a ‘being’ that is a potential for every ‘becoming’. Thus all things are to be conceived as qualifications of actual occasions... *how* an actual entity becomes constitutes *what* that actual entity is.... The way in which one actual entity is qualified by other actual entities is the ‘experience’ of the actual world enjoyed by that actual entity, as subject. The subjectivist principle is that the whole universe consists of elements disclosed in the analysis of the experiences of subjects” (Whitehead, 1978: 166) Elsewhere in the same book, Whitehead makes a more direct statement: “An actual entity is a process in the course of which many operations with incomplete subjective unity terminate in a completed unity of operation, termed the satisfaction.” (p.219) There are other, more modern versions of panpsychism, such as Phillip Goff’s ‘Russellian monism’ or the panexperientialism of Sam Coleman, both discussed below. The point is that there are numerous ways to articulate panpsychism, some more intuitive than others.

extended entities is exactly how science works, so there should be no surprise or special bewilderment to be had in the case of experience arising out of non-experientiality. This answer, however, is not satisfactory for Strawson, who want to keep his views ‘metaphysically straight’, in terms of logical proceedings and intuitive hunches, because, as soon as one starts doing metaphysics, a good portion of this exercise is precisely in articulating intuitions in a logical manner, and in this sense, it is not possible to *comprehend* how experientiality emerging from non-experientiality.

The main problem of emergence remains and is put forth forcefully: “*Emergence can’t be brute*. It is built into the heart of the notion of emergence that emergence cannot be brute in the sense of there being absolutely no reason in the nature of things why the emerging thing is as it is (so that it is unintelligible even to God) ...” The notion of something being ‘unintelligible to God’ is meant to be taken as a metaphysical notion instead of an epistemic notion. The reason for this is that the concern in metaphysics is about the nature of the world and how it is composed and it is not related to a theory of knowledge in which the arguments are related to justifications of belief. If brute emergence is accepted, then not even an all-knowing entity like God could explain how experientiality comes into existence. The very idea of brute emergence (also called ‘radical emergence’) entails ‘...by definition a miracle every time it occurs’ because if it is taken to be true ‘...there is absolutely nothing about X, the emerged form, in virtue of which Y, the emerger, emerges from it.” Obviously, scientific explanation, and philosophical argumentation can make no appeal to miracles⁸⁷, because miracles by definition, are supernatural events that violate the laws of nature. Thus, there must be something about the physical which allows the experiential to exist in some manner. There is a clear difference between ordinary scientific emergence, as is the case of liquidity, and brute or radical emergence in which things happen for apparently no reason that can be discerned nor grasped either theoretically or intuitively. Who would argue for brute emergence, putting aside theological concerns and arguments? It is not too clear that the

⁸⁷ Unless one takes a non-theological meaning to the word ‘miracle’. The fact that whoever is reading this had a much higher chance of not being born, than being born, given the way reproduction works with human beings or the fact that one lives in this planet at all could be called miraculous. Also, if Strawson is wrong about the non-existence of non-experiential matter, and if the best that can be done to prove the existence of non-experientiality is to rely solely on intuitions, then by Strawson’s own admission, the ‘brute emergence’ of consciousness would be something akin to a miraculous occurrence. If consciousness is a miracle, then there is no reason to believe in other such miraculous occurrences, as long as the supernatural connotation is removed from this term.

characterization of a type of emergence as ‘brute’ or ‘radical’ would gain much adherents, if it means that miracles must be accepted. So, what causes anyone to think in these terms? It seems that radical emergence gained popularity “[b]y one of the most lethal processes of theory formation, or term formation, that there is. The notion of brute emergence marks a position that seemingly has to exist if one accepts both RP [real concrete phenomena] (or more simply, the reality of experience) and NE [non-experiential]. And since many are... committed to both RP and NE, the notion of brute emergence comes to feel substantial to them...” (Strawson, 2008: 65) The notion of brutal emergence leads not only to miracles but to all sort of strange events and occurrences which cannot be accounted by the sciences nor by ‘common sense’: “Brutality rules out nothing. If emergence can be brute, then it is fully intelligible to suppose that non-physical soul-stuff can arise out of physical stuff... I’m not even sure we can rule out the possibility of a negative number emerging from the addition of...positive numbers [if brute emergence were true].” The words ‘fully intelligible’ in this passage is not meant to be taken as a serious argument because as has been argued above, ‘understanding’ is, at bottom, nothing more than a certain kind of feeling. Negative numbers coming out of the addition of positive numbers or thinking that a soul substance exists in a separate-but-equal realm of existence does not ease in any way, the understanding-feeling that usually accompanies any type of explanation. Using brutal emergence as the main theoretical argument against the possibility of experience arising out of the non-experiential; the following claim is Strawson’s strongest and perhaps most controversial argument: “Returning to the case of experience, Occam[s] [razor] cuts it again, with truly devastating results. Given the undeniable reality of experience...why on earth...commit oneself to NE [the non-experiential]?” (Strawson, 2008: 66.) This could be taken as the most disputed facet of Strawson’s thought and although it may initially sound strange, it carries a certain force: there are no good reasons to think that nonexperiential matter exists. One is certain about the case of experience. It is the most immediate phenomenon that cannot be doubted, but one can only *believe* in the nonexperiential. There is no proof that can be given that nonexperiential matter exists at all. The best one can hope to do in this situation is to appeal to an intuition that nonexperiential matter exists.⁸⁸

⁸⁸ It is important to point out that Strawson’s view is not like Berkeley’s idealism, despite superficial similarities. Strawson believes that there is an external world “out there”, only that this external world is made up of matter that only has experiential components. Berkeley denies the existence of matter and believes that the world which exists

However, an immediate objection arises, what about the issue of life of earth? The common intuition is to think that before the process of natural selection started taking place, all that existed was nonexperiential stuff. At some point, which is not clear, some kind of experientiality must have emerged at some point in time. Strawson is used to these types of arguments and replies in turn by saying “[t]his very tired objection is always made in discussions of this sort... one cannot draw a parallel between the perceived problem of life and the perceived problem of experience in this way, arguing that the second problem will dissolve as the first one did, unless one considers life completely apart from experience.” The second problem consists in the denial that life could arise out of lifeless matter, however, as more was discovered about the world it turns out that life can emerge from matter, but Strawson does not see this argument posing a problem of the same level of complexity of the case of experience from the case of non-experience. He poses the problem in the following manner “...let us call life considered completely apart from experience life*.” The distinction that is now being made is simple, there is life *without* experience, which Strawson will call ‘life*’, and then there is experiential life, or simply ‘life’. The argument proceeds “Take away experience from life and it (life*) smoothly reduces to P phenomena [non-experiential matter] Our theory of the basic mechanism of life reduces to physics via chemistry.” In this case life remains nonexperiential so any evolution to more complex structures can, theoretically, go backwards in time and it would all remain non-experiential, there is no problem of consciousness in this scenario. This argument can be pushed to an extreme: “Suppose we have a machine that can duplicate any object by a process of rapid atom-by-atom assembly, and we have a child.” In this case, “We can explain its life* [the child’s] functions in exquisite detail in the terms of current sciences of physics, chemistry and biology. We cannot explain experience at all in these terms.” (Strawson, 2008: 67) These are clearly two separate issues. It is possible to explain the functions of organisms in biological terms and it is also possible to look at all the different organisms in the world and see what elementary things constitutes them as can be done with ordinary objects through physics. This cannot be done in the case of experience, which is essentially a subjective affair, regardless of studying the brain as a nonexperiential object. An

depends on people’s perception of it. This is not what Strawson is saying, when he says that we have no good reason to think that completely non-experiential matter exists. Matter exists but is much more extraordinary than Berkeley could have conceived at his time.

objective science of subjective experience is an oxymoron, a contradiction⁸⁹. As Strawson remarks “The problem of *experience* seem[s] as acute [as ever].” And furthermore, there is no good reason to think that it will be solved by the sciences, because this seems to be a matter of the limitations of innate human intellectual capacities.

Are there alternatives for this view? Is it the case that the non-experiential does not exist? Apparently, there are such alternatives, with some qualifications. Experience in the case of non-human animals and all forms of matter could be called ‘proto-experiential’, that is, matter can be considered a type of primitive and not well-conceptualized form of experience. This is not a big shift from traditional experientiality, though “it merely changes the terms. ‘Proto-experiential’ now means ‘intrinsically suited to constituting certain sorts of experiential phenomena in certain circumstances...’ And although such a terminological makes for an easier understanding as to how it is possible that non-experiential matter does not exist, this shift in term does not change the essential point: “If you take the word ‘proto-experiential’ to mean ‘not actually experiential, but just what is needed for experience’, then the gap is unabridged.” He goes on to say that “If you take [proto-experiential to] mean already intrinsically ...experiential, although very different, qualitatively, from the experience whose realizing ground we are supposing it to be’, you have conceded the fundamental point.” This latter part is important, because only human beings have access to one type of experience, namely, the experiences that are associated with being human. The problem which could arise is that people may think that the experiences that are common to people are also the same (or similar) to the “experience” other non-human animals and other forms of matter have. This argument carries little force. It is not realistic to attribute this state to other things, simply because they are not human beings. The sense in which experientiality is argued for, as a fundamental constituent of everything must be, at the same time very different from human experiences, but also, in some regards, similar enough as to not render the notion of experientiality completely and theoretically unintelligible. The way the issue is framed the mind-body problem

⁸⁹ Raymond Tallis points to a closely related topic when he says that: “No more metaphysical ice is cut by functional resonance imaging studies than by the non-glamorous folk observation that if you bang your head you become a bit odd or lose consciousness; or that decapitation is associated with a decline in IQ. Terms like ‘synapse’ and ‘frontal lobe’ only seem to carry greater philosophical authority than ‘bang on the head’ and ‘behaving oddly’ or ‘losing consciousness’. But they take us no further into the relationship between brain function and consciousness.” (Tallis, 2005: p.51) Although this comment is specifically targeted at attempts to explain human behavior by using non-experiential scientific terms, it could just as well apply to attempting to explain the ‘manifest world’, lived-life experience using scientific terminology, it does not fit.

does not arise, because there is only one kind of stuff at the bottom of things⁹⁰. This does not diminish the complications with this account of reality. While it is true that there is no way to prove that the non-experiential exists, to go as far as to claim that there is experience, of any kind, in rocks or grass, is also a step in a direction that cannot be settled by the facts, which is fine in so far as metaphysics looks for tight arguments when empirical facts leave the topic undecided. However, what Strawson says is: “This is the unargued *intuition*...Bear in mind that the non-experiential could not emerge from the wholly experiential is exactly parallel and unargued.” (Strawson, 2008: 68. Emphasis mine.) If the *wholly* experiential cannot emerge from the *wholly* non-experiential, then the non-experiential could not emerge from the *wholly* experiential, and this seems to be true by definition, because the word ‘wholly’ creates a gap that cannot be done away with. The benefit of arguing that everything is experiential is that the whole universe is made into a theoretical unity with no need of extra, mysterious properties that may complicate this picture unnecessarily. The drawback to this theoretical homogeneity is that it remains an intuition, and in many respects, it is more counterintuitive than the ‘common sense’ belief that there is experiential stuff and that there is nonexperiential stuff, though one must readily conceive that reality rarely coincides with ‘common sense’.⁹¹

If it is the case that the experience that is being talked about in this version of panpsychism is far removed from an ordinary understanding of this term, then, would it not be the case that this type of panpsychism is form of ‘neutral monism’? After all, the claim in neutral monism is that the universe is not made from mental and physical attributes *as these terms are commonly understood*. Is this not the case for non-human experience after all? The experiential ultimates that constitute an apple are presumably different from the experientiality that is found in a slug and both are

⁹⁰ With different manifestations of the same phenomenon. Tree’s would be constituted of experience-realized atoms, though the tree would not have any experience per se.

⁹¹ Although the topic under consideration is how intuitions may lead us to conclude that experientiality is a distinctive feature of the mental, as Strawson has also mentioned, the mental is not limited to the experiential, there is also plenty of sub-experiential activity, or to use a more commonly known word there ‘unconscious’ processes that go on in the mind, and all this activity is far removed from common-sense and awareness: Stanislas Dehaene, a neuroscientist who focuses on how the unconscious works says that: “unconscious processes are more objective than conscious ones. Our...[many]... unconscious neurons approximates the true probability distribution of the states of the world, while our consciousness shamelessly reduces it to all-or-none samples... An analogy may be useful: consciousness is like the spokesperson in a large institution...[that] In order to avoid drowning in a ... sea of facts, the president relies on short briefs compiled by a pyramidal staff, and he lets a single spokesperson express this “common wisdom.” Such a... use of resources is generally rational, even if it implies neglecting the subtle hints that could be the crucial signs that a dramatic event is brewing.” (Dehaene, 2014: 98-99). Even in the formation of intuitions, a lot of information has to be weighed in trying to reach a plausible conclusion, and this knowledge can often be wrong.

presumably very different from the experientiality found in human beings, why even use the term ‘experientiality’? Is it not more accurate to claim that there is a kind of neutral experience in the universe? Strawson does not agree for reasons already discussed that are worth repeating: “One cannot...[appeal]...to ‘neutral monism’ in any version that holds that really only [certain] properties are ultimately real, if this involves the view that the experiential and non-experiential properties are at bottom only appearance or seemings.” Experience is not liable to serious doubt⁹², and, in any case, the argument that the only access people have to nature are appearances “is incoherent, because experience – appearance, if you like – cannot itself be only appearance, that is, not really real, because there must be experience for there to be appearance...” (RM p.69)

Neutral monism is not an adequate substitute for Strawson because if it is claimed that the only things that are real, are a correct way of viewing reality called ‘X’, then experience, which is not ‘X’ - as neutral monism states that reality is neither mental nor physical as these terms are currently understood- then the conceptions people have cannot capture the way things are. However, since experience is a real phenomenon, it cannot be convincingly argued that X is completely inaccessible because there is a conception of X in experience. If experience is so wrong in relation to the conception of reality people have, then X could not even be properly formulated at all. Therefore, experience is a fundamental aspect of reality, however small and distorted it may be, because in having experience we have access to an aspect fundamental reality.

⁹² One is reminded of C.S Peirce’s now classical line “Let us not pretend to doubt in philosophy what we do not doubt in our hearts.” Although there is much truth in this claim, it’s also known that things that used to be certain, are now false, such as phrenology, heliocentrism and even substance dualism, among other views. Nevertheless. Peirce is quite appropriate given the circumstances.

5.1: Ultimates in *Realistic Monism*

The last section of *Realistic Monism* is a somewhat technical portion of the whole essay, not including the long follow up essay *Panpsychism?* Which will get full exposition afterwards. Leaving aside the issues of neutral monism, the focus of the essay turns to the idea of ‘ultimates’ and as a consequence, leads to the consideration of ‘micropsychism’. Ultimates are to be construed as a theoretical postulate that indicate the smallest, most fundamental constituents of reality. So far as physics is concerned, these ultimates are leptons and quarks⁹³ in that they cannot *currently* be ‘broken down’ any further.⁹⁴ The particles discovered in physics are not the main concern here, what is important is to discuss if it is possible to attribute a fundamental nature to these particles over and above what the mathematical formulas say about them. One idea that comes to mind rather quickly, is that the potential for life* is inherent in matter and although this thought may now be common knowledge, it is quite striking to consider how complex biological life is, compared to the simplicity of the state of existence of particles. But as Strawson has pointed out, if something exists, then it must have a certain intrinsic nature. A-priori, it is not self-evident that such simple particles should lead to anything as complex as a planet, much less to the complexity of very rudimentary bacteria. What about the phenomenon that allows people to discover these particles in the first place? If consciousness did not exist, no scientific discovery *whatever* could ever be made. If brute emergence is out of the picture, and proto-experientiality is not a particularly helpful idea, then there might be a way in which ‘ordinary’ emergence might be plausible: “...if experience like ours (our mouse experience, or sea-snail experience) emerges from something... then that something must already be experiential in some sense or other.”

All experience, not only human experience, must come from someplace and magic is not an explanation. Given the varieties of experiences that are found, *at least*, in the case of non-human

⁹³ At the time of writing, quarks and leptons are considered to be the smallest particles. Werner Loewenstein, a biophysicist, says that: “experiments [have]...gone as far as simulating conditions prevailing at 10^{-25} seconds after the Big Bang...In these conditions, electrons, protons, neutrinos and quarks are found to spring from pure energy...” In science, energy is what is found in all things, but the quark is special because “protons and neutrons were born from quarks. This forms the most elementary organizational level we now conceive of.” See Chapter 2 ‘Information Arrows’. *Physics in Mind*. 2013. Loewenstein, R. Werner.

⁹⁴ “Fundamental particles are either the building blocks of matter, called fermions, or the mediators of interactions, called bosons.” The concern here are the building blocks of matter. Fermions are divided into two groups of six: those that must bind together are called quarks and those that can exist independently are called leptons.” The important thing to highlight is that quarks and leptons, are the fundamental building blocks of matter according to the standard model of fundamental particles. For more information see <https://physics.info/standard/>

animals and hypothetically from the experience-constituting ultimates that are found in ordinary natural phenomena like pebbles and leaves (*if* they happen to be made of experience realizing ultimates), then the following formulation is plausible: “Assuming, then, that there is a plurality of physical ultimates, some of them at least must be intrinsically experiential, intrinsically experience-involving.” (Strawson, 2008: 70) Notice that the term ‘ultimates’ is in plural form, not in singular, and the importance of this is that there may be a wide variety of ‘ground stuff’ besides the experiential. It is very difficult to stipulate what other ultimates there may be other than experiential and non-experiential ultimates. Since the main topic of concern here is the topic of consciousness, no more ultimates need to be considered for the moment. While it is true that experiences in between species, like fish and horses experience, differ from whatever type of experience (if any) are to be had in the cases of sand and glass, there must be some element in common between these types of experiences, in a manner in which it is possible to say that experience is an ultimate. The same could also be the case, in the case of the non-experiential (if it exists), in which it is not too difficult to imagine that non-experiential properties are common in the case of humans, dogs and concrete.

The first step, then, if panpsychism is too strong, is to embrace the thesis of *micropsychism* “[g]iven that everything concrete is physical, and that everything physical is constituted out of physical ultimates, and that experience is part of concrete reality, it [micropsychism] seems the only reasonable position...” It is fairly clear that ‘the physical’ is an ultimate, given human cognitive limitations.⁹⁵ As stated, experience is physical, because there are no good reasons to believe that it is anything else than a different manifestation of the physical or, to put the matter in a conservative fashion, the safest way to proceed, so the argument goes, is to say that experience constitutes some of the ultimates out of which everything is made, these ultimates could be found either in each instance of an ultimate, or in some instances of them. One should be careful, however, to distinguish this from fully-fledged panpsychism, as “Micropsychism is not yet

⁹⁵ A related thought experiment would be to consider a more intelligent being, an alien of some variety, who has a more sophisticated mental capacity. It is perfectly conceivable that such an alien might be able to discern metaphysical differences between the physical and something else. Since there are no metaphysical alternatives, other than varieties of idealisms or neutral monism, then the best that can be done at the moment is to postulate real materialism. Notice that the *difference* between materialism, idealism and neutral monism is one of *emphasis* and not of ontological status, because, one cannot properly differentiate the mental from the material. One can say that the brain is composed of matter, and out of this matter, in combination with many other factors, thoughts arise. The strongest sensible duality that can be postulated are the one’s discussed above: the experiential and the non-experiential.

panpsychism, for as things stand realistic physicalists can conjecture that only some types of ultimates are intrinsically experiential.” As a consequence physicalists “... must allow that panpsychism may be true, and the big step has already taken with micropsychism, the admission that at least some experiential ultimates must be experiential.” As stated previously, people have access to the inner nature of the world in experiencing it. If one seeks full unity, a sense in which everything is connected and is a type of combination or a manifestation of the same substance, then it seems to be quite unlikely that there may be non-experientiality: “I would bet a lot against there being such radical heterogeneity at the very bottom of things. In fact (to disagree with my former self) it is hard to see why this view would not count as a form of dualism.” Strawson no longer holds that mental-and-physical (M&P) monism is the most realistic view in part because it *approaches* substance dualism, and the problem of causal interaction between two different types of ontological substances and how they can affect one another looks like an insoluble problem. “...[R]eal physicalism, entails panexperientialism or panpsychism. All physical stuff is energy, in one form or another, and all energy, I trow [believe], is an experience-involving phenomenon.”

Panexperientialism is the view that at the very bottom of things, there is experience, and although this sounds essentially the same as panpsychism, it is not. Panpsychism as articulated by Strawson states that the ultimates that exist involve experience, or are experience realizing, whereas some versions⁹⁶ of panexperientialist postulate experience as an ultimate, but not as an ultimate that requires ‘subjecthood’. In other words, for some types of panexperientialists, experience is to be found in the basic stuff nature is made of, but there is no subjective ‘self’, no ontologically distinct entity or object that has any perception, of whatever kind, regarding its experience. Strawson does not think it plausible to argue that there need be an extra or additional subject of experience. He argues “...experience is impossible without a subject of experience” What follows from this is rather unusual as “we have...right at the start, a rather large number of subjects of experience...” (Strawson, 2008: 71) This looks like one of the strangest, and potentially far-reaching claims that

⁹⁶ See for example Sam Coleman’s discussion on this topic for an elaboration of panexperientialism. See the collection of essays *Consciousness and its Place in Nature 2006*. Strawson, Galen. pp. 48-52. Coleman states that “If experience must permeate the lowest level, let us deny that mere experience requires subjecthood.” Further below in the same paragraph Coleman mentions that “...on the view thus entertained, experiential ultimates can upwardly determine subjects when arranged in the correct way.” (Strawson (et al), 2006: 49) This last view, appears to imply that subjecthood can arise with the correct combination of experiential ultimates, though it is difficult to make sense of the word ‘experience’, without a subject that has these experiences.

can be made in philosophy, how can it be that things like stones and pebble have inherent subjectivity? Strawson stops short of this view, as he argues that “[p]anpsychism certainly does not require one to hold the view that things like stones and tables are subjects of experience – this receives no support from the current line of thought...” however there is an issue that remains ripe for some type of solution “...we will need to address...[an]... objection to the idea that many subjects of experience can somehow constitute a single ‘larger’ subject of experience.” One way in to the argument that all subjects of experience make up a single large conscious subject is to focus on the issue of “...how macroexperientiality arises from microexperientiality, whereby [by the latter] I mean the experientiality of ultimates relative to which all experientiality is macroexperientiality” In other words, what remains to be solved is how these distinct experiences, which come from ultimates, can combine and create a large experiential creatures, like conscious cats, apes, and most importantly, human beings.

It is difficult to imagine how some tiny ultimates could be experiential in such a way that is almost completely unfamiliar to human understanding of them, and then argue, that these particles converge in such a way as to create the type of experiences people are familiar with. Presumably the same process goes on with all kinds of animals which people consider to be conscious in a manner that is somewhat recognizable to us, such as dogs, horses, racoons and dolphins, etc. There are creatures which human beings have little trouble recognizing as conscious, but the more important point here, and the most controversial one, is that every single thing in existence has some form of experientiality – is made of, in Strawson’s philosophy, experience and is thus experience-involving or experience-realizing. Experientiality exists in a manner that is completely foreign to human understanding and this is not nearly as strange as it sounds for one can also consider that “there is no more difficulty in the idea that...there may exist sensory modalities (qualitatively) unimaginable by us.” (Strawson, 2008: 72) This is the case with some animals that have sensations that are alien to ordinary human senses such as the olfactory range of dogs or the visual capacities of eagles, etc. It is also very likely that there exist some sensations that people have no idea of something which is different from the usual senses, but which allows for a different aspect of the world to be revealed in whatever creature may possess it. This could be the case of some alien species in some other planet somewhere in the universe, or it could be the case that there are some animals on Earth that have certain capacities that human beings simply cannot

recognize. The point here is simply to stipulate this possibility as it relates to existence of ultimates, which may exist, but could not be recognized as such.

If these ultimates exist in nature *brutal emergence* is prevented. When microexperientiality is considered to be of the kind of experience which is not familiar to people, *then it looks as if emergence* (but not brute or radical emergence) is a way to transition from ultimates to large-scale consciousness: "...experience ... is an emergent property of structures of ultimates whose individual experientiality no more resembles human or sea snail experientiality than an electron resembles a molecule, a neuron, a brain, or a human being." This theoretical unity provides a smooth and intelligible view of consciousness and how it is, in a variety of different forms, a fundamental part of reality. This view can also help one appreciate the fundamental unity of all things in nature. What this view cannot do is "advance our detailed understanding in any way." Furthermore, and contrary to the famous case of liquidity emerging from seemingly non-liquid molecules, this emergence of micro-to-macro experientiality "has nothing to offer to scientific test." (Strawson, 2008: 73) The scientific process cannot enter and confirm, or at least provisionally pass some kind of judgement, to this - or any other - form of general metaphysical claims. As has been shown stated above, consciousness – in its subjective qualitative state – is not a topic that can studied in non-experiential terms by definition. This does not mean that it is not possible to speculate, and do good thoughtful metaphysics concerning the nature of reality.

It would be a mistake not to consider how experience plays a role in the world even if it turns out that it cannot be studied in the same manner that the brain or the universe can be studied. Experience is an immediate and inseparable aspect of human life. This distinction between experience and the study of inherently non-experiential can be put to the side for the time being. An additional complication to this like of thinking is that metaphysics is often connected with people's 'common sense' perception of what occurs in ordinary life and one such 'common-sense' perception is the famous object-property distinction: The argument can be put simply, one can see a red ball on the floor, and can distinguish which properties make up this red ball. One can argue that roundness, redness and extension are the fundamental properties of a red ball. Of course, redness can be found in many things, as too can roundness and extension. One uses these properties to compare and contrast which objects share similarities, such as apples which can be red, have extension and balloons which are round and can be red be like apples, but neither are reliable to

be used as a ball. This type of object-property distinction can be used for anything, ranging from cars to human beings and the experiential and non-experiential features of the world, but what Strawson point out is that “...[these] distinctions [are] unexceptional in everyday life, but [they are] hopelessly superficial from the point of view of science and metaphysics...” furthermore, one should be reminded that “every object is a process” and one should “abandon the idea that there is any sharp or categorical distinction between an object and its propertiedness.” (Strawson, 2008: 73) Everything that is seen at a specific moment in time is a process of physical, chemical and biological change, so that strictly speaking, an object is not the *exact* same object through time.⁹⁷ If one is aware that there are no instances in which there are properties without any objects, it becomes less complex to think that there could be matter that exists *without* experience.

There are some topics that still need elucidation in this panpsychist exposition and realistic materialist viewpoint. What is the issue of supervenience about and is it a plausible view to hold? Can conscious experiences stack on one another? What are the epistemic ramifications of panpsychism? Is it possible to introspect into the nature of consciousness beyond what is immediately given in everyday experience? Can experiences add or stack up with each other to create different magnitudes of sensation? All these questions will be answered in the last and most comprehensive account of Galen Strawson’s considered views on the topic, which is his second essay *Panpsychism?* from the collection *Consciousness and Its Place in Nature*.

6.0) Strawson’s Subjects:

After looking at some of the various options and configurations of hypothetical “ultimates”, it is time to focus on another technical topic which has to do with subjects of experience. Strawson differentiates between three different types of subjects of experience which include: 1) thick subjects of experience which is present in the entirety of a creature 2) traditional subject of experience, which is the one most in agreement with common-sense in which there is some inner

⁹⁷ Take any object and use basic scientific knowledge and one realizes that atoms are constantly moving, that temperatures are constantly rising and falling and that there are all kind of microbes and bacteria on an object at any given time. If one adds to this some philosophical reflection, one will discover that it is the mind that ascribes continuity to things and not the objects themselves, that take up some space in the external, mind-independent world. Simple changes in perception can cause a person to identify the same object as different things, so something can be a knife for cutting food, and it can also be a weapon used for killing, or one could see a tree at one moment, and some modifications later, the tree can become a raft used to cross rivers, etc. For more information see ‘psychic continuity’, below.

mental continuity that is constitutive of a subject and 3) thin subjects of experience according to which there cannot be experience without a subject of experience. The main difference between the first two views of subjects of experience and the thin view of subjects, is that both thick and traditional conceptions of subjects of experience assume that there can be a subject, without there being an experience, such as being in state of dreamless sleep. For thin subjects of experience, a subject necessitates the experience, so even when someone is sleeping, they are still a subject of experience. Strawson believes that thin subjects of experience are what constitute ultimate reality, and thus argues that at bottom there are many subjects of experience – which does not imply that these ultimates are self-conscious in a manner that would be recognizable to the human case of consciousness. It only suffices to point out that “ultimates” are experiential *and* subjects of experience and there is *no* extra problem of intentionality that can be posed that would present a problem for this view.

Consciousness and Its Place in Nature is Strawson’s longest, and most detailed exposition of his considered view on the topic of panpsychism and the nature of experience. The format of this book is such that the first essay that appears in it is *Realistic Monism*, which is followed by various responses and objections by contemporary analytic philosophers. The final article is a ninety-plus page essay which is, in part, a reply to some of the criticisms found in the previous essays, though it is more accurately described as a full exposition of all the possible steps required to show why panpsychism is the most plausible metaphysical view available. Since the main topic of this section of this work is about Strawson’s philosophy, the criticisms made by these analytic philosophers will not be dealt with directly, though an exception will be made in the case of Philip Goff. Strawson’s final essay titled *Panpsychism? Reply to Commentators with a Celebration of Descartes* repeats many of the arguments which have already been explained in *Mental Reality* and *Real Materialism*, though it is a more systematic development of a single issue, panpsychism. Repetition will be avoided as much as necessary, though it is unavoidable in some instances. The portion of this essay that deals with “the Real Descartes”, that is, Descartes as he actually thought (or so Strawson argues) about the mind-body problem (as opposed to what is commonly attributed to him), will not be dealt with – even though it is revealing – as it is not necessary to understand Strawson’s own philosophy. Instead, this section will attempt to expand on some of the issues that remain unclear in *Real Materialism* and *Realistic Monism*. Some issues, like the differences between ‘thin’ and ‘thick’ subjects of experience, some of the forms of intentionality, the topic of

supervenience and whether consciousness can be compounded are either new or were not mentioned before in any significant detail.

One issue which was not explained at much length, is the issue of subjectivity when talking about experience as it relates to things which appear to not have any, such as tables, rocks or particles. According to Strawson, there are three conceptions of what subjects of experience amount to "...the *thick* conception according to which it is only human beings and other animals *considered as a whole* that are properly said to be subjects of experience." (Strawson, 2006: 191) The second conception of subjectivity is "the *traditional* conception of the subject, the traditional *inner* conception according to which the subject *properly or strictly speaking* is some sort of persisting, inner, mentally propertied entity or presence." The traditional conception of the subject is simply the view that one is, essentially, the same person one day to the next even if there may be instances in which no experiences are had. In this case, no interruptions from instances of dreamless sleep or the use of anesthetic for a surgery, alter the fact that one is talking about the same person who is having different experiences throughout there lives. The third conception of the subject of experience is unconventional, and not well-known, this view is "the thin conception according to which a subject of experience, a true and actual subject of experience, does not and cannot exist without experience also existing, experience which it is having itself."

The main, and crucial difference between the thick and traditional conceptions of subjectivity on the one hand, and the thin conception of the subject of experience on the other, is that in the thin conception of the subject of experience "there cannot be an actual subject *of* experience, at any given time, unless some *experiences* exists for it to be a subject *of*, at that time." Contrary to thick and traditional subjects of experiences, a thin subject of experience always requires an experience *and* a subject of experience simultaneously, as under this conception experience cannot be separated from a subject as would be the case in, for example, dreamless sleep. It is important to note that this conception of thin subjects of experience does not necessitate or "offer any support to the idea that thin subjects are short-lived or transient entities." (Strawson, 2006: 192) Although Strawson believes that selves are short lived entities⁹⁸, the thin conception of subjectivity does not

⁹⁸ Strawson develops the idea that the 'self', or more accurately, 'selves' (in the plural) exist as brief transient entities in each individual, and that the base conception of a 'self' is to be formulated by the idea that they are best thought of as 'single-as-subject-as-mental' in his book *Selves: An Essay in Revisionary Metaphysics*.

require this to be true and can be put aside. It is also argued that there is an ontological distinction between a subject and an experience, as appears to be the case in Sam Coleman's arguments⁹⁹, but Strawson precisely thinks that this is a mistaken view, which could be attributed to the metaphysical tradition of separating objects and their properties as mentioned above. If panpsychism is to be a real theory of the nature of the universe, then 'thin subjects' of experience is the most plausible path available. In fact, it may well be the case that there are as many subjects of experiences as there are ultimates, and it is not clear at all how many ultimates exist in nature. Strawson quotes his previous self when he argues "... I had thin subjects in mind when I noted in RMP [realistic monist physicalism] that panpsychism, conjoined with the assumption that there are many 'ultimates' or fundamental constituents of reality, leaves us with 'a rather large number of subjects of experience...'" (Strawson, 2006: 193) The question may remain as to why the 'thin' conception of subjects of experience is a better alternative than the 'thick' or 'traditional' conceptions. Given, as stated before, that there can be no objects without any properties (see pp.90, above.) , and that it makes little sense to attempt to force a cleavage between the two, then all ultimates must have a subjective aspect to them *for* the experiences to occur. As particles or ultimates come into existence and disappear again, each of those ultimates must have experientiality, and positing a 'thick' subject of experience , makes no sense, as this would create an artificial situation in which experience and subjects of experiences would be different things, and experiences cannot be said to float 'in air', without them being an experience for something. Another problem with other conceptions of the subject of experience is that ultimates are *extremely* small particles whose supposed experientiality must be *vastly* different from the experience that human beings have. A separate objection to the view that there are many subjects of experience comes from the issue of intentionality, which will be discussed next.

⁹⁹ After discussing some issues in the doctrine of ultimates as elaborated by Strawson, Coleman notes that "...there need be nothing about ultimates in virtue of which experiences emerges from them" because non-reductive physicalists (like Coleman), that is, people who reject the idea that mentality or experientiality can be explained by 'lower level' activities of the brain or even physics, "...rejects smallism." (Strawson, 2006: 42) Furthermore "the most natural way to understand the addition of experience to ontology is as the addition of a new *property*." (Strawson, 2006: 44)

6.1: The Concept of Intentionality

An important topic, that serves as an objection to the idea that experience requires a separate entity, a subject of experience, is tightly connected with the issue of ‘intentionality’. Intentionality is a fundamental topic in the study of consciousness and experientiality, but it is also of relevance to metaphysics, which talks about the most general aspects of the world. To try and get a better understanding of intentionality, and the role it plays in trying to understand the world, it will be necessary to go back to *Mental Reality*, as Strawson’s view on this topic has not changed significantly over time. The issue of intentionality in Strawson’s work will not be dealt with in full depth, as there are too many examples and counter examples that cover a vast range of issues, but some of the more relevant arguments for the topic of metaphysics will be explored. “According to one currently central use of the word ‘intentionality’, the property of intentionality is the property of “aboutness.” It is the property that a thought has when a thought is about something – say, the city of Rome.” When one is thinking, in order to make sense of any idea, this idea must be a thought about something, otherwise it would make little sense to talk about ideas. One can, in conversation or by oneself think about the weather, or today’s news or about a person. One can think about the letters that are currently in your field of vision and one can also think about a specific idea when one is reflecting on the topic of panpsychism. In any case, the term should be relatively clear, when thinking, a person usually has a thought about something, whether this thought is specific or general is of no concern for the time being. Strawson, however does not agree that intentionality is *the* fundamental property of the mental at all as “...in this use it seems clear that intentionality is not a fundamental feature of mental phenomena.” Because there are numerous instances in which consciousness is not about anything at all: “Sensations are among the clearest examples of mental phenomena, and they are not *necessarily* about anything at all. Sensations of pain, for example, are not about anything in the relevant sense.” Strawson is talking about the human case, but it could be expanded to encapsulate other animals.

It frequently occurs that one may be thinking about an appointment one has with the doctor in the afternoon, while at the same time having some pain going on at the same time. The issue arises when having an itch or when one is feeling hot or cold and with many other types of sensations¹⁰⁰.

¹⁰⁰ The issue is more complex, much of sensation depends on situational context. But the case remains that a great deal of sensations can be present at any given moment and there are no thoughts had about them.

This is not to deny that one can think about a specific sensation at this very moment and thus make one's thoughts be about an itch or the hot summer day, but these can, under ordinary circumstances, go on without thoughts about them. If one takes this into account, then, Strawson's views are plausible "...I wish to exercise the intuition that there is no deep problem or puzzle of intentionality that is genuinely distinct from the problem or puzzle of experience, so far as the task of giving a naturalistic, materialistic account of mind is concerned." (Strawson, 2010: 177) Outside of the topic of how subjective states interact with an 'objective', non-experiential world, intentionality, in Strawson's view, is only an issue that falls within the purview of experience and there is no extra complication about it. To try and sketch out how intentionality interacts with the world, both mind dependently, and perhaps in certain respects mind-independently, Strawson makes some distinctions regarding the status of what things people's intentionality are about.

The first distinction Strawson makes is between what he calls 'E intentionality' and 'N intentionality'. 'E intentionality' refers to *existent* or concrete things in the world, such as iron, Tokyo or a book. 'N intentionality' deals with things that are imaginary or *non-existent* such as talking about Pegasus, floating mountains or the city of El Dorado. To both E and N intentionality a further distinction can be made: Strawson argues that E intentionality can be categorized into E/C intentionality, that is, intentionality about *concrete* things like stones and dogs and E/A intentionality which is intentionality that is about *abstract* existent things such as numbers. In the case of 'N intentionality', the concrete and abstract distinction can be argued to also hold, as N/C intentionality "...may be about (or "about") nonexistent concrete objects like imaginary cats, platinum coat hangers, or unicorns." Whereas in the other case "...N/A intentional thoughts may be about, or may purport to be about, nonexistent abstract objects like round squares or the square root of the largest number." (Strawson, 2010: 178) It could also be said that the latter distinction between N/C and N/A intentionality does not make much sense, because it is not really possible to imagine a round circle or the largest number, so thoughts can't actually be *about* these things, but it is worth noting this distinction.¹⁰¹ In any case, and for the sake of simplicity, only E/C, N/C and E/A intentionality will be considered briefly.

¹⁰¹ While one could quibble about the demarcation between concrete and abstract entities in relation to intentionality, the difference between what is 'real' and what is 'existent' is rather useful. Though this distinction is rather old and can be traced to medieval philosophy, Susan Haack offers a formulation of these distinctions when she argues that, along with Peirce that "*Reality* and *existence*, Peirce argues, are different concepts—the former, which applies to

How do these distinctions help clear up confusions as to whether it is possible for experiences to exist outside of a subject of experience? E/C intentionality will be considered first, to try and help give an answer to this question. Strawson postulates two different people, call them X and Y and imagine that these two people are having, qualitatively, the same experience. Suppose individual X is thinking about a particularly long wall that is located in China, in this case the thought is about the Great Wall of China, though X does not remember the location. The argument goes that X is either thinking about the Great Wall or is reading or seeing a picture about this specific wall, and there is a direct causal connection between X's thoughts about this wall and X's reading about or seeing a picture of the wall, though again, X does not remember the specific location of this object. On the other hand, "Y's... experience is caused by a freak brainstorm. X's experience is correctly said to be about [the wall]; it has classic E/C intentionality. In contrast Y...experience is not about [the wall] at all. It is not about any real concrete object, although Y thinks so." (Strawson, 2010: 179) In these cases¹⁰² there is a vast difference in respects to E/C intentionality because although the experience is the same the 'aboutness' aspect is very different because the mind, in the example of Y, is not directed at the actual wall, as the thought was caused by accident. There is no 'extra problem' of intentionality when experience is considered. Experience is a problem for scientific understanding, but intentionality is not an additional problem to the problem of experience. As Strawson puts it "...once one has subtracted the problem of experience, it is arguable that there is as much mystery remaining in the E/C aboutness of some thought of an object as there is in the fact that a mirror or an expanse of water can carry a reflection of an object other than itself." (Strawson, 2010: 180-181)

It seems evident that if a person is not having a conscious thought, issues concerning intentionality simply do not arise. Thus, the gap between a subject of experience separate from the experience seems to be unbridgeable. Perhaps this situation changes when the intentionality under

"generals" as well as to particulars, [is] more inclusive than the latter." See *Susan Haack: Reintegrating Philosophy*. 2016 Chapter. 2 *The World According to Innocent Realism* pp.35-36, for more information. In this case practically anything could be called real (outside of semantic issues such as 'is the fake real?'), not only stones and cats, but also Santa Claus and Zeus, these things are real because people have a conception of them, however vague and/or different they may be depending on the individual. However, Santa Claus and Zeus do not exist, because there is nothing in the world which can be pointed to that refer to these entities. Note that because a person may be wearing a Santa Claus costume (or a Zeus costume as well), this does not mean that this person is the Santa Claus people have in mind when they are thinking of this entity. In this case, although 'real' can be used for emphasis, it is mostly an honorific term.

¹⁰² Although Strawson uses the example of a statue on Easter Island in this part of *Mental Reality*, it works equally well with virtually any example, thus the use of the example of the Great Wall of China here, to highlight this point.

consideration is non-existent concrete or ‘N/C-intentionality’ as well as existent and abstract (E/A) intentionality? Computers may be used to elucidate issues concerning N/C and E/A (non-existent concrete and existent abstract) intentionality, though one should bear in mind that computers have no experience even if they are constituted by experiential ultimates. Now, suppose there are two different machines. One of these machines has the capacity to ‘look’ for different types of objects, depending on how its settings are configured. This machine is currently looking for a circular object that is less than an inch in diameter. This machine “...scans each object in the room for the favored properties. If such a [circular] object were present, it would retrieve it.” The other machine has the capacity to calculate numbers of a certain kind, for example, even numbers. In the first case “The suggestion is that it [the first machine] has ... N/C intentionality, a representation of a type of object that it has never encountered and that does not (we may suppose) in fact exist.” In the case of the second machine “It may be said that its operations have E/A intentionality – that it is set to represent an abstract object.” With experienceless machines¹⁰³, the general argument is that they have “derived intentionality, since they were programmed to do what they do by creatures like ourselves.”

The difference between derived and underived intentionality is simple enough to point out. In the case of derived intentionality, ‘derived’ simply means obtained or gotten from another source which is not from the machine itself, and this source should be goal oriented. At first glance, it may seem evident that machines get most, if not all, their functions via human programming. However, underived intentionality, which would mean intentionality that is ‘original’ in some sense, not obtained from anything else that has any intentionality, is possible. As Strawson points out “...imagine that *unprogrammed* versions of the two machines are stuck by a burst of radiation. At first, we may suppose, it sends them haywire. Then they settle reliability into doing exactly what the original machines do.” (Strawson, 2010: 190. Emphasis mine.) It would be safe to assume that the burst of radiation had no intentionality, it did not have in mind to affect the machines to

¹⁰³ Brining back the topic of non-experientiality in this context may be confusing, however Strawson was not yet convinced enough to challenge the notion that the non-experiential did not exist. If one were to put these examples within the context of latter-Strawson’s thoughts, experienceless machines can be thought of in the following way: although everything is experiential, the experience under consideration is not experience as is familiar to human understanding. So even if the machine is made of experientiality, the experience that is relevant to intentionality is not present in this case. It’s worth keeping in mind that ‘experience’ is used by Strawson to mean a very different type of experiences than the one people usually have in mind when thinking about this topic. It *could* well be the case that even if experience requires a subject of experience, there is no intentionality involved at all.

do anything. Nevertheless, because of the way these machines are designed and constituted, the radiation caused them to act as if they had intentionality all along.

The question now becomes “Do we still have examples of E/A intentionality and N/C intentionality in this case? Or did those judgments depend, in the original case, on our knowing that the original machines had been programmed?” The answer seems obvious “In the case of the irradiated computer, there seems to be no good reason to say that there is any sort of E/A intentionality. It is just that the [computing machine’s] operations *happen to be interpretable* as a calculation...” Is this any different in the case of the machine that looks for small circular objects? Is there intentionality in this machine, because it is now looking for a non-existent concrete object? It looks as if this machine fares no better “...there seems to be no good reason to say that it has any N/C intentionality. It does certain things as a result of the burst of radiation. It reacts in complex ways to the light-reflection properties of objects. What it does is interpretable in certain ways. But it is a mere convenience to say that it has N/C intentionality.” (Strawson, 2010: 191) One may use the word ‘intentionality’ to describe the action of almost any object. If an apple falls from a tree and hits the ground, one could say that the apple had ‘intentionality’ about ‘hitting’ the ground. A gust of wind will blow some leaves from the sidewalk on to the street and one could also say that the wind had ‘aboutness’ when it hit the leaves. But this is merely metaphoric. The main point raised by Strawson remains in place, intentionality is not a problem that goes beyond the experiential “there is no extra deep puzzle about intentionality, over and above the puzzle of experience.” (Strawson, 2010: 193)

There is much more to say about intentionality, both in *Mental Reality* as well as in *Real Materialism*. The topic of non-existent abstract intentionality, if it can be said to be an accurate description of a type of intentionality, has not been discussed. Many different scenarios which include instantaneous existence, the possibility that intentionality may be an illusion, imagining an object which cannot exist (such as a diamond made out of gold), and many other complications will not be considered here.¹⁰⁴ In *Consciousness and its Place in Nature*, the few words that Strawson says about intentionality is related to the topic of subjects of experience. The claim,

¹⁰⁴ For a full account of similar scenarios and much, more information regarding intentionality. See *Mental Reality*, second edition. Chapter 7 ‘Natural Intentionality’ pp.177-214 and the Appendix titled ‘*Real Intentionality 3: Why Intentionality Entails Consciousness*’ pp. 325-358. In *Real Materialism* see Chapter 10 ‘*Intentionality and Experience: Terminological Preliminaries*’ pp.255-279.

against Coleman's arguments, is that experience is not possible without a subject of experience. There is no improvement nor advancement in understanding by postulating that experience exists in the world, if there is nothing that experience belongs to. When Strawson talks about intentionality in *Consciousness and its Place in Nature*, he says that "[Some] think that to talk about the subject of experience is necessarily to talk of something that can be said to perceive, or to be in intentional states. I reject... [this view] ... (if, that is, intentional states are externalistically construed.)" (Strawson, 2006: 193) The debate between externalism and internalism is a long and complex issue that deserves its section, but for the purposes of this section it will suffice to briefly describe the differences between internal and external intentionality, in as much as it makes sense to create a sharp divide between the two, which is not at all too clear of a distinction. In any case, externalism in intentionality suggest that when the mind is directed at something, the thing that is the object of the minds aboutness is something in the world, at least partially, if not completely. So, if one is thinking about gold or water, there must be an ostensible piece of gold or water in the world, which one can point to.¹⁰⁵ Strawson does not agree with such a view, because, by exclusion, he thinks that the internalist conception of intentionality is correct. In the internalist view of intentionality, there need not be something in the world for there to be intentionality about it, a thing could be in the world, but it is not necessary. One could well think about a mountain which does not exist, or a fictional character or a triangle, and there is nothing in the world that corresponds with the image one has of the things in the mind, in these cases experiences are about things which have no external anchoring – something like this is plausible with thin subjects of

¹⁰⁵ One can think of the early Wittgenstein of the *Tractatus Logico-Philosophicus* for such a view, though Wittgenstein is not talking about intentionality. The early Wittgenstein thought that some technical sentences relate to things in the world, so some words in certain sentences would be 'pictures' of the world, and the pictured thing would be the world: "In the picture and the pictured there must be something identical in order that one can be a picture of the other at all." (2.161) Wittgenstein, Ludwig. *Tractatus Logico-Philosophicus*. The externalist view of intentionality could be thought of requiring a pictured thing that the intention is about or has as its center of attention. Saul Kripke, who believes that proper names and natural kinds are 'rigid designators' that is they refer to some external thing in the world, says in a more straightforward fashion says that "*Perhaps* some 'general' names ('foolish', 'fat', 'yellow') express properties. In a significant sense, such general names as 'cow' and 'tiger' do not, unless *being a cow* counts trivially as a property... Whether science can discover empirically that certain properties are *necessary* of cows, or of tigers, is another question which I answer affirmatively." (Kripke, 1981: 128) This view relies on the assumption that animals such as tiger or cows are so distinguished by certain specific properties – which might one day be determined by science - as belonging to the animal. But one does not talk about cows or tigers in a scientific manner in ordinary talk and even if science one day manages to discover some essential properties belonging to cows or tigers, these properties are subject to further revisions in light of new evidence, so people may never actually be talking about tigers or cows. If one removes external dependence, the problem of talking about anything, cows, tigers or water disappears: people talk about these things easily, without depending on external reference.

experience found in ultimates. Enough with intentionality. The topic which will be discussed next is the “supervenience problem”, which Strawson states “*puts aside panpsychism*”. Regardless of Strawson’s claim, there is an argument to be made that the supervenience problem is important within the context of panpsychism. This problem is important because it puts into focus the issue of the constitution of experience and its relation to brain states, which are taken by most people to be non-experiential phenomena, at least in part. It is also revealing to put forth the supervenience argument in relation to his panpsychism and the postulated ‘micro-subjects of experience’ despite Strawson’s claim.

6.2 Priestley's Supervenience Problem

Strawson traces back the supervenience thesis to Joseph Priestley. Priestley states that if “different systems of matter, organized exactly alike, ... would feel and think exactly alike in the same circumstances”. Before going into the details that accompany Strawson’s formulation of the supervenience argument, it is worth mentioning why this topic as formulated by Priestley is relevant to metaphysics, besides the reasons given above. One should be interested in how human experience relates to the external world, in so far as the external world could be interpreted in a slightly different manner for different. For example, it is certainly quite easy to talk and think about general things, like tables, chairs and cats, and people do this all the time without any effort. It is another thing altogether to argue that people have the *exact same* conception of what things make up a ‘chair’, ‘table’ or ‘cat’, etc¹⁰⁶. Presumably if two brains are constituted in the *exact same* manner, they would perceive and feel exactly the same, in the exact same circumstances. Although such a thought experiment is currently (and perhaps permanently, given the complexities involved) far from being able to be experimentally evaluated, it is worth pondering whether what Priestley suggests is actually true. When thinking about the world, is it even possible that what people have in mind are *exactly* the same things, given the same material constitution of brains?

Strawson instead considers an equally complex topic when he talks about the *inverted* supervenience thesis: “if different minds thought and felt exactly alike in the same circumstances, then they would be identical in respect of their material constitution.” Here things initially appear difficult to tease out. By using a different perspective, however, this is not too problematic. If two minds are identical in their experience, then it must be the case that what is realizing this is a brain, and a brain is simply matter organized in a certain way. Nevertheless, a moments reflection will cause one to doubt this straight-forward reply: is it even possible for two people to have the *exact* same thoughts at the *exact* same time, given the *exact* same circumstances? It’s one thing to look at, for example, a red¹⁰⁷ flower, and have another person confirm that it too is, apparently, a red

¹⁰⁶ Although not directly related, the topic of reference covers similar ground concerning the sameness of objects over time. See Chomsky and the Referential doctrine, below.

¹⁰⁷ ‘Red’ here refers to the phenomenal characteristic, that is, to the appearance of redness – it is not the actual, scientific, color definition of red which a wavelength of 620-750 nanometers. Strawson writes about the problem of colors and the phenomena of referring in his article *Red and ‘Red’* in *Real Materialism*, which will be the last essay of Strawson’s that will be discussed. This will serve as leeway to Chomsky’s thoughts about the mind and language, which are similar to Strawson in many, but not all respects.

flower. This red flower could be a rose, and both people may pick up the rose and get pricked by its thorns and it could also have a smell which both people agree is similar. Both people may be in a similar mood: they could both be happy, and they could be wondering if they are seeing the exact same rose the other person is seeing. They both are in the same place: they are in a garden, looking and feeling the exact same red flower, and they could both say that they are having all the sensations that are attributable to seeing roses.

All these things could be the same, but is it the case that both of them are having the *exact* same qualitative ‘what-its-like-seeing-a-red-rose’ experience? Is it the case that because these two people seem to agree on color, texture, smell and other relevant properties that the experiences they have, on the whole, essentially the *same* experience? There are multiple factors that need to be considered and the factors that can be talked about or expressed verbally as mental activity is far from exhausted by the use of language. Strawson’s initial approach to the issue is that “you and I believe that grass is green, and so do speakers of many different languages, and our brains are most certainly not identical in respect of whatever it is about them that makes it true of us that we believe that grass is green.” Strawson’s argues for a ‘common sense’ position, on first approximation, that the brain is simply too complex, and that there are simply too many factors to be able to say, with any confidence, that two people who are having the same experience, are having these experiences exactly alike in all respects. However, from a different perspective, this argument “fails to address the real issue” because “the mental entities that are...in play when we get down to the concrete business of metaphysics... are not things like beliefs, or any other such dispositional phenomena.” The mental entities that are relevant for the inverted supervenience thesis are not “particular occurrent conscious phenomena in any sort of isolation from the total experiential fields of which they are a part.” (Strawson, 2006: 217)

What is relevant in this case, is not to measure the minutiae of separating each instance of what it would be like for two people to look at a rose and to talk about its various qualities, as was just mentioned. In fact, as Strawson says “We can slice reality in many ways in thought and language, but the mental realities that we have to do with when we are being metaphysically serious are *total* experiential fields, total occurrent conscious experiential states considered at any different moment, the precise details of whose contents far outrun any possible human description.” (Strawson, 2006: 217-218. My emphasis) The previous exercise of analyzing many of the various

facets of what-it-is-like to see the same rose for two individuals misses the larger point. Although it may be of some interest to wonder if person A's sensation of red, matches person B's sensation of red, what matters for the inverted supervenience thesis is the whole process of *experience* of looking (or touching, or hearing, etc.) or thinking about anything. There is simply no way to encapsulate the totality of mental life in thought experiments, nor in laboratory experiments, though one can mention them and record them. If one keeps in mind that what is being talked about are two separate people with mental states that feel and think alike then one could then ask the following question: "could two human beings X and Y really be in identical total experiential states, qualitatively speaking, between t_1 and t_2 [time 1 and time 2] and still be in qualitatively different brain states? Could they in other words be identical in their 'E features' [experiential features], and yet differ in their 'B features' [brain features]?" If one sticks only to the case of experience and puts aside the many activities that are going on in the brain at the same time and if one accepts Priestley original formulation of the supervenience thesis, then it should not be hard to accept the inverted supervenience thesis in principle. It is possible, after all, for two experiences to be exactly qualitatively the same.

Strawson does not think that this conclusion is all that shocking, so the next step to take would be to put aside "all those things about their brains that have nothing to do with their current experience, together with all those things that are merely causally antecedent to their current experience." What is relevant, then, are those parts of the brain which have some direct connection with E phenomena: "we consider only those B features that are... directly constitutive of – 'realizers' of... their E [experiential] features between t_1 and t_2 . We may call these B* features, and the again ask whether X and Y can really be identical in their E features, between t_1 and t_2 and yet differ on their B* features." In other words, if all the features in the B* brain¹⁰⁸ which are

¹⁰⁸ The argument that a brain is causally related with consciousness is quite plausible, but the evidence related to the direct connection between the mind and the brain, and how to interpret these results, are far from clear. Here the philosopher Alvin Noë points out that 'PET and fMRI [procedures] yield multicolored images. The colors are meant to correspond to levels of neural activity: the pattern of colors indicates the brain areas where activity is believed to occur...' The problem however, is that interpreting the results from neuroscience is very complex, even in such simple cases such as whether words rhyme 'how do we decide which neural activity... is associated... with [this] mental act [of rhyming]?... we [would] need to have... a baseline to judge whether... [a] deviation from the baseline corresponds to the mental act.' However, when one tries to find a baseline, or 'normal' state of the brain, Noë reminds us that "the brain is never at rest..." Noë, Alvin. 2009 *Out of Our Heads* (pp.20-21). If finding out which specific mental act corresponds to something as simple as rhyming, how is it possible to know which mental acts are associated with very complex mental phenomena, such as appreciating beauty or making a willed decision? Another important factor is what Raymond Tallis calls the 'community of minds', the social world that gives meaning and significance to most –

directly relevant to the realization of a particular experience, such as watching a movie scene, or walking on the beach or having a stressful meeting with a boss are taken to be necessary to the realization of the experience, then it looks as if, by definition B* sections of the brain are a requisite for experience by definition. Things become quite complex in this area, for there are arguments for and against the (B*) brain state argument. If one believes that there is a direct connection between experience and B* features of the brain *and that's all there is to any experience*, then it must be true that B* states of the brain are necessary to be a constituent of experience. If one believes that there is more to experience than B* brain states, then it is possible to argue that the brain is not all that is relevant to experience, even if it is not possible to specify or point out *what* it is that is involved in experience, that goes beyond brain and consciousness.

Now the question that Strawson raises is “whether subjects of experience X and Y can be E-identical and B*-different.” There are numerous ways to answer this. On one approximation “[o]ne might first reply that it may not be physically possible even if it is logically possible...” (Strawson, 2006: 219) An answer to this type of objection would be “it must be possible for X to have one electron (or indeed a million) in a different place, as compared to Y, between t_1 and t_2 , without X and Y being E-different – in which case there can indeed be B*-difference without E-difference” In other words, for the argument of two people having the exact same experience while differing in B* brain states to work, it might be possible that person X and person Y have the exact same experience, while a *minute* aspect of B* states differ. It could be the case that a single molecule is in a different location in each of the two brains, or that a neuro-chemical reaction occurs a mere milli-second more quickly in one (B*) brain than another. Given that these differences are so small, it seems plausible that such a situation could occur. There remain some complications here, which are worth at least noting, before reaching a definitive conclusion on this matter. Strawson notes that “we must go back to the notions of realization and direct constitution.” The issue can be framed as “[i]s the electron indeed itself directly constitutive of, realizatory of, any E features? If it is not it is irrelevant, if it is, then it is again not clear whether X and Y can be E-identical and B*-

if not all – of the relevant concepts, ideas and basic communication of people’s every-day lived life experience, and these aspects of life, cannot be measured in any *meaningful* manner.

different.” It’s unlikely that electrons have very much to do, with any direct causal mechanisms¹⁰⁹ in the B* brain or even in the regular functioning of a brain.

All these difficult situations having been considered, Strawson concludes by saying that “... my suspicion [is] that if we approach the question of supervenience realistically, and as real physicalists, in the way I have sketched, then we have good reason to suppose it to be two-way.” That is, if it is agreed that the supervenience thesis as stated by Joseph Priestley is correct, then its converse form must be true as well. So the following two points should be accepted as true “[i] physical qualitative identity entails experiential qualitative identity” as well as “[ii] experiential qualitative identity entails physical qualitative identity (in the relevant parts of the brain)” (Strawson, 2006: 220) If human beings are taken to be members of the same species, with essentially the same brain, then in principle two people may have the exact same experience, even if it is extremely difficult for this to occur in real life, given how many things should remain alike at various levels of complexity and specificity. Again, although Strawson states that *the supervenience argument just given puts his “panpsychism aside”*, it is can be illuminating within the context of panpsychism. So far as ‘micro-subjects’ of experience are concerned, it is quite plausible that they too can be in the *exact* same experiential state, and if one considers just how wide ranging thoughts can be, compared to common sense conceptions of matter, this further highlights just how extraordinary ‘ordinary’ matter can be. The next topic which will be covered is a particular criticism of Strawson’s elaboration of ultimates in relation to experience. The specific issue is how separate experiences in ultimates can be ‘added’ to create either a completely new experience, or the same experience multiplied by order of magnitude. This argument is elaborated by Philip Goff’s essay in this book, followed by Strawson’s reply to Goff in the final article of *Consciousness and Its Place in Nature*.

¹⁰⁹ Although Roger Penrose might disagree, see his *Shadows of the Mind* (1996) for an argument as to how particles might play a direct causal role in consciousness.

7.0 The Composition Problem

One of the strongest arguments against Strawson's views concerning the experiential ultimates that make up reality is presented by Philip Goff, in what could be called the addition problem. The idea is that it makes no sense to postulate billions of subjects of experience because 'experiences don't sum' or 'don't add up.' Consider feeling a certain sensation like pleasure, on this view, pleasures are constituted by billions of ultimates being in a pleasurable state. However, since ultimates are small in comparison to a human being, these ultimates would have to be in a state of 'SMALL PLEASURE'¹¹⁰, but a human being is not in a state of 'SMALL PLEASURE', a human being is in a 'PLEASURABLE STATE'. One would have to add up millions of subjects being in 'SMALL PLEASURE' states to get a human being in a PLEASURABLE STATE, but this is not coherent because being in PLEASURABLE STATE is not equivalent to being constituted by millions of 'SMALL PLEASURE.' One cannot get experiences to add up in such a manner that pleasure, or pain, or boredom are merely additions of small subjects of experience. If this is how ultimates work in Strawson's philosophy, then Goff would be correct. However, in Strawson's account the creation of experiential states is the result of *combinations* of different lower experiential states, not an *addition* of them. For Strawson, this view, the view of experiential states combining to create new experiential states is a less bad option than postulating experiential states from non-experiential reality.

Philip Goff, a philosopher who develops his own version of panpsychism¹¹¹ different from Strawson's, develops his argument in the following manner, in his essay '*Experiences Don't Sum*'. The main thrust of Goff's criticism against Strawson is that it makes no sense to argue that ultimates have experiences, because it is not possible to make sense of different experiential states making up ultimates, which can then 'add' with each other to create an experiential state which human beings experience. In other words, one cannot make sense of 'small' experiences adding up to create a 'big' experience. As Goff says: "Somehow thousands of experience-involving ultimates come together in my brain to constitute the 'big' experience involving thing that is my subject of experience." (Strawson, 2006: 53) Since everything is made of matter, which is

¹¹⁰ Capital letters indicate concepts as opposed to 'mere' words.

¹¹¹ For more information see *Consciousness and Fundamental Reality*. Goff, Phillip. Oxford University Press. 2017. In this book, Goff attempts to develop a variation of 'neutral monism', which he calls 'Russellian Monism', Strawson's elaborations on neutral monism, and its unlikely tenability has been discussed above.

constituted by different types of fundamental particles and each of these particles has inherent experientiality, then the following would seem to be the case: "...let us suppose that each of the billion ultimates that compose my brain is a subject of experience: that there is something it is like to be each of the ultimates of which my brain is composed."

As a thought experiment Goff states: "Imagine that each of the ultimates in my brain feels slightly pained. It is unintelligible why the arrangements of these ultimates in my brain should give rise to some *new* subject of experience, over and above the billion slightly pained subjects of experience we already have." (Strawson, 2006: 54) Another way of putting this point would be to say that when a person is having an experience of pain, if it is true that ultimates are experiential, then these ultimates must also feel pain, though in a *much* smaller scale than human beings. The problem is that if this is true, then there must be radical emergence, because these 'small' experiences add up to create a new experience which did not exist prior to the merging of ultimates. Even if the experience is 'pain' in all the ultimates, the addition of these creates a *new* experience of pain, which can now be felt by people, and according to Strawson, radical or brute emergence is not a realistic property in nature. Goff gives other arguments beside the 'addition' problem as a critique of Strawson's panpsychism, though these are not the most relevant for Strawson reply, before this can be given, some more elucidation of the addition problem will be shown.

Returning to the example of pain suppose there are several ultimates. Goff asks one to "[c]onsider a physical ultimate that feels slightly pained, call it LITTLE PAIN 1. Consider ten such slightly pained ultimates, LITTLE PAIN 1, LITTLE PAIN 2, etc., coming together to constitute a severely pained thing, call it BIG PAIN." Each of the ultimates are separate from each other, though they are all in a pain-like experiential state and when they 'add', the result is BIG PAIN. "Assuming the coherence of this, the experiential being of each LITTLE PAIN is part of the experiential being of BIG PAIN; the experiential being of the BIG PAIN is a how which contains nothing other than the experiential being of all the LITTLE PAINS." (Strawson, 2006: 58-59) For Goff, the difficulty comes in the next point "...for LITTLE PAIN 1 to be part of BIG PAIN is for *what it feels like to be* LITTLE PAIN 1 to be part of *what it feels like to be* BIG PAIN." However, "...what it feels like to be LITTLE PAIN 1 is not part of what it feels like to be [in] BIG PAIN. LITTLE PAIN 1 feels slightly, BIG PAIN does not." If Goff is correct, then it's not possible for the pain that human beings feel to be constituted by many small pains, because one does not feel small pains in this

scenario, one feels significant pain, thus the ultimates that constitute small pains cannot add to create significant pain. As Goff puts the issue “BIG PAIN feels a certain way that all the LITTLE PAINS do not: that is, severely pained.” (Strawson, 2006: 58) Given Goff’s exposition of Strawson’s argument, it appears to be incoherent in a fundamental manner that seems to be insurmountable, that is, *if* Goff’s account of LITTLE PAIN happens to be factual. Goff continues “[a]ssuming that my experiential being is *wholly* constituted by the experiential being of a billion experience-involving ultimates, then what it is like to be me can be nothing other than what it is like to be each of those billion ultimates (somehow experienced all at the same time.)” (Strawson, 2006: 59) Somehow each of the ultimates that make up a person must be synchronized in such a manner that whatever one feels, all the ultimates must feel the same way as the totality of the human experience. Thus, if one feels tired, each of the ultimates that constitute a person, must also feel a LITTLE TIRED 1, LITTLE TIRED 2 and so on. Goff maintains that this cannot be the case “[my] experience is of a three-dimensional world of people, cars, buildings, etc. The phenomenal character of my experiences is surely very different from the phenomenal character of something that feels as a billion ultimates feel.” (Strawson, 2006: 59) Strawson now must provide some replies to these arguments, which will be discussed next.

7.1: Reply to Goff

For the sake of argument, suppose that Goff is correct about the incompatibility of ultimates with human (or any other large animal) experience. What are the consequences of this view for metaphysics? Arguably the most important consequence of arguing that ultimates do not have experience is that Strawson is not talking about the nature of the world and is only postulating a mechanism that does not explain the nature of consciousness in a theoretical manner. A further consequence of Goff’s arguments is that, if correct, then ‘radical emergence’ *must* be a possibility, as there is no way to explain how any ultimates can add to create a different experience which is not the same experience as the ultimates that constitute it, though even if ‘radical emergence’ were true, it would not explain how billions of ultimates can ‘add up’ to anything. In this regard metaphysics is always liable to be radically in error, as by definition metaphysics goes beyond the scientifically testable and empirically verifiable. This does not mean metaphysics is of no use, it can be tremendously useful in trying to see how the mind can plausibly give an account of the

nature of the universe. However, any assumption¹¹² in metaphysics which is not thought out in detail, is liable to be attacked by powerful arguments, such as the one given by Goff. However, Strawson does not agree with Goff's way of setting up or characterizing the problem.

Strawson's name for views that resemble Goff's arguments is the '*Composition Problem*', which he defines as "the problem of how pluralities of [thin or small subjects of experience] can jointly compose or constitute distinct and 'larger' single [thin subjects], the problem of [microsubjects], e.g. electrons...[or] string [small subjects], can possibly compose single [macro subjects], e.g. human [subjects]." Strawson attributes such a view originally to William James, whom Goff also quotes, but this can be set aside. As Strawson quotes "...given smallism, we have to accept some form of the view that 'states of consciousness, so-called, can separate and combines themselves freely, and keep their own identity unchanged while forming part of simultaneous fields of experience of wider scope'." (Strawson, 2006: 248. See James 1909, for more information on his views on this topic). What Strawson is hinting at – regarding The Composition Problem - is different that Goff's own formulation but is a legitimate way of stating the problem. Whereas Goff focuses on the problem of *addition*, specifically, how can X micro-experiential state, add with Y micro-experiential state and form a 'larger' experiential state Z, Strawson considers this to be an issue of *combination* of experiential states. Combination is quite different from addition when the issue being talked about are ultimates and how they give rise to emotions, perceptions and many other facets of mental life.

There may well be several different types of ultimates which have different 'sensations' or attributes, though as in the case of liquidity and many other phenomena like vision, concrete matter, etc. These came into existence in virtue of whatever types of properties are to be found in ultimates. These ultimates may or may not feel pain, or 'LITTLE PAIN', individually, but then they *combine or fuse* with each other, a whole different experiential state would come into being¹¹³.

¹¹² Susan Haack has a rational rule of thumb as to how to proceed when doing metaphysics: "Unlike the... Positivists, I believe metaphysics is a legitimate enterprise... it has... often entangled itself in unanswerable questions... what makes these questions unanswerable is that they rest on false presuppositions...the way to resolve *this* problem... is not to abandon metaphysics, but to do *better* metaphysics—specifically, to trace our steps back until we identify those false assumptions, and then start again without them" *The World According to Innocent Realism* Susan Haack: Reintegrating Philosophy. 2016 Chapter. 2). This does not guarantee, however, that this new metaphysical project will turn out to be the truth about the world.

¹¹³ Though not in such a manner that radical emergence is an issue. For on this view, there is something about the intrinsic state which is suited for the creation of a new state.

Whatever Goff may have in mind when he talks about pain, it is a mistake to think that the pain human beings feel, would be the kind of pain which are attributable to ultimates. The ultimates under discussion do not need to have anything remotely like human experience of pain and in any case, it's not possible to dismiss the likelihood that several ultimates in different or similar experiential states could combine to create something which is new. At least there are no a priori (nor empirical) reasons to rule out such an outcome. Finally, Strawson points out that "...in RMP [Realistic Monist Physicalism] ...unintelligible experiential-from-experiential emergence is not nearly as bad as unintelligible experiential-from-non-experiential emergence." (Strawson, 2006: 250) It is easier to have some grasp on how two different experiential states could lead to another experiential state, than it would be to try and understand how experiential states could come from something *entirely* non-experiential even if the nature of how this process can occur remains extremely obscure. The next section will be concerned with epistemic issues which relate to the idea of how much experiences can converge or differ in the case of human beings. There are a range of options that will be talked about, but these options are not an exhaustive account on these manners. The most important epistemological scenarios will be discussed and the topic of how knowledge relates to experience will be called 'revelation' by Strawson.

7.2: Revelation in *Consciousness and its Place in Nature*

Putting ultimates aside and focusing on actual human experiences, the following question may be raised: how much acquaintance do people have with any *particular* experience in so far as an experience is a characteristic of all experiences that are similar to it? In other words, given an experience of being in pain, or pleasure, or seeing red or anything else, how much is known about the totality of that specific experience? The first epistemological thesis is called 'The General Revelation Thesis', which states that "I am acquainted with the essential nature of experience generally considered – i.e. with whatever all possible experiences have in common just insofar as they are indeed experiences – just in having the experience." This is a broad statement in that there is no particular or specific experience being mentioned, all that is being stated is, quite simply, that in having *any* kind of experience, people are familiar with the nature of the experience simply by having it. This should be trivial given that human beings are essentially the same organism, with very superficial differences and experience as a natural phenomenon ought to be regarded as the same in each person. Things may become more complicated when Strawson introduces 'The

Revelation Thesis' which states that "In the case of any particular experience, I am acquainted with the essential nature of that experience just in having it." (Strawson, 2006: 251) This is a more specific (and arguably stronger, because it is more precise) claim than the 'The General Revelation Thesis', because the focus of attention is on a particular experience (pain, pleasure, colours, etc.) and not on experience in general. In this case one has knowledge of the essential character of pain in simply having it. In terms of how deep or how comprehensive this type of knowledge is, will be discussed by Strawson in two other formulations of the revelation thesis.

So far, it is not clear if 'The General Revelation Thesis' can also encapsulate the argument that the *whole* essential nature of any specific experience is had when one is having an experience, although Strawson takes this latter view to be what Goff is arguing for. Strawson calls this 'The Full Revelation Thesis'. The problem with this argument is that it is extremely difficult to imagine that pain-experience one is having (or all the pain experiences one has in one's entire life) covers the *entire* range of pain experiences that exists in the world. By necessity, such an argument would not only encapsulate all human pain-experience, but all non-human animal pain-experience such as penguin pain experience, or giraffe pain experience etc., and even further than that, it must all cover all *possible* pain experience in existence. It is not likely that any specific human experience exhausts all possible pain experience, given the amount of species and general variability that can be found in nature. What's more likely, in any situation, is 'The Partial Revelation Thesis' which states that "In the case of any particular experience, I am acquainted with the essential nature of the experience *in certain respects*, at least, just in having it." (Italics mine.) This is a more conservative and reserved argument than the 'Full Revelation Thesis' and can be expressed by saying that in any experience, whether it is of pain, pleasure, joy or anything else, is only a *part* of the total experience of these sensations. So, there is more to pain or joy than any particular experience at any given moment in time. The positive aspect of this argument is that one can acknowledge that whatever experience one is having in a limited manner, is a portion of the *total* experiential character of 'pain', 'joy', 'sadness', etc.

This argument is in tension with Goff's picture of Strawson's view. Goff argues that Strawson's view of understanding the nature of experience in simply having it an experience is not entirely coherent as "...this commitment to my having, through introspection, a transparent understanding of the essential nature of my conscious experience is sharply in tension, if not inconsistent, with

my conscious experience turning out to be, in and of itself, quite different from how it appears to be in introspection” the reality of consciousness could well be that there “billions of micro subjects of experience.” Furthermore, Goff states that “Strawson claims that in introspecting one’s conscious experience, one perceives metaphysical reality [as it actually is]” (Strawson, 2006: 57) Strawson does not agree with the way Goff is describing his views, although Strawson does not have a problem with the idea of having knowledge of ‘things-in-themselves’¹¹⁴. What Strawson does not agree with is this double-order categorization that Goff suggests. Strawson says that “[one] of my ... problems with Goff’s rephrasal is that the original claim makes no use of the second-order notion of introspection. It is resolutely first order. It is that ‘the having is the knowing’. (Strawson, 2006: 251). When Goff says that Strawson’s argument is that people have a transparent understanding of experience, he is partially correct – however, when Goff further adds that our conscious experience is made up of ‘billions of micro subjects’, he adds a layer of introspection that is not warranted by daily experience and is not possible to access. It’s true that people can introspect and notice that one is noticing, it is not possible, however, to go further ‘down’ than consciousness to say that, the conscious experience one is having is actually constituted by micro-subjects of experience, whatever the case may be as to the existence of these types of ultimates, they are not subject to introspection by human beings, so there is only one level of introspection available. The other disagreement Strawson has with Goff, which is somewhat connected with the previous argument, is when Goff argues that ‘the phenomenal character of LITTLE PAIN 1’s experience... is no part of the phenomenal character of BIG PAIN’s experience...’ (Strawson, 2006: 58) Nor should it be, because, as Strawson argues, people do not have access to “Full Revelation thesis of this sort” (Strawson, 2006: 255). Nor does this argument entail that BIG PAIN’S must be the result of the addition of LITTLE PAINS. A human being can

¹¹⁴ The idea of ‘things-in-themselves’ goes back to Immanuel Kant, and although there is good evidence that other thinkers before Kant arrived at similar ideas, notably Ralph Cudworth the phrase ‘things-in-themselves’ as well as a rich theoretical defense of this term remains one of Kant’s most important ideas. Although there is plenty of technical discussion about the different ways Kant used this term, the basic idea is straightforward, and can be put in the following manner. Human beings perceive the world in a certain manner, using certain concepts like unity, colors, space, shape, etc. that are unique to humans. There is nothing necessary in the objects of the external, mind-independent world that have these concepts, it is human beings that apply them to the world. The way a person interprets the world is not the same way a monkey would see the world, or a spider, not to mention, potentially, other intelligent creatures that may live in the universe (though Kant does not use these examples, they are useful to understand the concept). Therefore, we can only ever see appearances and not the way things are outside these appearances. Strawson seems to think that we have access, in some respects to reality-in-itself, whereas Chomsky, discussed later, does not.

say she is in a 'more or less' state of pain, an ultimate could play a role in terms of the configuration of matter that leads to a human being having more or less pain, but there is no logical reason to suppose that addition of ultimates, small as they are, would lead to any *specific* state.

The final section of *Consciousness and Its Place in Nature* is concerned with 'dual aspects' of 'smallism', though this discussion becomes too technical and does not clear up much issues when it comes to the nature of ultimates. Furthermore, a distinction between 'inside' and 'outside' is far from clear when what is being talked about are things that are miniscule. It makes sense to think that introspecting leads people to conclude that there is 'from-the-inside' knowledge of experience, though the nature of 'outside' is obscure. If a version of smallest panpsychism is to be defended in some manner an 'outside' of sorts must exist. If there is no outside, and all is inside, then it is difficult to imagine how it would be possible to differentiate between ultimates, that is, everything would be constituted of a single ultimate, that may or may not have different aspects or features, depending on different configurations or modes of existing, but this formulation would lead to a situation in which no discriminations could be made. It should be noted that Strawson does not state this in his discussion of 'inside' and 'outside', but it is worth considering nonetheless, as a consequence of explicitly denying that such a differentiation exists. The last section of Strawson's thought, the referential doctrine in relation to colors, will be considered as a direct connection to the thought of Noam Chomsky, which overlaps significantly with Strawson in some respects.

8.0: *Red and 'Red'*: Strawson and the Referential Doctrine

The analysis of matter and how deep-down consciousness may go can now be put aside. When trying to answer the question “what is there?”, one need also consider the role that language plays in thinking and analyzing the world. Although the example Strawson chooses is simple enough - the colour ‘red’ - what he demonstrates has important consequences for metaphysics. After some analysis, it turns out that reference to the colour experience¹¹⁵ red, plays no role in the *meaning of the word* ‘red’. There need not be anything in the world that is picked up by the colour-word red, and still it is useful and necessary to talk about phenomenal qualities such as colours and sounds. Although Strawson sticks to the colour experience ‘red’, similar analysis can be done with a vast range of sensations and perceptions, including pain, objects, people and so on that go on to further cement the fact that reference to things in the world is *not an essential* component for the definition of the word¹¹⁶. Experience remains a private phenomenon that is often inadequately or indirectly described by language. Through this portion concerning reference and language use, one will be able to connect more easily to the philosophy of Noam Chomsky, which follows similar lines of thought.

It is time to put aside the metaphysical aspect of experience as such, and turn to a different, though closely related area of concern for the study of ‘what there is’, namely the topic of reference. There are obviously too many things to consider when the topic under consideration is *everything*, it will be useful then, to be able to talk about pointing out things through reference, taken to be a pairing between a word that is said by a speaker, and a thing in the world. Noam Chomsky talks about the referential doctrine in more depth than Strawson, though Strawson’s view on reference is similar to Chomsky’s. A curious fact on this topic is that Strawson’s father, distinguished British philosopher Peter Strawson, wrote about the referential doctrine in his influential paper titled *On Referring* (1950), which shares some similarities with *Red and 'Red'* (and also *Pain and 'Pain'*) in so far as Peter Strawson is concerned with the ordinary usage of words in everyday life, but this can be put aside for the present discussion. Since reference constitutes a broad area of knowledge,

¹¹⁵ Experience is a private phenomenon for each individual, the use of externalized, spoken language is not.

¹¹⁶ The one apparent exception to this is numbers, as they are true by definition. However, there are no things in the external world people can point to and say this is the number “one”. Nevertheless, in mathematics reference to numbers appear to be necessary.

what will be talked about in Galen Strawson's case will be the colour red¹¹⁷ (but the argument works equally well with any color, or indeed, any of the 'traditional' five senses), and how referring to this color does not imply that two people are actually seeing the same color, even if the word they pronounce is the same. This serves the dual function of seeing, in part, how the mind 'experiences' aspects of the world mediated through the mind and it also serves to see how language can shape the way the world is viewed and interpreted.

An important theme, which has been mentioned before, but needs to be repeated in talking about the issue of reference is that, against some of the views of early-Wittgenstein, Quine, Kripke and others, *words* themselves do not refer to things any more than it can be said that *words* themselves communicate, reference is something *people*¹¹⁸ do, not words by themselves¹¹⁹. Words do not have a 'sticker-like' function in which the word 'tree' (or 'tiger' or 'ball') attach themselves to an object in the world which happens to be a tree in a park, or a tiger in a zoo, or ball in a football game.¹²⁰

¹¹⁷ Though reference to private sensation does not stop with colours. Strawson dedicates an entire chapter in *Mental Reality* that deals with essentially the same problems in relation to the personal feeling of 'pain'. The reason for choosing to talk about colours instead of feelings is that the perception of colours has a more philosophical feel than the topic of sensations, which additionally has clear psychological implications. In any case, this entire section could have been written about the feeling of 'pain' instead of it being about the colour experience of 'red', and the general conclusion would remain the same: words do not pick out 'private' first-person experiences. For more information see *Mental Reality*, chapter 8 "*Pain*" and *Pain*.

¹¹⁸ This is a point that Chomsky makes frequently, following Peter Strawson's influential paper "*On Referring*". In this paper Peter Strawson famously points out a flaw in the belief that names – specifically proper names – refer: "Because Russell confused meaning with mentioning, he thought that if there were any expressions having a uniquely referring use, which were what they seemed (i.e. logical subjects) and not something else in disguise, their meaning must be the particular object which they were used to refer to. Hence the troublesome mythology of the logically proper name." Peter Strawson continues to clarify when he says "... if some one asks me the meaning of the expression "this" ... I do not hand him the object I have just used the expression to refer to, adding at the same time that the meaning of the word changes every time it is used... I explain and illustrate the conventions governing the use of the expression... It is quite different from giving (in any sense of giving) the object to which it refers ; for the expression itself does not refer to anything ; though it can be used, on different occasions, to refer to innumerable things." (Strawson, P.F. 1950: 328)

¹¹⁹ This may seem trivial but it's a point that's been disputed. Thus, Quine argues that "[m]uch of the utility of general terms lies in their yield of demonstrative singular terms." He goes on to put forth the following example: "Say we want to teach the name "Nile". The hard way would be in protracted training [i.e. repeated exposure of word with object] ... Given his mastery of the general term 'river', on the other hand, and of the device of deriving singular terms, we only have to stand with him on the quay at Cairo and *say once, pointing, 'This river is the Nile'.*" (Quine, 1960: 100) According to Strawson – and by extension to Chomsky – there need not be any river at all to understand what a river is, and pointing towards anything in the world is quite inessential.

¹²⁰ Although Wittgenstein radically revised his 'picture theory of meaning' by the time his *Philosophical Investigations* were published, his only published work in his lifetime, the *Tractatus-Logico-Philosophicus* was extremely influential in the development of logical positivism and was an important precursor to contemporary thought about words referring to things. Simplifying a great deal, the *Tractatus'* basic idea is that some words 'picture' facts of the world, much like a camera takes pictures of a slice of the world. The world consists of elementary facts which can be 'pictured' by language, such as 'the plate is on the table', or to use the typical example, 'the cat is

These types of points of view are the ones that Strawson attempts to show are wrong by talking about colours (or sensations, like ‘pain’, etc.). In this case, the color under consideration will be red. Strawson, already in the first paragraph of *Red and ‘Red’* says “I take it that to say that a man is *ordinarily color-sighted* is not to say that he has colour-experiences of a certain particular qualitative character when he looks at certain things, but only that he is able to make the full range of *colour discriminations* that most people can make.” In other words, there is no deficiency in a person’s ability to make the normal color discriminations that anybody else can make – there is no issue if colour blindness in this case. When Strawson talks about a person having colour-experience “he has experience of some *phenomenal quality*...” (Strawson, 2008: 101). That is, the colour experience is related to how things appear to a person when they are looking at a colour, which is what colour is like to each person who experiences them. These colours are appearances of some aspect of the world *as interpreted by the mind*– these appearances are similar to Lockean ‘secondary qualities’, that is, they are not essential characteristic of objects in the world.

However, a caveat should be pointed out before talking about how to refer to the colour red “... the expression ‘experience of a certain phenomenal quality’ should not be taken to imply that the experienced phenomenal quality is something that exists independent of *a* [the name of an ordinary person] and his mind, something that is objectively ‘out there’” because, as is often the case for so-called secondary qualities “... *a* may be the only person in the world whose colour experience... has *exactly* the qualitative character that his color-experience has now.” (Emphasis mine). This example should be familiar, the color one may be experiencing now will be one’s own, even if one is looking at the exact same object, such as a red phone - one’s experience of red - is in each case a private experience of the world as interpreted by the mind which is not an experience that can be shared with someone else by using words. However, the fact that each color experience is essentially a private manner *does not* imply that the process or act of looking at any object with specific colour(s) are illusory (or hallucinatory) in any way: “Suppose one looks at an object *o*, and has a colour-experience *e*. I (hereby) assume that it is wrong to suppose that the phenomenal-quality colour that *o* appears to be, as one look at it, is an entirely mind-independent quality of *o*.” But the important point is that “...even when phenomenal qualities are treated as essentially mind-

on the mat’, etc. Whatever facts cannot fit into this picture scheme of elementary facts, should not be talked about, because the issues are too complex.

dependent in this way, they can still be treated as fully *real*.” (Strawson, 2008: 103) Colours, whether it be red, blue, yellow or any other, can still be named and labeled, though this does not support the view that language can not go further than simply naming specific colours, with no intent or capacity to express anything about a color other than whatever the color is called.

After all these qualifications - as is often the case when discussing philosophical issues - the question that arises is simple, and the question can be stated in four simple words: “What does ‘red’ mean?” This seems to be an easy thing to answer, so Strawson proceeds to say “Imagine a simple scene. Pillar box P is in front of us. *That*, we say, is red... And we are right. P is red. But what exactly has been said?” Apparently, all that has been said is that there is an object in front of a person, a pillar box, and what has been uttered by people who see this pillar box is that it is ‘red’. Is there any confusion here? It is something people do very often, and no particular difficulty seems to arise in pointing to and naming colors. However, the nature of total reality, and one’s understanding of it is far from being transparently straight forward. It has been mentioned that colour experiences are related to appearances, so whatever it is that one had in mind when one thinks of the color red, must be what the color red actually is. However logical and tempting this train of thought may be, it also happens to be wrong: “In fact, however, reference to [phenomenal qualities at a specific time] plays no part at all in an adequate account of the meaning of the word ‘red’. Nor does reference to any other particular phenomenal quality.” But how can this be possible? “... because of the much discussed possibility that people may have different colour-experiences... when they all look together at a single pillar box in normal and uniform lighting conditions – and even when they all agree that the pillar box is red.” (Strawson, 2008: 105) It is a definite possibility that several people looking at the exact same thing are not experiencing the same phenomenal aspects as another person. It is not coherent to point to one’s head and say, ‘this is what red looks like’, because these experiences cannot be shared, even if the same word is being used to talk about a specific phenomenon. Nor should it be thought that looking at brain scans of people who are looking at the colour red would be of any help in solving this issue, as the qualitative appearance of a colour is a private matter¹²¹.

¹²¹ All these thought experiments and illustrations apply to ‘pain’. One can point to an injury in one’s leg and say, ‘this is pain’, or one can look at a brain scan of a person who is in pain, or one can simply imagine something painful. None of these examples suffices to establish that the word pain is anything other than a word that discriminates between numerous unpleasant emotions and sensations, the subjective qualitative experience of pain remains something that is

If this still looks as unreasonable, or is not subject to immediate recognition, the point can be further refined and made even more specific. Strawson will grant "... that the colour-experiences of the members of the group do differ, as they look together at [pillar box] P, although the members of the group are all ordinary colour-sighted..." in that they are able to make colour-discriminations. Furthermore, the "... lighting conditions are constant, and that [pillar box] P has... constant light-reflection-and-absorption-and/or- remission properties..." All the external conditions being the same, for all the members of the group would seem to make it easier to determine that a very specific colour is being seen. But to finish adding yet another twist in this thought experiment consider "... that the colour-experiences of the members of the group, who are all fully competent speakers of English, do not change from time to time, as they look at [pillar box] P." The situation is set up in such a matter, that there is no chance of the box changing color due to lighting conditions, so as to not confuse speakers who are fully fluent in English to say that the red pillar box is now 'crimson', 'maroon', 'vermillion' or any other shade of red. It is of course granted that in terms of private experience, if it could be looked at publicly, could lead others to say that one person's 'red' is another person's 'crimson', but this can't be done, thus all private experiences of this particular pillar box are called 'red' by everyone around it. What do all these specifications show about people's experiences of the color red? It is clear that "... facts about what particular colour-experience speakers of English have when looking at things like pillar boxes are irrelevant to an adequate account of the meaning of the word 'red' in English." What is perhaps the single most surprising revelation about this experiment, which can be difficult to fully grasp initially is that "... the word 'red' carries no reference to any particular sort of colour-experience at all; but to say this is... in effect to say that it carries no reference to any particular phenomenal quality." The word 'red' carries no internal reference, no content, to the *color* red that is familiar to everyday experience. This argument appears to go directly against what 'common sense' and lived experience dictate, yet the argument, as it stands is difficult to refute.

All the above being said, it is clear that people somehow manage to get along in life perfectly fine talking about 'red' shoes and 'red' flowers without any particular difficulty. Yet the word 'red' does not pick out something red in the world, which is opposite of what common-sense dictates.

private, though like 'red' it can be talked about, and even treated, without any problems. Besides *Pain and 'Pain'*, see also Strawson's *The Weather Watchers*, chapter 9 in *Mental Reality*, for more discussion on the topic of pain, as well as the subject topic of pain in relation to behavior as being inadequate for determining if a person is actually in pain.

There has to be some aspect of the mind and/or of language that is getting something essentially correct about the *structure* of some aspect of the world that does not cause widespread confusion when talking about ordinary things. After all, “[t]he members of the group certainly all know what the words mean, all [of] them being competent speakers of English; and since they do not differ at all in what they are disposed to apply the word to, they can all correctly be said to mean the same thing by it.” In other words, the speakers all agree on the meaning of the word ‘red’. But the most important aspect of red, what actually matters to people is not the *word* ‘red’ or ‘blue’, but the *experience* or sensation that colours evokes in each individual¹²². But it is precisely this aspect ‘redness’ (or blueness, or yellowness, etc.) that does not get evoked by the word ‘red’, as Strawson puts it: “The respects in which they [the members seeing the pillar box] *do* differ (i.e. their colour-experiences) are therefore *entirely irrelevant* to the meaning of the word.” (Strawson, 2008: 106. Second emphasis mine) This is certainly a very curious property of words. One could attempt to give an explanation of this phenomena by appealing to evolution, after all, it’s been shown that some animals use colors for some kind of selectional advantage which allows them to survive in different environments¹²³. Yet animals do not have anything that resembles human being’s capacity for language¹²⁴. Strawson argues that “Environmental pressures have operated to give most human beings similarly sophisticated *discriminatory* capacities vis-à-vis the different L-properties [light properties]” though this is not an argument that is difficult to understand, “... it is very hard to imagine what kind of selective pressure there could be on us not only to evolve a high level of *discriminatory* sensitivity... but also to evolve... experiences of qualitative differences in which out discriminatory capacities are grounded.” It may well be the case that qualitative sensations are simply not very important for survival, or if they are, the way in which they relate to survival remains rather obscure, especially when one is considering the qualitative feel of colors.

¹²² It is difficult to elaborate on how colors make individuals feel when experiencing them. Exactly why this is so is not clear. Suffice it to say that red is a colour that people may find beautiful, as is often the case when looking at roses, or it may be a colour that causes repulsion, as when one sees blood. Obviously, there are many different reactions to seeing the colour red, but this merely reinforces Strawson’s point that colour experiences play no role in the definition of a particular colour ‘red’, ‘yellow’, ‘blue’, etc.

¹²³ One could, for example, point to the chameleon, stick insects (Phasmatodea) and some octopuses (among other various underwater creatures) that use colors and surroundings for selectional advantage, though it is not at all clear if these animals have any conception of color that even approximates the human case.

¹²⁴ For a detailed analysis of the differences between human consciousness and animal consciousness see: Arana, Juan. *¿Constituye la Conciencia El Factor Diferencial de lo Humano Frente a lo Meramente Animal?* Naturaleza y Libertad. Número 10, 2018. ISSN: 2254-9668 See also Blanco, Carlos. *Conciencia y Mismidad*. Dykinson. 2013.

Whatever the status of evolution for the qualitative aspects color have for people, “The fact that, if these differences in phenomenal-quality experience exist, they do not show up in language...” (Strawson, 2008: 108)

In fact, this complexity can be pushed further by using a thought experiment, though Strawson’s *exact* formulation will not be used, in order to minimize technicalities, the basic thought experiment remains the same. Take two standard human beings and call them Monet and Renoir. Consider that for Monet, the colors ‘red’, ‘yellow’ and ‘blue’ are represented by blood, a New York Taxi and the ocean. Renoir, on the other hand, has a different color-experience which is inverted so that the blood, the taxi and the ocean *look*, experientially, as green, violet and orange respectively when looking at the same object. However, in terms of *utterance* Renoir calls these colours ‘red’, ‘yellow’ and ‘blue’. The qualitative experience of the colors is radically different, but they have the same name, and there is no confusion so far as the *use* of language is concerned. This is entirely conceivable, in terms of evolutionary theory. As Strawson says “It seems that this could be a consequence of genetic differences between Monet and Renoir... there could be two colour-experience-determining genes which are alleles [a variant of a particular gene] of one another.” However, the problem with this is that “...it seems clear that nothing could favour the selection of one [color-experience] over the others, in the present case, since it is presumed that each gives rise to exactly the same discriminatory capacities...” So long as human beings can make the relevant discriminatory differentiation between different wavelengths of colour, colour-*experience* does not appear to be terribly important for adaptation. Furthermore “...there is no evolutionary advantage for us in our being similar in this way [of having the same color-experience]” (Strawson, 2008: 108) Further objections concerning the plausibility of such an outcome in the evolutionary process can be ignored, as the main point remains: it is entirely possible for two people to use the same *word* for different colour experiences, so that someone’s experience of red is someone else’s experience of yellow, but both use the word ‘red’ appropriately and no confusion enters the conversation.

What do these thought experiments amount to? That all there is to colours that can be talked about are the words people ascribe to them, irrespective of personal colour-experience? This would be taking the conclusion a bit too far: “Perhaps one could say this: the word ‘red’ simply holds a more or less determinate place in a *linguistic system of differences*. But it does not hold this place in

virtue of picking out (or ‘carrying reference to’) a particular phenomenal quality that exists...” (Strawson, 2008: 100-111) The case can be put in the following: “the linguistic system of differences consist of a group of words – colour words – none of which carry any sort of reference to any particular phenomenal quality at all.” This view has some surprising consequences for people who believe that the world is roughly as one sees it. Reality is thus much more complex and harder to grasp than what first may appear to be the case. This perspective makes it look as if Strawson’s conclusion is too strong, given the importance people give to colours on a daily basis. And in fact, peoples experiences of colours¹²⁵ are, to some extent (which is not too clear) shared: “there is a sense in which we communicate about it, given that the overall *structure of our discriminations* of the differences (on the basis of our colour-experiences) is more or less the same.” At least, people are able to make discrimination between colors, which obviously proves that people are seeing different colors when they use different words, and this is a common act that people do (colour-blindness aside, of course.)

What is counter-intuitive is Strawson’s conclusion that “... when one says ‘red’ and, pointing at the pillar box, says, ‘That colour, that is’, one is wrong to think that one *means* – in any sense – the particular phenomenal quality that one then has experience of oneself, although it is certainly very natural to think this.” A baby first hears color words from adults, such as the sky is blue or the grass is green, and even if the baby sees a person pointing to the sky, or to a patch of grass and say the word ‘blue’ or ‘green’, though a discrimination is being made through language, the experiential feel of the color is *not* what is being talked about, though it may be what is intended. It may be objected that when people talk about or point to a colour, they are not interested in the word ‘red’ (or ‘blue’, ‘green’, etc.) but instead are actually interested in the phenomenal quality of each color, regardless of how the word is pronounced. However, “... in covertly ‘pointing’ inwards in this to an experienced (privately experienced) phenomenal quality – one is not pointing to something which is such that reference to it is essential to any adequate account of the meaning of the word (the public word) ‘red’...” (Strawson, 2008: 111) One is not pointing at anything that

¹²⁵ One can look at *Psicología del color: Cómo actúan los colores sobre los sentimientos y la razón*. (Gustavo Gili, 2004) by Eva Heller. This book gives an overview of how people relate sensations to single colors and to a range of colors. The fact that so many people associate, for example, the colour red with love, or the colour blue with peace, points, but not proves, that there is some aspect of the qualitative experience of colour that manages to be felt similar by different people. These conclusions should be taken with a grain of salt, as the study of subjective states is extremely difficult and prone to error and/or misinterpretation.

can fulfill the purposes of referencing a private experience when talking about colours¹²⁶. This does not imply that one cannot attempt to describe how a color feels – it clearly possible to do so – but reference to the word is not the same thing as referencing the private experience.

Now Strawson applies a twist to this thought experiment. Suppose, somehow, that everyone who sees the colour red actually has the same qualitative feel, when they see the colour of blood (or a pillar box). Furthermore, Strawson says “suppose they all have Monet colour vision”, as in they associate blood, a New York Taxi and the ocean, with the colours red, yellow and blue, and that they all understand or are fluent in English. Once these conditions are established, “Can one say that ‘red’ does in fact carry reference to a particular phenomenal quality – the one that all human beings experience when they see a pillar box in ordinary light?” In other words, in this situation all human beings have the same sensations and experience as well as the same phenomenal qualities, can it now be said, then, that the word ‘red’ captures the phenomenal qualities of the colour that looks like blood? This answer, surprisingly, is “No, because there may be Martians. Martians who do not have Monet colour vision but rather Renoir [which inverts the colors red, yellow and blue to green, violet and orange] colour vision could arrive on earth and *learn English*. And it seems that when they had done so, there would not be anything they did not know about the meaning of the word ‘red.’” Clearly, even if it is possible (and it is not) to get people to express what they *see* when they see the colour ‘red’, there could be other species that have different colour vision and pronounce the same word ‘red’ that is meant by human beings, but the qualitative experience of this word is not captured by the word. Even if there were a near-total monopoly on the qualitative feel of the colour red, “except one person Renoir. Renoir speaks the language as well as us... Is he wrong about what ‘red’ means – in any way at all? Surely not.” (Strawson, 2008: 112) Other exceptions, which Strawson mentions, such as problems raised by issues related to translating words, or of comparing aliens who are blind but sensitive in some other way to light properties with a blind person who cannot discriminate colours at all, but can know that tomatoes and blood are red, do not change the fact that experiences of colours are private phenomena. In

¹²⁶ This holds true for the feeling of ‘pain’ and other such sensations. The key assumption being challenged when speaking about ‘red’ or ‘pain’ is “...that the *epistemological* facts about the necessarily public evidential circumstances in which a given mental term is acquired and used determine the *semantic* facts about the meaning of a term, and hence determine the *ontological* facts about the thing the term is a term for – since to know what a term *means* just is to know what the thing it is a term for *is*.” (Strawson, 2010: 222)

fact, people who see no colour, or see only some colours, though they can certainly use colour words, are missing out entirely of an important aspect of the world as experienced by the mind.

Putting aside these thought experiments, it is time to consider what appears to be a strong objection to the argument that the word ‘red’ carries no reference to the experience of red. One can turn to technical scientific terminology to see if the argument has flaws. After all, “... one can define ‘red’ in terms of the [light] L-properties of objects; and that the true meaning of the word ‘red’, as applied to objects, is ‘reflects light of wavelength of between x and y, or z and w, or... nanometers.’” (Strawson, 2008:118) After all, when colours are studied using a scientific framework, what is relevant in identifying a colour as ‘red’ or ‘blue’ are specific non-experiential properties such as wave lengths in relation to nanometers.¹²⁷ However, even if this is the case in which people define ‘red’ as ‘wavelength which has x properties’, all that has been accomplished is to lengthen the word ‘red’ to a sentence, and the problem of experience remains untouched. Facts about colour (or sound, or any other of the human senses) are presented in relation to technical properties that describe the phenomena in a way that is useful for scientific understanding, but the subjective qualitative feel of people is not subject to study in this manner. The more complex an issue becomes, the less likely it is prone to be subject of scientific enquiry, simply because there are too many factors to take into account. Even more technical examples are considered by Strawson, but these can be set aside, as they add no more insight to his essential point. Granted, there are difficulties in leaving this argument as it currently stands, because, as stated previously, people talk about colours all the time. It’s important to note that “[c]olour-experience *precedes* and is independent of language mastery.” (Strawson, 2008: 122. Emphasis mine) Also, “It is very curious to claim that no sense can be given to the general notion of something’s looking red or blue independently of reference to language, and to the notion of creatures possessed of the mastery of the use of the words ‘red’ and ‘blue’.” (Strawson, 2008: 122)

¹²⁷ In fact, when one is talking about the visible spectrum, that is, to colours which human beings can discriminate – which is far from being all the possible colours that exist, range from about 380 to 700 nanometers, see https://science.nasa.gov/ems/09_visiblelight for more information on the topic . Colours which are higher or lower on this spectrum cannot be captured by the human eye but can be captured by other animals. It’s interesting to consider, not only shades of colours that cannot be discriminated, such as ultra-violet light (which can be discriminated by some animals, like bees), but also colours that are *completely* alien to human cognition. This implies, obviously, that there is more to the universe, by far, than what people can experience. This perspective lends credibility to the Kantian view that the world must conform to our mode of cognition, but there are other ways the world can be seen and experienced.

Obviously, many non-human animals, have colour experiences and they certainly don't know English (nor anything that resembles human language), so it is evident that colour experience precedes language. What is surprising about these difficulties is that even when there is such a gap between experience and colour-words, people are still able to agree on "colour judgements... We know, then that we *resemble* each other in this respect – in respect of possessing the property of being such that P *looks red* to each of us. But what does this resemblance... consist in?" It is clear that when talking about fashion, or colorful vistas, people are saying something beyond the definition or meanings of words, when speaking to each other, though "one cannot give an adequate account of it [colour resemblances] without reference to our linguistic abilities and dispositions... we are disposed to say and judge that P looks red (and hence also to act in non-linguistic ways that show that we judge that P is or looks red)" (Strawson, 2008: 123) Thus people's reactions to colours, clearly reflect non-linguistic thinking, but so far as being able to compare experiences and judge that these experiences are the same, remains a point which cannot go beyond people's capacities to use words. What does this argument, in the end amount to? After all what has been argued for, in some detail, is the relation of word 'red' does not refer or denote, it carries no word-to-object property to the experience of seeing the colour that look like blood, an apple, or a fire hydrant. But why should this matter? It is a common topic of debate whether one's own colour experience matches someone else's, and it appears that it is not possible to agree what anyone's color experience is. If this experiential-linguistic curiosity was limited only to colors, then the consequences might be less important, however it will be argued that colours are far from being the only things which language does not coincide with, so far as conscious experience is concerned. In fact, a whole host of words and concepts, some trivial and some quite profound are not subject to reference relations. Another way of stating this is that words do not directly relate to things, and words are not *mere* words, they are an essential component of thinking and understanding the nature of the world.

If it is not possible to refer to inner experience when communicating - not only the case of colours - what consequences are there for people who want talk about, and refer to chairs, fruits, the economy, history, politics, birds and so on? All these questions are fundamental in trying to understand the most overarching questions about the nature of existence, and, if it is the case that people don't have direct access to the world through language, then the consequences of language on experience (and vice-versa) can not be overstated. In a certain manner, people, with the sensory

capacities they have, quite literally shape and give structure to the world. If the goal is to try and understand 'what there is' and also how 'what there is' affects people's understanding of what surrounds them, then language plays, at least in part, an important role in trying to understand the nature of the mind and world, which makes up 'everything'. Strawson's glimpse into the nature of language will help serve as a catapult to the other philosopher considered here, Noam Chomsky, who will be discussed next.

8.1) Metaphysics as a Connection Between Experience, Language and the Nature of the World

Before going into Chomsky's philosophy and his views on metaphysics more generally, it will be useful to discuss why two disparate fields, such as consciousness, called 'experience' in this case, and language can help in disclosing the nature of the world¹²⁸. Why should Chomsky's 'philosophy' be considered a natural, and in some ways obvious complementary component to Galen Strawson's philosophy? It should be reminded that, as the philosophical tradition has developed, 'metaphysics' has been defined as that which goes 'after the physics', or perhaps another way of disusing what metaphysics is, or should aspire to be, is the field of knowledge concerned with what there is *beyond* physics. At a first glance and depending on one's view's concerning physics predictive capabilities, one can argue that everything, ranging from psychology, sociology and thoughts in general are all made up of, at bottom, elementary particles that pervade all aspects of the world.

There is another view however, which goes against this reductionist account, which believes that the range of physics is limited to very simple¹²⁹, elementary phenomena. If one holds this view, which, a priori seems to be plausible because it is extremely difficult, if not entirely incomprehensible, how atoms have a direct causal relationship with the way people view and interpret the world, then an immediate objection can be stated, which is, why should everything that is not casually connected to physics, which includes most aspects of human being's life and interest, be narrowed down to issues concerning consciousness and language? After all, it is perfectly legitimate to argue that there are sociological, religious and literary concerns which are of great importance, that can also be labeled as belonging to metaphysics. And in a sense, this is true *if* all human activity, aside from physics, is to be called metaphysics. To this objection a few replies are in order. While it is true that the vast majority of human activity apparently bears no

¹²⁸ Although there are many philosophers who speak about these topics, the reason why Chomsky and Strawson compliment each other is because they both agree on many issues which are considered highly controversial. Both share a view of matter, language and human ignorance that are surely a minority perspective in the field.

¹²⁹ Physicist Sean Carroll says something similar, if somewhat less strongly stated "[p]hysics is the simplest of all the sciences, and fundamental physics – the study of the basic pieces of reality at the deepest level – is the simplest of them all. Not "simple" in the sense that the homework problems are easy, but simple in the sense that Galileo's trick of ignoring friction and air resistance makes our lives easier. We can study the behavior of an electron without worrying about, or even knowing much about neutrinos or Higgs bosons, at least to a pretty good approximation." (Carroll, 2017: 235)

immediate relationship to physics, then, why choose consciousness and language to describe the nature of the world? There are many are many replies to this question, but if one does not want to make metaphysics so broad that it becomes a meaningless enterprise, it is, for practical purposes, necessary to limit the scope of this field of enquiry. Nor is it a trivial issue to try to disentangle metaphysics from epistemological issues, which Strawson states to be the case.¹³⁰ Epistemology deals with the nature of belief and the justification of knowledge, whereas metaphysics seeks to find extensive areas of enquiry in which connections can be made about all kinds of phenomena. While it is possible to give this preliminary definition of ‘metaphysics’ and ‘epistemology’, the two fields entail each other in many respects. No matter how much one wants to focus on one of the two, it is not possible to disentangle them completely, as it would not make sense to disentangle physics from chemistry¹³¹, of psychology from biology. What should be true of metaphysics as opposed to epistemology is that it presents itself phenomenologically prior to epistemic considerations, so far as experience of the world is concerned. Even though consciousness is an epistemic matter, what first captures a person’s attention is the world. Consciousness or experience, as discussed in length above, is a necessary pre-requisite for any kind of knowledge *whatsoever*, and is not subject to doubt itself, outside of certain thought experiments – experientiality is a *fundamental given*, and from this ‘given’ it makes sense to question the validity, scope and quality of the knowledge that is presented to oneself. From the fanciest elaborate works of art, to the impressive and detailed theories which are to be found in physics, none of these would

¹³⁰ Strawson argues that: “Structure is a matter of quality because a thing’s qualitative character, exhaustively considered, is a matter of *all* aspects of how it is, and its structural character is an aspect of how it is. The converse claim... sounds a bit mystical, but it can on further reflection begin to seem hard to rebut, *even when one maintains, as one must, a sharp distinction between epistemology and metaphysics.*” (Strawson, 2008.:28 n39. Emphasis mine.) Exactly how one can proceed to make such a distinction is not clear, nor are any further arguments given.

¹³¹ One can see close connection between all these fields as chemistry is essentially the combinations of atoms the atoms found in physics, as is pointed out by Thomas R. Scott and James Lawrence: “The physics of atoms becomes the chemistry of molecules through the bartering and sharing of electrons in an atom’s outer – or valence – shell. The number of electrons that an atom harbors normally matches the number of protons that give the atom its identity.” Furthermore, they point out that “With the increase in protons from hydrogen (1) to ununoctium (118) there is a commensurate increase in the electrons whirring around the nucleus.” (Thomas & Powell, 2018: 30) Biology and life is the result of chemical interactions, as was shown by the famous Miller-Urey experiment. Sean Carroll states that “...in 1952... Stanley Miller and Harold Urey took a flask of some simple gases – hydrogen (H₂), water (H₂O), ammonia (NH₃) and methane (CH₄) – and zapped it with sparks. The idea was that these compounds may have been present in the atmosphere of the ancient Earth, and that sparks would simulate the effects of lightning.” Surprisingly “With a fairly simple setup, and after running for just a week without any special tinkering, Miller and Urey found that their experiment had produced a number of different amino acids, organic compounds that play a crucial role in the chemistry of life.” (Carroll 2017: 250-251) Although this experiment is now considered dated, the data indicates that life can emerge from conditions found on ancient Earth, and one can see the ascension from physics to chemistry to biology.

be possible without experientiality, which in turn, cannot be explained by physics as it currently stands, and there are good reasons to believe that the phenomena of subjectivity will elude theoretical explanations of the kind which the natural sciences seek to elucidate. So far, these statements should not cause much controversy, as long as one does not believe that eliminativism is broadly speaking coherent.

But what about language? Why should language matter in the way we view and understand the world? One of the first reasons that should come to mind is quite trivial, and it is that everything that has been explained so far has been argued through language use. Any arguments about the nature of the world cannot be expressed in full detail without language mastery¹³². This does *not at all* suggest that language is the only way people can view different aspects of the world, as it is obvious that there are plenty of approaches that can help people comprehend the many different aspects of how people view reality. Thus, the arts, broadly construed, offer a window to the aesthetic and ethical dimensions of the world as experienced by human beings. It is also true that in many cases, even though language can be the most precise (though this is not always the case) form of communicating knowledge, it quite often bumps into crucial limitations, as can be seen from Strawson's example in *Red and 'Red'*, in which a single colour can evoke so many sensations and cannot be properly described at all, in so far as our experience of the world is considerably more rich than what language can hope to encapsulate. A less trivial example concerning the reasons why language is a crucial component of metaphysics is that, language is the 'vehicle' of thought, it is what allows people to analyze and organize the nature of the relationship between mind and world. Even granting that there is more to thought than language, it is only through the use of language (and, in physics mathematics is fundamental too) that people can form theories and concepts about reality.

When the topic of discussing, as Quine puts it "what there is", the only way to delineate and describe existence involves an interplay between people's minds and the experience of the world to form a tentative picture of, at least, some of the things that exist. Describing and understanding even the simplest of phenomenon is far from being an easy task, and contrary to common thought, even some of what seem to be the most solid conceptions of objects people have in mind when

¹³² This is because a good deal of science is based on mathematics as Russell, Chomsky and Strawson point out, and it is not possible to have meaningful conversations using mathematics alone.

speaking of the world, are anything but 'solid'. Language is a complex and fluid biological system of the brain, and, depending on one's interests, assumptions and background information, it is the organ that permits human beings to contemplate the world around them. Accordingly, the second portion of this work will focus on the philosophy and 'metaphysics' of Noam Chomsky, and his views concerning language, the course of rational inquiry and the nature of the mind in relation to the world as much of Chomsky's work fills in and complements Strawson's work. Taken together, the philosophy of Strawson and Chomsky can offer, or so it will be argued, a comprehensive view of the nature of the world, so far as language and experience are concerned.

Part II: Noam Chomsky's Epistemic Metaphysics

Q: Given everything that's on your plate, why do you bother with the philosophers?

A: That's the most fascinating topic of all.

- Noam Chomsky

Though it was not the intention of God or nature to abuse us herein, but a most wise contrivance thus to beautify and adorn the visible and material world, to add lusture and embellishment to it, that it might have charms, relishes, and allurements in it. Whereas otherwise really in itself, the whole corporeal world in its naked hue, is nothing else but a heap of dust or atoms...

- Ralph Cudworth

1.0 Noam Chomsky: Life and Works

Noam Chomsky was born in Philadelphia, Pennsylvania on December 7, 1928 to a family of Jewish immigrants. His father, William Chomsky was a Hebrew scholar who partially influenced Chomsky's interests in linguistics¹³³. Chomsky would go on to study in the University of Pennsylvania at the age of 16, though his initial experiences in college made him want to drop out. Due to fortuitous events, Chomsky met the linguist Zellig Harris, who shared many interests with him, including leftist political orientation. Through Zellig's influence, Chomsky continued his college courses, and by 1951 received his M.A. His interest in philosophy would flourish under the tutelage of the famous analytic philosopher Nelson Goodman, and later, when he went on to continue his studies in Harvard, he was also influenced by Willard Van Orman Quine¹³⁴. He finished his doctoral dissertation by 1955, titled *The Logical Structure of Linguistic Theory*, and this, in turn, would be modified into a book that would revolutionize the whole field of linguistics called *Syntactic Structures*. Apart from being considered 'the father of modern linguistics', Chomsky has always had interest in radical leftist political thought, stemming from the anarchist tradition of Bakunin, Proudhon, Orwell and many others. At the core of his anarchist thought is the idea that authority must give justification for any action taken and if the authority in question cannot provide a valid reason for the use of this authority, then it ought to be dismantled or changed accordingly. Chomsky subscribes to the moral principle of universality, in which every person should be judged by the same principles one applies to oneself. Chomsky is probably most famous in the international arena for his sustained critiques of U.S foreign policy and military interventionism, as well as being a critical voice of how the mass media operate in the United States. His political activism became public during the Vietnam War, which he considers to be the most disastrous war of the latter part of the 20th century. Among the many books Chomsky has authored concerning US power and international relations are: *American Power and the New Mandarins*, *The Fateful Triangle: The United States: Israel, and the Palestinians*, *Profit over People, Language and Politics*, *Necessary Illusions*, *On Anarchism*, *Failed States*, *Deterring Democracy*, *The New Military Humanism*, *Because we Say So*, *Manufacturing Consent*, *Hegemony*

¹³³ <https://chomsky.info/reader01/>

or Survival, Hope and Prospects and *Who Rules the World?* This is but a sample of his overall work in this field alone.

Chomsky is also industrious in the amount of output and material he produces in his scientific domain of linguistics, which occasionally overlaps with his ‘philosophical views’. Actually, as will be discussed in the next section, Chomsky does not think that it is too sensible to make a sharp differentiation between philosophy and science, because he sees these fields of enquiry as belonging together in many respects. This makes it rather difficult to extrapolate a particular philosophical outlook for Chomsky, which in turn makes looking for a ‘metaphysical position’ in his works a nebulous affair. However, there are numerous themes in all of Chomsky’s work in linguistics and cognitive science that can put together to get an approximation of what a Chomskyian metaphysics might look like, though this would be only one interpretation – other views may also be extrapolated from his body of work. Besides the already mentioned *Syntactic Structures*, some of Chomsky’s work in the sciences, which often includes philosophical material, are *Cartesian Linguistics*, *Rules and Representations*, *The Minimalist Program*, *New Horizons in the Study of Language and Mind* and *The Science of Language*. Again, the above-mentioned lists include books that are interview format, that is, they are conversations that Chomsky has had with journalists and activists, that have been published in book format.

The interview books mentioned does not include secondary sources on Chomsky’s work, which are also extensive, and which include, as a sample *Chomsky: A Guide for the Perplexed*, *The Cambridge Companion to Chomsky*, and *Chomsky a Beginners Guide*. This list will not include the numerous books that critique Chomsky, mostly, though not exclusively, from a political perspective. The numerous documentaries and lectures that can be bought or seen online, can also be put aside, as the point is well established: Chomsky continues to publish books and contributes to numerous fields of knowledge to this day. At of the time of this writing Chomsky is 91 years old. Chomsky’s first marriage was to Carol Schatz, whom he met when he was a young boy, and married until Carol’s death in 2008. He had three children with Carol. Chomsky remarried in 2014, to Valeria Wasserman and continues to travel around the world talking about the many threats human beings face in the modern world. As has already been pointed out, there are several secondary sources on Chomsky’s contributions to linguistics, politics and philosophy, this work can also be considered as a contribution to that literature. By looking at some of Chomsky’s works,

what will be attempted here is to give an interpretation on what Chomsky's metaphysics would look like. There is no work about this aspect of Chomsky's thought, and before sketching out what a Chomskyian metaphysics might look like, an easier task would be to attempt to highlight Chomsky's 'philosophy', in as much as it can be separated from contemporary scientific enquiry. To this end, some of Chomsky's comments about the role of philosophy and his thoughts on some of the traditional figures of the western philosophical tradition will be given.

Although Chomsky resists being labeled as belonging to a particular group in philosophy, evidence will be presented to argue that, much like Galen Strawson, Chomsky is a type of monist with a rationalistic-idealist bent, who, like Strawson, does not see the point of re-introducing the mind-body problem. In particular Chomsky shares similar views with the 17th century Cambridge Platonists¹³⁵, as well as Kant, in the role that cognition plays in setting a limit to what human beings can know. To this extent, Chomsky could also be called a transcendental idealist of sorts or even a "rationalistic idealist", as 'materialism' for him is not a clear concept in contemporary philosophy. After indicating what Chomsky's conception of philosophy is, a sketch of his metaphysics¹³⁶ will be given that takes naturalism as a starting point for any realistic view of the world. The work will then proceed to Chomsky's view of the referential doctrine, which is crucial for metaphysics generally and for language specifically. What the referential doctrine turns out to be, when analyzed through a Chomskyian gaze is not a word-object relation, but instead points to a rich relation of an inner mental life in which the concepts and conceptions people bring with them helps them interpret the world. The section after this will deal with Chomsky's consideration of Strawson's panpsychism and the limits of human knowledge, and the last section will talk about how the problem of experience (consciousness) could be advanced in a rational manner.

¹³⁵ See footnote 146 below and also see *Talking Philosophy*. Magee, Bryan. 1978.

¹³⁶ Although there are some differences in the approaches Strawson and Chomsky take regarding metaphysics, they both agree that it should focus on the nature of the world. It's important to remember that for Chomsky, talk about the 'world' is to talk about the mind and the *interaction* it has with the external world. Although this point is trivial, it can sometimes appear as if there is mind on the one hand, and world on the other and while this can be useful as a kind of shorthand speech, in reality, for Chomsky, the 'world' could more accurately be described as the 'mind-world', with emphasis on mind.

1.1 Chomsky's Conception of Philosophy:

For Chomsky, it does not make much sense to differentiate between philosophy and science, because up until the middle of the 19th century science was simply a part of philosophy. He points out that if someone were to ask some of the classical philosophers, such as Descartes, Hume or Kant if they were scientists or philosophers they would not know how to answer because such a distinction did not make much sense. However, as specialized knowledge continued growing and branching into new disciplines, it became less plausible to be informed in all areas of knowledge. Nevertheless, for Chomsky who trained as a philosopher under the guidance of Nelson Goodman and Willard Quine, philosophy focuses on a series of classical questions that remain of interest to philosophers. His appreciation of philosophy stems in part from the fact that philosophers tend to focus on the 'big picture' questions concerning human cognition and mental development, whereas scientists often tend to be stuck in technical questions without thinking much about the consequences or significance of what they're doing. The main task for philosophy, as Chomsky sees the issue is for it to clear the way for the development of a science, seeking to clarify what is and is not relevant for systematic inquiry, which is a difficult task, often ending in failure.

Under contemporary understanding, Chomsky is a somewhat curious philosopher, in that he does not have a preference of being labeled as a philosopher or a scientist, as both fields of knowledge share a common history. As already mentioned, Chomsky does not think it makes much sense to distinguish science and philosophy. He has stated, when asked about the usefulness of philosophy in the scientific enterprise that "I think it helps to look at the question in ... more historical depth. If you asked Hume "are you a scientist or a philosopher," he couldn't have answered because there was no distinction. If you had asked Kant [the same question] ... he couldn't have answered." (Ludlow, 2013: 187) The issue is that in contemporary times, it is clear that most scientists would not call themselves 'philosophers', and likewise, most philosophers would stop short of calling themselves 'scientists' though the latter group often, though not always, have a good grasp of the sciences. Chomsky points out that "In fact, until ... the middle part of the nineteenth century, there was no really clear distinction between science and philosophy ... By the latter part of the nineteenth century, they sort of became separated...". He then goes on to state that "[t]here's no boundary to what's in philosophy. It just depends on what ... those who come out of this tradition want to study, and a lot of what they want to study are questions in the foundations of science or

say the kind of things that [Bas] van Fraassen [who tries to differentiate realism and antirealism] is trying to clear up using the results of science.” (Ludlow, 2013: 186). This does not mean that science will answer all the questions that are posed, because science, although tremendously useful focuses on simple phenomena, and many questions, concerning international relations, politics and large parts of ethics can be considered, mostly, outside the realm of hard scientific enquiry¹³⁷.

One thing philosophy can do is to clear up what does and does not belong in a particular area of research: “[t]here are some philosophers who know the sciences very well, and who have contributed to the sciences... they try to clarify what they are doing and even contribute to them at a conceptual level. That’s pretty much what Descartes and Kant and others did who were called philosophers.” Conceptual clarity then, is an important component of philosophy, and is not a trivial matter. Some philosophers like Descartes, Hume and Kant focused on trying to clear up what could today be called ‘psychological issues’ - which by default includes experience – which are tied to the nature of human knowledge and how it interacts with the world. Other, more contemporary figures “[such as] John Rawls [a political philosopher] [are] not working in the sciences. He’s trying to figure out what concepts of justice we have that underlie our moral systems, and so on. And it does verge on the sciences.” There is simply too much information to consider on any given topic, and thus one big task of philosophy, is to be “the mother of the sciences. It’s clearing away the thickets and underbrush and trying to set up things in such a way that the sciences take over.” (Chomsky, 2013: 129) Chomsky does not fit in neatly to what a ‘philosopher’ or a ‘scientist’ tend to be, if one takes as examples of “philosophers” people like Russell, Wittgenstein and Heidegger, and if one takes Einstein, Dawkins and Edelman as examples of “scientists”. This should not be too much of a concern. As Bryan Magee put it, when he introduced Chomsky for a BBC television program: ‘he’s [Chomsky] something of a joker in the pack as far as philosophy is concerned, many professional philosophers would insist quite

¹³⁷ This is not to say that there is no good work that is not scientific, if one uses a narrow definition of ‘science’. There are plenty of good, serious scholarly work regarding history, politics, culture and so on. The problem becomes when one thinks of ‘psychology’ or ‘international relations’ as a science in the sense in which physics is a science. Physics deals with elementary phenomena, international relations, for example, deals with too many actors to have the word ‘theory’ or ‘science’ attached to it and have it mean the same thing as a ‘theory’ in physics, though again, this does not mean these works are not serious or useful, they can be both. Science, as has been discussed here refers to a small domain of intricate knowledge with physics, chemistry and biology being the most successful examples of the sciences. ‘Science’ can also be used honorifically, that is, it can be used to designate good work, for example: The ‘science’ of rhetoric, or the ‘science’ of cooking, etc. But such examples can be misleading, and, as such, ‘science’ here will stick to its more restrictive use.

sincerely that he isn't a philosopher at all, that linguistics is simply a different discipline... I am not going to argue about that, it's little more than a question of definition anyway." What's important in Chomsky's case is "the fact that he was trained as a philosopher [and] his work has enormous implications for philosophy..." (Magee, 1978: 174.)

It should now be more clear what Chomsky considers philosophy's role to be, and that consists in at least two factors: it depends on what people who study the philosophical tradition decide to study, and it often tries to differentiate what is relevant and what is not relevant in any given field of serious enquiry, which is often, though not always, scientific in character. Obviously, this characterization of philosophy makes the field quite broad, as there is certainly much more in human knowledge that cannot be made into a strict science, such as history, literature and international relations than things which could be made into a science. It is also true that Chomsky deals with topics which go beyond the scope of the sciences, as he divides his time into political activism and his role as a scientist and attaching a label into each of these separate fields can be problematic and subject to dispute. Nevertheless, when it comes to political philosophy, Chomsky considers himself as belonging to the anarchist tradition of the libertarian socialist variety.

What about when it comes to the topic of language and consciousness more broadly? Here one must be careful and attempt to construct a plausible interpretation of his 'philosophy', and no quick answer is readily available scattered through-out his numerous books. While it is true that linguistics and the scientific study of consciousness are different fields of enquiry, both are closely related in numerous respects. Trivially, it can be mentioned that without consciousness, it is not possible to speak or to articulate thoughts, making linguistics as a field of study impossible. However, there is more to consciousness than what enters people's awareness, and even those times when one is aware of a specific thought, it cannot always be adequately expressed in words, as noted above.¹³⁸ What about the case of language? What is the proper way to approach this phenomenon? First off, it is easier to point out some mistakes regarding the study of language, as

¹³⁸ Stanislas Dehaene, mentioned in footnote 37 above, has worked on this topic. The following excerpt is common in his book *Consciousness and The Brain: Deciphering How Codes Our Thoughts*: "Because of its limited capacity, consciousness must withdraw from one item in order to gain access to another. Stop reading for a second, and notice the position of your legs; perhaps you feel a pleasure here or a pain there. This perception is now conscious... a second ago it was preconscious – accessible but not accessed, it lay dormant amid the vast repository of unconscious states." (p.21). Not only is there vast amount of unconscious information, but there is also pre-conscious information that is equally important in trying to understand how the mind/brain works.

many misleading questions are prone to arise. One such question concerns the ‘function’ of language. “[Function is] not a clear biological notion or a psychological notion... if I ask you what the function of a skeleton is, and you say: “the skeleton is to keep you straight and keep you from falling to the ground,” that is not false.” Things are much more complex, as he continues by saying “...[it] also applies to its function [the skeleton] to store calcium, or to produce blood cells, or to do any of the other things it does.” In other words, when someone asks about the function of a specific biological or mental phenomenon, what the question implies is that there is a fundamental manner in which the skeleton, or the heart, or the brain works in the case of biology or psychology. Sticking to biology, the issue is that biological systems are extremely complex and thus ‘function’ in many ways, so that asking such a can be quite misleading. If the word ‘function’ is applied in asking ‘what’s the use of language?’, some observations emerge that may not be immediately obvious. “...let’s take language. What is its characteristic use? Well, probably 99.9% of its use is internal to the mind. You can’t go a minute without talking to yourself. It takes an incredible amount of will not to talk to yourself.” (Chomsky, 2013: 11) Some process is going on in people’s heads in which they ‘talk’ to themselves non-stop, in a fragmentary manner¹³⁹.

Another ‘function’ of language could be communication, as it seems obvious that when people are together, they communicate through language, but this is a rather superficial observation: “It’s perfectly true that language is used for communication. But everything you do is used for communication – your hairstyle, your mannerisms – your walk ... So true, language is also used for communication.” However, as mentioned, the vast majority of the time language is internalized in the brain in some manner that remains obscure. A common misconception that can be attributed at least partially, to not giving the subject matter too much thought, is the external aspect of language, focusing on what people *say* rather than what they think. Again, this is misleading “... a very tiny part of language is externalized – what comes out of your mouth, or from your hands if you’re using signs... if you want the notion of communication to *mean* something, let’s say to

¹³⁹ Continuing from the above quote Chomsky states that: “We don’t often talk to ourselves in sentences. There’s obviously language going on in our heads, but in patches, in parallel, in fragmentary pieces and so on.” He adds another proposal, connected with these fragmentary speeches: “An interesting topic that should be addressed some day is that our internal speech is very likely fragments of re-internalized external speech, and the real “inner speech” is very likely inaccessible to introspection.” (Chomsky, 2012: 11-12) A curious parallel is that Strawson describes thoughts (not language) in a fragmentary manner when he states that “Is the stream of consciousness a stream? I doubt it. My (empirical) bet is that the process of consciousness is pulse-like and discontinuous...” (Strawson, 2009: 234) For more descriptions and arguments as to how thought is present to people, see *Selves* pp.234-240

convey information... a very small part of the externalized aspects of language are for communication.” (Chomsky, 2012: 12) So, as is the case with asking what the ‘function’ of the skeleton is, the question as to what is the function of language is perhaps even more obscure. Nevertheless, there are some principles from the study of language that can be beneficial for a philosophical outlook. If Chomsky is pressed on the subject, he says that “Language... serves many... purposes: to establish relations among people, to express... thought, for play, for creative mental activity, to gain understanding, and so on. In my opinion, there is no reason to accord privileged status to... these modes. Forced to choose, I would have to say something quite classical and rather empty: language serves essentially for the expression of thought.” (Chomsky, 1979: 88)

Given the various ways language can be viewed, what is common in almost all of these examples is that language is tightly connected with thought, regardless of whether one is communicating, talking or reading, language appears to accompany thought¹⁴⁰, though the latter is arguably broader than the former in terms of the complexity that composes human thought, and the difficulty associated with expressing any mildly complex idea in any detail. According to Chomsky’s thoughts about philosophy, many aspects of the study of language is trying to clear out what is relevant and what is not relevant when studying language, and the mind/brain is apparently at the center of human language capacity. In terms of philosophy, Chomsky comes out of the western intellectual tradition and tends to focus on some of the issues that concerned these classical figures – problems connected with epistemology, metaphysics and ethics, among other areas of study. Although Chomsky was initially influenced by the likes of Goodman and Quine, he finds much value in the Cartesian tradition of the 17th century, which connects with topics of how the mind works, and what distinguishes human beings from other animals. A look at Chomsky’s exposition of Descartes’ view of language, as well as more contemporary thinkers’ role of language and mind

¹⁴⁰ Related to the topic of thought and language Steven Pinker points out “The idea that thought is the same as language is an example of what can be called a conventional absurdity... Think about it. We have all had experiences of uttering or writing a sentence, then stopping and realizing that it wasn’t exactly what we meant to say. To have that feeling, there has to be a “what we mean to say” that is different from what is said.” In addition, as Pinker emphasizes “Sometimes it is not easy to find any words that properly convey a thought. When we hear or read, we usually remember the gist, not the exact words, so there has to be such a thing as a gist that is not the same as a bunch of words.” (Pinker, 1994: 47) This thinking which words express is called mentalese, is often attributed to the philosopher Jerry Fodor, who says that “The obvious (and, I should have thought) refutation of the claim that natural languages are the medium of thought is that there are nonverbal organisms that think.” Fodor further adds that “...representational systems of preverbal and infrahuman organisms surely cannot be natural languages.” (Fodor, 1975:56)

will serve as background orientation for what will be argued to be Chomsky's epistemic metaphysics.

1.2 Chomsky Among Classical Philosophers

Although Chomsky has discussed in depth his views concerning language and mind in numerous publications, the majority of these exchanges are with contemporary philosophers. If one takes a more historical, bird's eye view of Chomsky intellectual orientation, it is clear that he belongs within the rationalist tradition. Of course, there are many important figures in this tradition, such as Spinoza, Malebranche, Wolff and Leibniz among many other, lesser known figures. However, the rationalist philosopher which Chomsky spends most of his time discussing is Descartes. Besides Descartes, there is another philosopher who Chomsky occasionally cites and quotes, the Neo-Platonist Ralph Cudworth. Most of Cudworth's philosophy is dense, and his main work has yet to be updated into a modern version that would facilitate his study. As Kant basically elaborated a philosophy quite similar to Cudworth's, and since Chomsky agrees with Kant's philosophy¹⁴¹, it is worth considering what Kant has to say in relation to metaphysics as there is far more literature by Kant and about Kant than there is on Cudworth. Chomsky also finds value in some of Peirce's ideas, specifically his idea of abduction. Of Peirce's abduction Chomsky says that "Peirce's concept of abduction is sometimes glossed as inference to the best explanation, but though underdeveloped, the concept goes well beyond that. Crucially, Peirce insisted on the limits of "admissible hypothesis," which he took to be quite narrow, a prerequisite for "imagining correct theories." (Chomsky, 2016: 28) Though Peirce's concept of abduction will not be dealt with here, his complaints about metaphysics are important because they are still relevant, in a slightly modified form.

Chomsky saw Descartes as engaging in a thoughtful and scientific enterprise that sought to illuminate mental phenomena, and thus trying to give a complete account of the world in scientific terms. As Chomsky points out "...Descartes believed – wrongly – that "push-pull" mechanics could explain all the phenomena of the natural world, except such things as consciousness and human creativity." In this view, the domain of the experience, was of a different character than the rest of the world "... to explain what was beyond the scope of his mechanics, he postulated a second substance; little else was open to him..." (Chomsky, 1979: 96) Although Descartes was wrong, Chomsky adds that "...the existence of the soul, Descartes's second

¹⁴¹ See footnote 147 for more information.

substance, is a scientific proposal: it is false, but it is not irrational.” Furthermore, Chomsky adds that “[a] convincing rejection of his dualism requires a demonstration that his postulate is useless, or unnecessary because we can explain the properties of the mind in other ways.” Nevertheless, people should admit that “[i]t is conceivable, though not demonstrated, that principles entirely different from those of contemporary physics enter into an explanation of mental phenomenon. In all these matters one must guard against dogmatism” (Chomsky, 1979:97) It is precisely to guard against dogmatism and to attempt to put metaphysics on a correct path that Descartes, Peirce and Kant will be discussed in what follows.

2.0 Chomsky on Descartes

A brief sketch of Chomsky's views amid various philosophers will help pave the way for an elaboration of a philosophical system that often compliments Galen Strawson's thought. This section is an overview of Chomsky's thoughts about some philosophers, as there are simply too many figures that Chomsky has talked about. The aim of this section is to get a flavor of Chomsky's rationalist orientation. As is often the case when speaking about rationalism, the most influential figure from a historical perspective is René Descartes. The intellectual landscape during 17th century thought was vastly different from the current understanding of the natural world. In Descartes case, he "was able to convince himself that all aspect of animal behavior can be explained by the assumption that an animal is an automaton." With this mechanistic framework in mind "he developed an important and influential system of speculative physiology." Under this philosophy, all animals were elaborate machines, not unlike a clock or a similar mechanical object. However, human beings were an exception to this philosophy in certain aspects: "he arrived at the conclusion that man has unique abilities that cannot be accounted for on purely mechanistic grounds...", while human behavior could be explained within Descartes' thought the "essential difference between man and animal is exhibited more clearly by human language, in particular, by man's ability to form new statements which express new thoughts and which are appropriate to new situations." In fact, one of the many instances Chomsky quotes Descartes is related to the issue that the difference between humans and non-human animals when it comes to language use cannot be based on small physiological differences. Descartes says that "this does not happen because they lack the necessary organs, for we see magpies and parrots can utter words as we do, and yet... they cannot show they are thinking what they are saying." This is not the case with human beings as "...men born deaf and dumb, and thus deprived of speech-organs as much as the beasts, or even more so, normally invent their own signs to make themselves understood by those who... have the time to learn their language." (Chomsky, 2009: 60)¹⁴²

While it is conceivable that a machine could be created that would 'respond' to a certain set of inputs, this would be limited to the machines' design, and the range of 'outputs' would be quite limited. So, one can imagine that a machine could be created that could make a specific sound

¹⁴² For more information on this topic, as well as the influence of Cartesian thought see Chomsky, 2009 pp.59-77

if it wanted ‘food’ and a different sound when the machine was in ‘pain’, and so on. The exception to the human case, in Descartes (and Chomsky’s) view is “... human language, in particular, [is special] by man’s ability to form new statements which express new thoughts which are appropriate to new situations.” (Chomsky, 2009: 59) What Chomsky finds valuable in Descartes’ discussion is an extremely complex and rich phenomenon. People can overlook the fact that they find themselves constantly speaking to themselves and to other people effortlessly, that it is sometimes difficult to appreciate the amount of work and extraordinary coordination that is present in the case of language use. A few brief scenarios can be presented to get an inkling of what is being talked about. One such situation is the fact that a person is reading this sentence, under specific circumstances and with plenty of background information, beliefs, preferences and so on; it would be unlikely if every person reacted or thought about this information in the *exact* same manner (though not impossible, see *Strawson on the composition problem*, above), as the argument proceeds, the brain is performing vast amount of unconscious work that can lead to different interpretations (or they could also be virtually the same, depending on context and how alike two people are) in a manner that is automatic.

A second scenario could be, for example, meeting a friend and talking about something apparently very simple, like yesterday’s tennis match. Upon meeting a friend, the exact words that are being used in the conversation varies every time one sees the same person, such that greeting a person, talking about the weather and then analyzing a tennis match is rarely the same circumstance regardless of the frequency and intimacy between the two relevant people. New sentences are formed all the time, and no effort is needed to understand completely novel information. An immediate illustration of this point would be to hear someone say, “the ball was hit with such mathematical precision and the opponent was so tired that it was inevitable that a loss was forthcoming.” A phrase that is *exactly* like the one just mentioned has never been uttered ever, but there is no difficulty whatsoever in understanding what is being transmitted.¹⁴³ A

¹⁴³ Of course, much simpler examples can be given concerning a single *simple* word. As Douglas Hofstadter and Emmanuel Sander mention: “Occasionally one hears sentences like “I don’t know what country the florist comes from, but she seems very nice.” Why the “but” here? What kind of zigzag in discourse space is this? ... consider how [the sentence] would sound with “and” instead: I don’t know what country the florist comes from, *and* she seems very nice.” It simply sounds like a *non sequitur*. One wonders what these two thoughts are doing in the same sentence.” (Hofstadter & Sander, 2013: 72.) The point to be emphasized here is that a single word can make sentence have quite different meanings, and even if the ideas they try to express are obscure, both sentences are ‘processed’ differently, without difficulty.

suggestive take away of these kinds of observations is that language is closely related to a feature that is unique to human beings in the biological world, namely, the use of creativity. “[language] manifests itself in what we may refer to as the “creative aspect” of ordinary language use -its property being both unbounded in scope and stimulus-free. Thus, Descartes maintains that language is available for the free expression of thought or for appropriate response in any new context”, though what’s especially worth highlighting is that these ‘appropriate responses’ appear to be “undetermined by any fixed association of utterances to external stimuli or physiological states (identifiable in any non-circular fashion)” (Chomsky, 2009: 60) There is infinite capacity of expression which is not limited by the environment, after all two people, could, for example, watch the same tree or ocean and come up with an infinite number of sentences which are not identical.

Now that one has an inkling of the importance of language in relation to experience, it is important to take a step back and look at these topics in relation to metaphysics. Can analyzing language and language use in relation to Chomsky’s work help advance metaphysics? Before this question can be answered, it will be necessary to state what the problem with metaphysics is, as articulated by two important figures in the history of philosophy, namely Charles Sanders Peirce and Immanuel Kant. Afterward, Chomsky’s thoughts on Strawson’s panpsychism will be explained in detail and then one will see how Chomsky thinks rational enquiry should proceed.

2.1 Problems with Metaphysics: Peirce and Kant

Although what metaphysics is, and how it should proceed is rather clear in Strawson, it is less clear to extrapolate what philosophical ‘metaphysics’ could be extracted from Chomsky. However, before turning to Chomsky’s view of the nature of rational investigation which would include metaphysics, some background about the somewhat confusing nature of of this enterprise is in order, as it pertains to the history of modern philosophy through two important figures: Charles Sanders Peirce and Immanuel Kant. Kant serves as a catapult into Chomsky’s general observations about the nature of the world, and a few words from Charles Sanders Peirce, the father of pragmatism, should lay the groundwork for the subsequent Chomskyian arguments. Though pretty much any view can be argued for or against in philosophy, it is difficult to disagree with Peirce about the state of metaphysics. Though Peirce was talking about the state of metaphysics towards the end of the nineteenth and the beginning of the twentieth century, many of his observations remain accurate, and his thoughts about this topic should be quoted extensively, because many of the same problems remain. Peirce begins his critique of metaphysics by saying that “[l]ogic requires that the more abstract sciences should be developed earlier than the more concrete ones. For the more concrete sciences require as fundamental principles the results of the more abstract sciences, while the latter only makes use of the results of the former as data...” It should not be controversial to say that the more abstract a field of knowledge is, the easier it *should* be for that field of knowledge to develop, because there are more phenomena available for consideration. The more concrete sciences can then take some of the results of the more abstract sciences as tools that can then help specific areas of knowledge grow.¹⁴⁴ Peirce adds that “...notwithstanding this, there is one highly abstract science which is in a deplorably backward condition. I mean metaphysics... The common opinion has been that metaphysics is backwards because it is intrinsically beyond the reach of human cognition... Why should metaphysics be so difficult?

¹⁴⁴ ‘Science’ as Peirce uses the word in this context, is much broader than contemporary definitions of the field. Thus, if properly done sociology can help inform psychology, whereas psychology can help inform biology, in so far as many human and animal actions studied by biology, take for granted certain biological assumptions related to behavior and thought. Biologists, in turn, can help orientate physicists when it comes to considering the possibility of life in other planets, as biologists have much more varied data on what constitutes life than physicist due. Although not technically considered a science, history, properly studied can help inform sociology, and so on. In this respect metaphysics should inform a large range of disciplines, ranging from neuroscience, which is the study of the brain, to physics, which is the study of matter. The world discovered by conscious consideration will forever have material for study, in all domains, so long as people continue existing.

Because it is abstract? But the abstracter a science, the easier it is...” Why then is metaphysics in such a bad state, according to Peirce? “...the chief cause of its backward condition is that its leading professors have been theologians.” (Peirce, Charles Sanders. 1934. CP. 6.3.)

Why should theologians be the cause of this bad state of metaphysics? Because theologians’ “... principle business is to make men feel the enormity of the slightest departure from the metaphysics they assume to be connected with their faith..... nothing can be more unscientific than the attitude of minds who are trying to conform themselves in early beliefs.” (CP. 6.3.) Since metaphysics deals with the broadest of questions, it is easy to make assertions that are not backed up by sufficient evidence (this will always be the case with metaphysics, as indicated by Strawson), and departure from evidence in the context of religious belief can lead to bad system-building. There is also the difficulty of confusing what can be stated to be a matter of fact about the world, when in reality such facts rest on the nature of the mind and not the world. For example, if a theologian argues, from a priori principles, that God created the universe, and that mind shares some direct connection to divinity, these theologians are making epistemic mistakes concerning the limits of the mind, since as a matter of principle, it is not possible to fully understand what God is, nor that such a Being would have *any* wishes. In this last example, claims about the status of God are not facts of the world, which is metaphysics, but are instead considerations of the nature of the capacity of the human mind in relation to God, which falls more naturally under the rubric of epistemology, and this is an important distinction. However, even though Peirce considers metaphysics to be in ‘backwards state’, this does not mean he considers it fruitless, on the contrary, he argues that what is needed is metaphysics done with a scientific attitude “...it is worth trying... by proceeding modestly, recognizing in metaphysics and observational science, and applying it to the universal method of such science... that the disputes and obscurities of the subject may at last disappear.” (Collected Papers/ CP. 1934. 6.4). Although theologians have since lost much prominence in contemporary philosophy, many of the problems related to metaphysics is connected to a strong defense of science, narrowly construed. The problem with taking science in such a narrow manner is that it often naturally leads to the view that if something isn’t empirically verified or publicly observable, it isn’t worth talking about¹⁴⁵. This might be good for physics, but in metaphysics one

¹⁴⁵ One could point to Mike Adler’s “Newton’s Flaming Laser Sword”, as an elaboration of this type of thinking. See https://philosophynow.org/issues/46/Newtons_Flaming_Laser_Sword for more information.

cannot simply deny that consciousness and related mental phenomena aren't real in the sense that Strawson articulates. One could say, that scientism is a form of theology, in so far as its adherents think that science will one day be able to answer all or most of the important questions human beings have been asking for millennia. Quite aside from the issue of scientism, contemporary topics in metaphysics such as the nature of the self, causality, the existence of certain kinds of entities, free will, and so on, are questions that pertain more accurately to people's cognitive abilities than to facts about the world absent people and hence, an argument could be made that much of what goes on in contemporary metaphysics are questions pertaining mostly to epistemic concerns, so using the term 'metaphysics' can be misleading if it is not clarified and connected with the human mind. Now, Kant will be discussed, whose philosophy of mind Chomsky generally agrees with and (see footnote 147) who has been instrumental in framing modern conceptions of metaphysics.

The problem of metaphysics as understood by Kant is articulated by Sebastian Gardner who begins by explaining some of the reasons behind Kant's decision to write his 'mature works'. Gardner says that "[m]etaphysical enquiry employs the same cognitive power as is employed in commonsense and scientific judgements about the world of experience: the very same principles of reasoning as are employed in empirical judgements about tables and atoms, are employed in a purified form, in metaphysical judgements about God and the soul." Metaphysics is the relationship of the mind with whatever there is in the world, but as has been argued, there is too much activity and complexity going on in the world to be able to understand everything. In the case of Kant, Gardner argues that when metaphysics is related to people's "knowledge of God and the soul... [it] is [an issue that has] yet to be decided in the *Critique [of Pure Reason]*", in other words, when metaphysics seeks answers for questions of a religious nature, Kant provides no positive explanation to these issues in his *Critique of Pure Reason*. On the other hand, when metaphysics is taken to be "required for the rationality of cognition... the question is... *how* metaphysics is possible." However, given the broad reach with which metaphysics is concerned with Gardner points out that "Kant's usage of the term metaphysics is... ambiguous: he is uncertain whether [the *Critique of Pure Reason*] brings metaphysics to an end, or that it shows in what new form metaphysics is possible" (Gardner, 1999: 21-22). Since the main concern of this work is with metaphysics as the ground for the broadest characterizations of the world, and furthermore, since

Chomsky agrees¹⁴⁶ with Kant's general philosophy as it relates to the mind, some questions raised in Kant's *Prolegomena to Any Future Metaphysics* - which was published by Kant after the *Critique of Pure Reason*, partly as an attempt to clarify that work - are in order - though the ambiguity pointed out by Gardner can still be felt in this work too. In the beginning of the *Prolegomena*, Kant states "...as concerns the sources of metaphysical cognition, its very concept implies that they cannot be empirical. Its principles (including not only its maxims but its basic notions) must never be derived from experience." This status of metaphysical knowledge implies that metaphysics "... is therefore a priori knowledge, coming from the pure Understanding and pure Reason. But so far Metaphysics would not be distinguishable from pure Mathematics..." (Kant, 2007: 1-2) Clearly metaphysics and mathematics are different fields of knowledge, even if one argues that they both have a-priori elements to them.

Assuming Kant is correct, and if by stipulation 'experience' cannot be the source of metaphysics, the only option left for the formulation of metaphysics is that it is a-priori, that is, before or in the mind's conceptions of the nature of the world. But is this formulation of metaphysics coherent? Can, as Peirce, Strawson and Chomsky¹⁴⁷, argue, metaphysics be scientific? Kant goes on to ask "Is Metaphysics at all Possible? Were a metaphysics... a science... could we say, here is metaphysics, learn it, and it will convince you irresistibly of its truth: this question would be useless, and there would only remain that other question... How is science possible, and how does reason come to attain it?" But human reason has not been so fortunate in this case." When people either use *only* a-priori cognition or attempt to go beyond all possible experience: "There is no single book to which you can point as you do in Euclid, and say: This is metaphysics; here you may find the noblest objects of this science, the knowledge of the highest Being, and of a future

¹⁴⁶ In an interview Chomsky had with philosopher Bryan Magee which aired in 1978, Magee said the following "I said that your work always puts me in mind of Kant; in fact you seem to me to be redoing, in terms of modern linguistics, what Kant was doing. Do you accept any element of truth in that?" To which Chomsky replied "I not only accept the truth in that, I've even tried to bring it out, in a certain way." Though he also hastens to add that "I haven't myself referred specifically to Kant very often, but rather to the 17th century tradition of the continental Cartesians and the British Neoplatonists, who developed many of the ideas that are now much more familiar in the writings of Kant..." (Magee, 2001: 191)

¹⁴⁷ Because Chomsky does not think it makes much sense to separate science from philosophy, this can cause some confusion for people who work exclusively (or predominantly) in one field or the other. When philosopher Peter Ludlow was attempting to get Chomsky to clarify his views about 'realism' in relation to people's common-sense conception of the world, a field that Chomsky argues properly belong to ethno-science, the role that philosophy plays in this area was somewhat obscure. Ludlow then asked Chomsky if he thought metaphysics was possible, and Chomsky replied by saying "...science is metaphysics... It's talking about what the world is made of". For more on this conversation see *The Philosophy of Generative Linguistics*. pp.174-191 by Peter Ludlow.

existence, proved from the principles of pure reason...” (Kant: 6) How is the problem of clarifying the role of metaphysics to be accomplished, if there is no single book one can point to and say ‘*that*’ is metaphysics? Kant states that “[t]he conclusion [to be] drawn is, that metaphysics is properly concerned with synthetical propositions a priori, and these alone constitute its end, for which it indeed requires various dissections of its concepts... [related to] its analytical judgements...” As a consequence of this, metaphysical “... procedure is not different from... other kind[s] of knowledge, in which we merely seek to render out concepts distinct by analysis...” (Kant, 2007: 9) It is within the domain of human experience, with the world as it is presented to human beings given their mode cognition, that metaphysics is possible. Metaphysical arguments that go beyond what lies outside people’s mode of cognition, such as arguments concerning the existence of God, whether the universe had a beginning or the claim that idealism is the case are topics that can never be definitively settled.

In the end, and in some respects related with Peirce’s protestations of theologians, a part of metaphysics ought to be following this line of thought: to analyze the world conceptually via synthetic a-priori synthetic cognition. The distinction between analytic and synthetic judgements, in relation to synthetic a priori judgements and how they relate to experience¹⁴⁸, though technical, is worth explaining. Simply put analytic judgments are true by definition, that is, no other facts about the world are needed to know its truth. A common example of what kind of statements are analytic is “all bachelors are unmarried.” Other examples of analytic judgments include “water is wet”, “horses are animals”, “four quarters make a whole”, etc. Once an analytic statement is heard, no extra work needs to be done in order to testify its veracity since analytic statements are taken to be a priori, and do not require *additional* experience for them to be true. Synthetic statements on the other hand, require experience for them to be verified. So, statements like “glasses magnify vision”, “fire burns wood” or even “John is married” require experience to be confirmed or refuted. Synthetical statements are *a-posteriori*, or after the fact of experience. Are there judgments of the world that are synthetic *and* a-priori? That is, are there things in the world that are innate that *at the same time* require experience? Kant’s transcendental idealism, a view to which Chomsky

¹⁴⁸ Talking in detail about Kant’s transcendental idealism, including his ideas concerning synthetic-a priori cognition can become very technical and can lead to a wide range of different interpretations of his philosophy which are still much disputed today. For a lucid and comprehensive view concerning Kant’s transcendental idealism see Lucy Allais *Manifest Reality* (2015), particularly chapter 8.

partially subscribes to (though not using that label himself), and which Strawson partially accepts¹⁴⁹, is that the human mind contains synthetic and a-priori properties, which cannot be accounted for on the basis of learned experience. In these cases, a person is born with these judgments, indeed these judgments contribute to the way world experience the world. The way people experience many aspects of the “manifest world”, for example, is not something that can be *taught* and the knowledge the manifest image provides is not trivial¹⁵⁰. A difficult question to tease out is what part or aspect of the external world finishes or contributes to the mind through interactions between the mind and the world¹⁵¹, but this can be put aside for the moment.

Mathematics and metaphysics, in different ways, are not *learned* through experience, they are *part* of people’s experience, conditioned by people’s mode of cognition. In this respect, it can be argued that a good deal of the world is a result of the way human beings experience the world, as opposed to another creature with a different type of cognitive makeup. This results in the argument that people have a conception of the world as it is represented to them, but the world ‘as it is in-itself’, outside of people’s way of experiencing it, is unknowable¹⁵². They are synthetic in so far as they allow people to view the world, to ‘connect’ X with Y, but they are a priori because people are born with them. A whole other debate is whether there are additional forms of knowledge beyond these that the mind uses to shape reality,¹⁵³ or even another way of formulating Kant’s thought¹⁵⁴, but this can be set aside. It seems then, given what has been argued by Strawson and others, that

¹⁴⁹ A consequence of Kant’s argument is that it is not possible to know objects as they are in themselves, because they are ‘filtered’ by these judgments and our mode of cognition. Strawson thinks that Kant puts the matter too strongly, and argues instead that in some respects, we have knowledge of reality as it is in-itself. For more information on Strawson’s arguments see Chapter 3 of *Real Materialism: Can We Know the Nature of Reality as It is In Itself?*.

¹⁵⁰ Though Kant does not use this phrase, nor does he have this example in mind. This is stated because the idea of the manifest image is crucial for the development of contemporary metaphysics that will be argued for in the conclusion. The “manifest image” was popularized much later by Wilfrid Sellars

¹⁵¹ Again, Allais (2015) discusses Kant’s views on similar questions.

¹⁵² This point can be disputed, as Kant’s transcendental idealism is subject to much debate. The philosopher Carlos Blanco offers a concise critique of some of Kant’s philosophical claims. See *Logic and the Laws of Thermodynamics in Themata* no.57 January-June pp.35-48

¹⁵³ Notice that this distinction is even stronger than the primary-secondary property distinction made by Locke. Locke argues that certain things, like solidity and extension resemble the things themselves. Kant argues that even primary qualities, though fully empirically real, are still shaped by the nature of cognition.

¹⁵⁴ Schopenhauer for example, a neo-Kantian, simplifies Kant’s philosophy in a manner that is arguably more intuitive. In Schopenhauer’s case he states that “[b]y means of the form of causality peculiar to it, and of time...and space, the form of pure sensibility attributed to causality, the understanding first creates and produces this objective external world out of the raw material of a few sensations in the organ of sense.” (Schopenhauer, 1997.: 97) For Schopenhauer, Kant’s twelve categories are reduced to one, namely causality, and this along with space and time are what gives intelligibility to the world.

there must be some other role for metaphysics, other than being the results of the conditions of possibility of any knowledge whatever. Before talking about Chomsky's methodology and some of his contributions to philosophy through his views on the nature of the mind, naturalism and the nature of reference, it will be useful to see how Chomsky evaluates Galen Strawson's philosophy within a broader context in the history of philosophy.

2.2 Chomsky on Galen Strawson's Realistic Monism

If one forgets the history of science and philosophy, it is easy to fall into the trap of thinking one has discovered new knowledge, when what is claimed to be a discovery is actually quite old. Strawson however, is aware of historical antecedents to his own philosophy, particularly on the topic of consciousness being an entirely physical phenomenon as well as the topic of extreme human ignorance concerning the nature of the physical. Others, however, are not as well informed and treat mind and matter as if these were metaphysically separate aspects of nature. Strawson has repeatedly stated that "Realistic materialists... must grant that experiential [mental] phenomena are real, concrete phenomena, for nothing in this life is more certain. They must therefore hold that they are physical phenomena." (Strawson, 2008: 31) Chomsky quotes distinguished contemporary neuroscientist Vernon Mountcastle who makes a claim which was already known in the 17th and 18th centuries. Chomsky points out that "... Vernon Mountcastle, formulating the guiding theme of a collection of essays that review the results of the Decade of the Brain... [states] essentially the same thesis [as Locke, Russell and others] as an "astonishing hypothesis" of the new biology, a "radical" new idea in the philosophy of mind, "the bold assertion that mental phenomena are entirely natural and caused by... activities in the brain..." this observation then leads to the dismissal of the traditional "Cartesian mind-body dualism" (Chomsky, 2016: 111), and other such centuries old observations. One would do well, in these instances to look back at an important - if often overlooked - figure in the history of philosophy, Joseph Priestley (discussed in p.29, above), who preceded Strawson's own philosophy centuries prior to his elaboration of 'agnostic materialism' and his more recent 'real materialism'. Priestley's observations about the nature of matter and mind, specifically in his work *Disquisitions Relating to Matter and Spirit* is, for Chomsky, an "important work [which] was the culmination of a century of reflections on Locke's speculations, and their most elaborate development." (Chomsky, 2016: 11). Already in 1777 Priestley made the observation, which Strawson agrees with, that "the powers of sensation and

perception, and thought, as belonging to man, have never been found but in conjunction with a certain *organized system of matter*; and therefore, that those powers necessarily exist in, and depend upon, such a system. This, at least, must be our conclusion, till it can be shewn that these powers are incompatible with other known properties of the same substance...” (Priestley, 1777: 26) Obviously, Priestley did not have anything remotely similar to modern day technology which allows neuroscientists to look at the brain to see what type of activity is going on. Chomsky goes on to say in relation to Priestley “[o]ur ignorance provides no warrant for supposing that sensation and thought are incompatible with post-Newtonian matter.” (Chomsky, 2016: 112) It is important to emphasize that the reason for abandoning the old *mechanistic* materialist framework is due to Newton’s discovery that people do not know what the limits of bodies (or matter more broadly speaking) are.¹⁵⁵ Also, in order to avoid a potential confusion that may be caused by pointing out that there are no good reasons to think that thought and matter are separate entities, is that Priestley is not arguing that thought is *reducible* to ‘lower parts of matter.’ Chomsky then cites John Yalton who says “that the kind of matter on which the two-substance view is based does not exist...” (Chomsky, 2016: 113)¹⁵⁶ In other words, the type of matter that was postulated prior to Newton’s discovery, the matter of the mechanical philosophy which seeks to explain the world as a kind of machine, is not the kind of matter that exists in the world.

The most important contemporary elaborations of this view, are, in Chomsky’s views, the philosophy of Galen Strawson as well as Daniel Stoljar, though Chomsky spends more time talking about Strawson, probably because at the time of writing, Strawson has a larger body of work that

¹⁵⁵ See pp. 175-186 below.

¹⁵⁶ It’s difficult to assess whether contemporary scientists are aware of this history. It was already established by Newton, Priestley and others that this type of matter does not exist (a mechanical or machine-like matter), but Gilbert Ryle’s ‘ghost in the machine’ is still discussed and it is sometimes assumed that people are machines. Nevertheless, this old lesson sometimes re-appears in scientific literature, often associated with the discoveries of quantum mechanics. For example, physicists Bruce Rosenblum and Fred Kuttner point out that “Randomness was *not* Einstein’s serious problem with quantum mechanics, despite [the] much quoted theological comment [“God does not play dice with the universe”]. What disturbed Einstein, Schrödinger, and many other experts today, is quantum mechanics’ *apparent denial of physical reality*. Or, maybe the same thing, that the observer’s choice of how to observe [the experiment] affects the prior physical situation.” (Rosenblum & Kuttner, 2011: 85) (Emphasis mine.) The world is indeed stranger than a machine. However, these very same authors make the same interpretive mistake telling the history of physics since Newton, when further on in the book they say that “The meaning of Newton’s mechanics was clear: It described a reasonable “clockwork universe.” Classical physics needed no interpretation.” (Rosenblum & Kuttner, 2011: 125). *This is the opposite of what Newton discovered*. If one has in mind the history Chomsky is discussing, these large conceptual mistakes would disappear, and contemporary scientific culture might be different today. Matter, since Newton, has been ‘ghostly’, not ‘mechanical’.

Stoljar¹⁵⁷. Issues related to how thought can arise out of matter did not trouble Priestley, and Chomsky adds “rightly, I think, any more than scientists should have been concerned about the irreducibility of the mysterious properties of matter and motion to the mechanical philosophy...” (Chomsky, 2016: 114)¹⁵⁸ The idea that something as radical as thought can arise from matter is “[a] common objection... such ideas invoke an unacceptable form of “radical emergence,” unlike the emergence of liquids from molecules, where the properties of the liquid can in some reasonable sense be regarded as inhering in the molecules.” The topic of “Radical-Emergence” (which Strawson often calls “brute emergence”), has already been talked about in some length, though Chomsky does not think that arguments against ‘radical emergence’ are particularly strong, since he takes it to be part of ordinary science. Chomsky further adds that “We also *cannot conceive* of a liquid turning into two gasses by electrolysis, and there is no *intuitive* sense in which the properties of water, bases, and acids inhere in oxygen and other atoms.” (Chomsky, 2016: 116. Emphasis mine.) The problem posed by “radical emergence”, in the situation of thought emerging from matter appears to be weak, because what is under attack is the notion of ‘conceivability’. Under this conceptual framework it is fair to say that there are plenty of phenomenon in nature which are not intuitive, if by ‘intuitive’ one has in mind anything that remotely approaches the topic of ‘common sense’ and lived experience. When people look at the world and consider all the phenomena that are seen on the one hand and compare it to what scientific theories say about these phenomena on the other, there is a very big gap¹⁵⁹ - in some cases an unbridgeable gap - between

¹⁵⁷ At the time of writing Stoljar has published two books: *Ignorance and Imagination: The Epistemic Origins of The Problem of Consciousness* (2006) and *Physicalism* (2010), whereas Strawson has more.

¹⁵⁸ Another important figure in the history of philosophy, namely Arthur Schopenhauer has also put forth arguments that are similar to the one’s Chomsky presents. Schopenhauer says that “The tendency to gravity in the stone is precisely as inexplicable as is thinking in the human brain, and so on this score, we could also infer a spirit in the stone. Therefore... I would say: you think you know a dead matter, that is, one that is completely passive and devoid of properties, because you imagine you really understand everything that you are able to reduce to *mechanical* effect. But physical and chemical effects are admittedly incomprehensible to you so long as you are unable to reduce them to *mechanical* [effects].” Schopenhauer adds that “In precisely the same way, these *mechanical* effects themselves and thus the manifestations that result from gravity, impenetrability, cohesion, hardness, rigidity, elasticity, fluidity, and so on, are just as mysterious as are those others, in fact as is thinking in the human head. If matter can fall to earth without you knowing why, so can it think without you knowing why.” (Schopenhauer, 1974: 105)

¹⁵⁹The physicist Paul Davies elucidates on this point when he states that “solid matter is revealed... to be almost all empty space, and the particles of which matter is composed are... ghostly patterns of quantum energy, mere excitations of invisible quantum fields, or possibly vibrating loops of string living in a ten-dimensional space-time (Greene, 1999). The history of physics is one of successive abstractions from daily experience and common sense, into a counterintuitive realm of mathematical forms and relationships, with a link to the stark sense data of human observation that is long and often tortuous. Yet at the end of the day, science is empirical, and... must be grounded... “in reality.” (Davies & Henrick. (ed), 2010: 83)

understanding the theory and looking at what *actually* happens in the world. That Strawson adopts the ‘No-Radical Emergence Thesis’ and concludes from this that panpsychism is the most accurate account of the nature of reality is something that Chomsky considers, but does not adopt. Nonetheless it makes sense to explore Chomsky’s view on Strawson philosophy in chronological order based on Chomsky’s writings.

Galen Strawson’s first publication of *Real Materialism* was in a collection of essays written by various philosophers as a response to various aspects of Chomsky’s work, these essays were put together and published under the title *Chomsky and His Critics* (2003) and was edited by Louise M. Anthony and Norbert Hornstein. In *Real Materialism* - to repeat an appropriate quote by Strawson - he says that “... we have no good reason to think that we know anything about the physical that gives us any reason to find any problem in the idea that mental phenomena are physical phenomena.” Strawson then points out “Joseph Priestley saw this very clearly over two hundred years ago... Noam Chomsky reached essentially the same conclusion over thirty years ago...” (Strawson, 2008: 20) Chomsky, in his reply to Strawson, views the essay in a positive light: “If only for my benefit, I will review the basic framework of Galen Strawson’s careful and illuminating paper...” Chomsky does not object, nor does he explicitly endorse, the characterization that he might be a ‘real materialist’, as long as physicalism is devoid of the meaning it had during the mechanical philosophy. He continues¹⁶⁰ by stating that “[a]mong the many important conclusion Strawson reaches is that Bertrand Russell was basically right in holding that what we know of the non-mental does not suffice to show whether it is “different from the world of mind.”” Thus, this specific conception of materialism does *not* imply a limitation to what matter is, and ‘common sense’ arguments to the extent that matter is solid whereas thought is abstract do not fit in to theories of the natural world. One of the benefits of using the word ‘experiential’, rather than mental, aside from the issue of terminological clarity, is that

One should note the use of scare quotes at the end, which is presumably intended to point out how radically different scientific theories are in relation to the world that people see and experience in ordinary life, thus it is not only liquidity and gases that are a problem to understand intuitively, it is almost all aspects of nature. It’s still difficult to reconcile this last comment with what, for example Brian Cox and Jeff Forshaw say about particles “Dealing with particles ‘of no size’ [aka massless] sounds problematic and perhaps impossible... but for now this [observation] is not mandated by experiment and *there is no place for size in the fundamental equations of particle physics.*” Last emphasis added (Cox & Forshaw: 116)

¹⁶⁰ An important terminological point is that although the word ‘non-mental’ is used by Strawson and Chomsky it is more likely to cause confusions than the term ‘non-experiential’ which is clear, this when Chomsky uses the word ‘non-mental’ it can be also taken to mean the ‘non-experiential.’

“[Experiential phenomena] provides “some securely anchored, positive descriptive content,” and ... [Strawson notes] that there is no need to “draw a sharp line” that distinguishes the broader category from the rest of concrete reality.”

While it makes sense to try and avoid sharp distinction between aspects of the world that are experiential versus those that are non-experiential, the phenomenology of experience when compared to the phenomenon of the non-experiential creates a substantial epistemic gap. Thus, one can talk about something being experiential to greater or lesser degrees, such as thinking about a mouse having less experientiality than a dog, or a human being having a clearer capacity to process experience when a person is awake compared to when that person is distracted or sleepy, and so on – experience appears to be a gradual phenomenon. However, the difference is fundamental between having no experience at all and having any experience at whatsoever. Chomsky tends to agree with the ‘no sharp distinctions’ rule in the study of nature generally: “Similarly, no one should try to do so [make sharp distinctions] for other aspects of the world that lend themselves to (more or less) integrated study at a particular stage of understanding...” (Antony & Hornstein (ed), 2003: 266). On Chomsky’s reading of Strawson, he quotes the following “By having experience, he [Strawson] argues, “we are directly acquainted with certain features of the ultimate nature of reality,” namely Experiential features of the world.” This aspect of Strawson’s views “seems to me to be persuasive, but we should nevertheless, be cautious in endorsing [the idea that experience consists only of neurons firing]” (Antony & Hornstein (ed), 2003: 266-267) This brief quote gives some insight as to how Chomsky views topics that relate to the nature of the world, in other words, metaphysics, though with a particular epistemic dimension, that of the mind imposing its structure on the world. As the last part of the quote indicates, Chomsky follows Strawson’s view that reductionism is way too strong a statement concerning the way the brain works. Other views, also discussed in *Mental Reality*, like vat-idealism imagines that we have no access to fundamental reality at all, as all that is known is the product of some elaborate machine projection. Another perspective, related to one version of naïve realism¹⁶¹, states

¹⁶¹ Bertrand Russell points out, briefly but succinctly, the problems associated with such a form of naïve realism, which lead to this view being self-defeating: “Science seems to be at war with itself. Naive realism leads to physics, and physics, if true, shows naive realism to be false. Therefore, naive realism, if true, is false; therefore it is false.” (Russell, 1940: 15) In case the point is not clear enough, naïve realism would hold that all that has to be done in order to understand the world is to observe it closely, but when the world is observed closely, all kind of strange properties,

that the view people have of the world, as revealed by ordinary, everyday ‘common sense’ shows that the world is as it looks like. Objects such as trees and rocks are actually solid and there are no problems in terms of epistemology or ontology that raise any difficulties for an ordinary view of the world. There can be many views that stand between varieties of idealism and naïve, ‘common sense’ realism¹⁶², but Strawson views’ and Chomsky’s sympathies take a more nuanced approach. While there is no doubt that there are many aspects of the world of which people are completely ignorant of, the very fact that there is experience tells people something, however small and potentially distorted this may be, about the nature of the world. On one interpretation, this perspective is quite removed from naïve realism, and it shows that what people understand of the nature of the world *directly*, is rather limited, because saying that experience *itself* is an aspect of the world is quite different from saying that an experience *of or about* ‘X’ (tree, house, sun, etc.) is a ‘direct’ aspect of reality, or reality as it is in itself, because, as Chomsky has points out, through Russell, peoples’ percepts already filter the sense-data that are considered to be given or self-evident.

One should be careful in trying to argue that the experiential and all it consists of, in its entirety, are ‘neurons firing’, as “one may reasonably doubt that current understanding of the brain permits that high degree of confidence.” Chomsky also quotes Strawson when he agrees that it would be a mistake to think that when the brain is being talked about, the only thing that should be considered is the brain as it is described by physics, which Chomsky stating that “physics” “mean[s] natural science.” It is convenient to think that since everything is made out of the things physics talks about, then the brain is just whatever physics tells us about its constitution, with neuroscience coming in to explain ‘higher-order’ features, like consciousness through appeals that the only thing experience amounts to, are neurons firing in the brain. Beside the fact that such statements are not justified given the complexity of the brain, there is much more to experience than what can be described by neuroscience, and explorations concerning metaphysics as well as the referential doctrine can serve to highlight just how complicated the simplest of phenomena are and

such as atoms and other particles appear, and this view is far removed from the way the world appears from a naïve realist perspective, which does not see objects that are made up of atoms, etc.

¹⁶² One can point to Berkeley as an example of a rather strong form of idealism and point to G.E. Moore as someone who defends a naïve picture of reality.

consciousness, after all is said and done is not such a simple phenomenon. Chomsky proceeds to briefly summarize Strawson's realistic materialist monism and notes that the three main thesis that can extrapolated from *Real Materialism* are, paraphrasing: That physics seeks to genuinely represent the 'external-world', if only through the structure provided for by mathematics, that all matter has some components that are non-experiential, that the traditional mind-body problem cannot be posed as there are (to human beings at least) even simpler examples of 'hard problems'. One such 'hard problem' arises when it comes to the issue of conceiving intuitively the nature of the world, as was observed by Locke "...and others, who in various ways came to the conclusion that motion has effects "which we can in no way conceive motion able to produce... Even before Newton [motion was a hard problem]"¹⁶³ (Anthony & Hornstein (ed), 2003: 267). The second thesis, that matter has components that are non-experiential, however, is somewhat difficult to talk about, as it is in effect a metaphysical *assumption*, and not necessarily a *fact* of the world. Strawson then argues that it is entirely possible that there might not be any kind of non-experiential matter at all, as there is no proof for the existence of non-experiential matter. Chomsky says that "thesis (2) is a bit different from his [Strawson's] earlier assumption that "each particular mental phenomenon essentially has non-mental being." Given that experiential being does not exhaust the (loosely characterized) domain of the mental, thesis (2) appears to allow for the non-existence of non-mental being" in fact, such an argument maybe allows "the conclusion that "at very deep bottom," the universe consists of nothing but bits of information (Wheeler 1994)." (Antony & Hornstein (ed), 2003: 267-268)

If everything is experiential then, one assumption that could be made, is the one offered by John Wheeler who states that at bottom, what there is are 'bits of information', which are 'yes' or 'no'

¹⁶³ The topic of motion being a 'hard problem' in the past should not be overlooked as a mere curiosity of the time. Related to the topic of motion, the concept of 'causality' is potentially problematic, because under a particular interpretation of quantum mechanics, it doesn't appear to exist – or at least it plays no detectable at the deepest levels explored in physics. Sean Carroll states that "[a]t the deepest level we currently know about, the basic notions are things like "spacetime," "quantum fields," "equations of motion," and "interactions." [There are] No causes, whether material, formal, efficient, or final." (Carroll, 2017: 29) Carroll is careful not to apply this idea of a 'causality-less' universe to the manifest image of lived life, because people do use and understand the 'manifest' image in terms of apparent causal interactions. Whether causality actually exists is discussed by Strawson in 'The Secret Connexion' in relation to the philosophy of David Hume. Strawson concludes that Hume believed causality to be a real phenomenon of the world, but people cannot prove it exists. See Strawson *The Secret Connexion*.

answers to the questions that can be posed about nature, whom Chomsky cites¹⁶⁴, though Strawson does not. In the latter sections of *Real Materialism*, when Strawson is defending his reasons for choosing the term ‘materialism’ over other terms (see pp.58-62 above) he says “Chomsky is a clear example of someone who is, methodologically a true materialist in my sense. I am not sure that he would accept the title, however, [as] he avoids the terms ‘materialist...’” (Strawson,2008: 36 footnote 73). In *Chomsky and His Critics*, Chomsky replies by saying that although Strawson suggests that RMM (Real Materialist Monism) “ontologizes [my]... methodological stand”, this reformulation of Chomsky ‘methodological naturalism’ is potentially misleading, because it “inflates what should be an innocuous proposal: that we should investigate “mental aspects of the world as we do any others...” (Antony & Hornstein (ed), 2003: 268) In these respects, Chomsky prefers to keep his views concerning philosophy, simple¹⁶⁵, in that if there is no good reason to introduce technical terminology or add unnecessary complexity to an argument, he avoids it. The point of Chomsky’s ‘methodological naturalism’ is to study all the aspects of the world using the same approach that has been successful in the sciences. It is not that Chomsky thinks that Strawson’s arguments are not valid, they are, but they differ in emphasis from Chomsky, in that Strawson is more interested in the more abstract a- priori structure the mind has when it tries to categorize and organize the nature of reality, whereas Chomsky’s main concerns have to do with the way language works as a phenomenon of the mind/brain, which is connected with the way people interpret reality. Having stated this, Chomsky concludes, at least in *Chomsky and his Critics* that Real Materialist Monism (RMM) “does “ontologize” the methodological stand, in a way that seems to me quite reasonable, though where the chips may fall, who can say?” (Antony & Hornstein (ed), 2003: 268) In other words, what Chomsky is arguing is that it is difficult to know whether all reality is experiential, or if reality is both experiential and non-experiential, as much

¹⁶⁴ This ‘information’ view of the nature of reality is by no means universally accepted, and in fact has been argued against by people such as Raymond Tallis (1999, 2011), on pragmatic and semantic grounds, though this can be put aside.

¹⁶⁵When asked about the meaning of the word ‘dialectics’, Chomsky says that “I’ll tell you the honest truth: I’m kind of simple-minded when it comes to these things. Whenever I hear a four-syllable word I get skeptical, because I want to make sure you can’t say it in monosyllables” (Chomsky, 2002: 228-229) However, this does not imply that philosophy must be easy as he further clarifies that “There are some parts of philosophy which I think I understand, and it’s most of classical philosophy. And there are things there that I don’t understand, because they don’t make any sense – and that’s okay too, these are hard questions... it’s not necessarily a criticism to say that something doesn’t make any sense: there are subjects that it’s hard to talk seriously about.” (Chomsky. 2002 :230-231).

of the debate concerning language and mind treats mind as if it were a separate ontological aspect from the rest of the world.

By the time Chomsky publishes *‘What Kind of Creatures Are We?’* his conclusions concerning the possibility of panpsychism are stated differently, when Chomsky quotes Priestley: “it should not perplex us... that “life should be a property of an entirely animal system, and not the separate parts of it” That seems to be a reasonable stance” (Chomsky, 2016: 117) Furthermore, as pertaining to the topic of ‘materialism’ or ‘physicalism’ (as these two terms can be used interchangeably), he thinks that “it is not clear that we want to found a serious philosophical position on a concept that we think that we understand intuitively but cannot analyze, particularly when a long history reveals that such commonsense understanding can often not withstand serious enquiry.” (Chomsky, 2016: 122) In this last quote, Chomsky is talking about Stoljar, but in this context, it can also apply to Strawson’s ‘Real Materialism’, in so far as the word ‘physicalism’ is used as a term that encompasses all of reality. Chomsky’s view on panpsychism, then, is that it is not likely that all matter has experiential components, and that only some specific arrangements of matter lead to the property of mind¹⁶⁶. In this respect, and opposite to Strawson arguments, Chomsky believes that ‘radical emergence’ is a common occurrence in nature, and qualms about ‘mental properties’ being special to such an extent that panpsychism is the most realistic option available are not warranted by the evidence, though either view about the existence or non-existence of panpsychism cannot be definitive given the way science, and the human mind, works. All of this is not to deny that it is by any means easy to separate when something stops being experiential and becomes non-experiential, but that such a distinction exists as a fact of reality should not be too controversial.

In these respects, Chomsky would agree with the Strawson of *Mental Reality* when Strawson stated “I believe that experience is not all there is to reality... that once there was no experience like ours on this planet...” but would disagree with Strawson when he asserts that “...however experiential

¹⁶⁶ Thomas Nagel also talks about rationality being a property of whole conscious subjects, not parts of them when he states that: “Rationality, even more than consciousness, seems necessarily a feature of the functioning of the whole conscious subject, and cannot be conceived of, even speculatively, as composed of countless atoms of miniature rationality. The metaphor of the mind as a computer built out of huge number of transistor-like homunculi will not serve the purpose, because it omits the understanding of the content and ground of thought and action essential to reason. It could account for behavioral output, but no understanding.” (Nagel. 2011: 87) Though of course, mind is needed for rationality. It is an open question as to how big of a role rationality plays in recognizing the domain of the mental.

properties are described, there is no good reason to think they are emergent, relative to physical properties, in such a way that they can correctly be said to be nonphysical properties.” (Strawson, 2010: 105) In this quote, Chomsky would agree that experience is not all there is to reality, but emergence would not be an obstacle to scientific explanation as it is taken to be part of normal science. Chomsky might well add that, even though it is possible to talk about experiential and non-experiential features of the world it is important “... to recognize that... the concept “physical facts” [non-experiential facts] means nothing more than what the best scientific theory postulates, hence should be seen as a rhetorical device of clarification, adding no substantive content.” (Chomsky, 2016: 125). That is, unless a definition of the physical can be given, which is precisely what Strawson does, which Chomsky acknowledges. The mind-body problem now becomes the problem of experience and non-experience. Though it is likely to be a mystery, what can be discussed sensibly is how human beings use experience to understand the world they are presented on the occasion of sense data. Contrary to what common sense may indicate, the picture of “naïve realism” people take for granted is literally false, the world is structured by the mind to appear a certain way, and not other ways. Now it is time to see in-depth what Chomsky thinks about the mind in relation to the world.

2.3 The Structure of the Mental World

Chomsky’s philosophy can continue to fill in some of the remaining gaps in metaphysics, or so it will be argued, that are left behind by Peirce and Kant and in some respects, he can compliment some aspects of Strawson’s philosophy. By using methodological naturalism as a starting point, and by recognizing the rich mental structures that human beings use to form the world, Chomsky’s metaphysics can be taken to be ‘scientific’ as Peirce uses the term and also ‘critical’ as Kant philosophy was. However, Chomsky’s thought is much less complex than Kant in that he does not look for sophisticated justifications for metaphysics, as he argues that science simply is metaphysics (see footnote 148) and his thoughts on this topic, which will be discussed in relation to the referential doctrine, as well as his elaboration of people’s internal conceptions of the world, further fulfills Peirce’s suggestion of doing metaphysics with a scientific attitude. The naïve or ‘common sense’ view that the world¹⁶⁷ is that the world is more-or-less as it appears to

¹⁶⁷ Although what’s relevant in the case of Chomsky is the seventeenth century formulation of how the world is made. Eduard Dijksterhuis points out that: “Seventeenth century mechanistic science... assumed no other explanatory

people in ordinary life – but this perspective is not sustainable as Newton demonstrated, a topic that will be explored in even greater detail soon. Questions about the nature of the world are raised by talking about ‘things-themselves’ or how the world is independent of people’s ways of conceiving it. Is it possible that there are other ways to conceptualize the world? Perhaps it is possible, but for human beings, to try to make sense out of the immense amount of information and sense-data and try to give an account of the nature of the world, as accurately as possible is not a new problem. As Chomsky states “The questions... I ... consider are classical ones. In major respects we have not progressed beyond classical antiquity in formulating clear problems in this domain [concerning the mind] ... From Plato to the present time, serious philosophers have been baffled and intrigued by the question Bertrand Russell... formulated in this way: How comes it that human beings, whose contact with the world, are brief and personal and limited, are nevertheless able to know as much as they do know.? (Russell, 1948, p.5)” The point is quite easy to overlook, but careful observations of the situations in which people find themselves reveal quite a complex structure. People know how to act in so many situations which are completely new with no trouble or apparent effort. It looks as if there is a certain structure in the mind, which can be hinted at, but not described in full detail, that allows people to understand the world in a very specific manner. “In the classical tradition, several answers were suggested. One might argue, along Aristotelean lines, that the world is structured in a certain way that the human mind is able to *perceive* this structure, ascending from particulars to species to genus to further generalizations and thus attaining knowledge of universals from perception of particulars.” (Chomsky, 2007: 5) (Emphasis mine)

This tradition is nonetheless an indication of the mind finding some order in the world through the myriad of information and sense data that bombards the senses at any moment in time. There is a problem with this view however, and that is that, unless certain rich “metaphysical assumptions” (making some kind of reference to an external world) are postulated - as well as a sophisticated

principle besides matter and motion, and no other way in which material bodies influenced each other besides contact...” (Dijksterhuis, 1986: 457.) What happened when science began to leave behind its Aristotelean foundations is that “...substantial thinking, which inquired about the true nature of things, had to be exchanged for ‘functional’ thinking, which wanted to ascertain the behavior of things in their interdependence...” (Dijksterhuis, 1986: 501). And leaving behind the ‘inner nature of things’ implies leaving behind common-sense conceptions of the way the world works. Chomsky and Strawson (to a lesser extent), point out however, that the view that the world as a kind of machine is mistaken. There is no good reason to believe computers will be much better at explaining the world, much less the mind.

epistemic ‘filtering mind’ - it is extremely difficult to give an explanation as to how people tend to have such a highly uniform picture of the world. “A more fruitful approach shifts the burden of explanation from the structure of the world to the structure of the mind. What we can know... depends on the specific experiences that evoke in us some part of the cognitive system that is latent in the mind.” This uniformity of understanding is coherent if one assumes that it is the mind that is making discriminations, and not the world. The mind has in it numerous kinds of divisions and categorizations that are polished and brought to fruition by making *some* kind of contact with some of the aspects of the world that provides the mind with the necessary experience and data to allow it to grow and form the world in the way people do. When people perceive the world, one should bear in mind that there is an epistemic apparatus that allows the world to be revealed the way it is, and not some other way. Whereas Kant offers a rich theoretical account of the construct as to how the mind filters sense-data, it is the Cambridge Platonist Ralph Cudworth, that Chomsky finds more useful in explaining how the mind gives meaning to the world that is perceived. When the shift of enquiry turn from the world to the mind, the following argument can be made, as Chomsky comments through Cudworth that “... knowledge “consisteth in the awakening and exciting of the inward active powers of the mind,” which “exercise[s] its own inward activity upon” the objects presented by sense, thus coming “to know or understand, ... actively to comprehend a thing by some abstract, free and universal ratio’s reasonings ...”, even the most trivial phenomena in the world is projected by the mind, thus “[t]he eye perceives, but the mind can compare, analyze, see cause-and-effect relationships [etc.]... giving a comprehensive idea of the whole, with its parts, relations, and proportions. The “book of nature,” then, is “legible only to an intellectual eye...” (Chomsky, 1975: 6-7) Thus, whatever is seen in the ‘world’, is more correctly labeled as the “mind-world” and can be also called “rationalistic idealism”¹⁶⁸, as this is the only avenue which is open to serious enquiry and research¹⁶⁹. That is, although people see certain aspects of the worlds

¹⁶⁸ Chomsky in fact used this term to refer to Lovejoy’s essay *Kant and the English Platonists* in *Problems of Knowledge and Freedom*. Rationalistic Idealism could well apply to Chomsky overall philosophy.

¹⁶⁹ It could be argued that, interpreted in a certain way, Cudworth’s philosophy already touches on a kind of mind-world metaphysics when he states that: “‘The essences of light and colours’, saith Scaliger, ‘are as dark to the understanding as they themselves are to sight’. Nay, undoubtedly so long as we consider these things no otherwise than sense represents them, that is as really existing in the objects without us, they are and must needs be eternally unintelligible. Now when all men naturally enquire what these things are, what is light, and what are colours, the meaning hereof is nothing else but this, that men would fain know or comprehend them by something of their own which is native and domestic, not foreign to them, some active exertion or anticipating of their own minds...”(Cudworth, 1996: 56-57) Not only light and colors, but most aspects of nature would thus be unintelligible without a pre-existing mental framework that allows for some understanding of them, because, so this argument goes,

as given and self-evident, when people see things like cars, trees, tables and the like, *there are no such entities* in the mind-independent world, a cat does not recognize a car as a car nor a tree as a tree, but people do recognize these things as certain phenomena. There is a shared world of meaning among people, but this is rather different from the scientific enterprise, which attempts to find objects or aspects that belong in the external world- the world absent people. Chomsky, citing Cudworth says “[t]he primary objects of science and intellection,” namely, “the intelligible essences of things,” “exist no where but in the mind itself, being its own ideas ... And by and through these inward ideas of the mind itself, which are its primary objects, does it know and understand *all external individual things, which are the secondary objects of knowledge only.*” (Chomsky, 2007: 7) (Emphasis mine). Thus, the mental domain is the primary aspect of knowledge human beings have, and what belongs to the world is of secondary epistemic security.

Furthermore, it is the mind in interaction with the world that gives intelligibility to anything, and if some area of the mind/brain is not working, so will the corresponding areas of the world be shut down from enquiry, as is the case with people who suffer certain brain lesions or are blind, or deaf, etc. In a philosophy of mind, which will be in this instance called ‘psychology’, Chomsky raises similar arguments as those he quoted from Cudworth: “Thus psychology is that part of human biology that is concerned at its deepest levels with the second-order capacity to construct cognitive structures that enter into first-order capacities to act and to interpret experience.” (Chomsky, 2007: 38) With such ideas taken into consideration, the sensible conclusion that can be reached, given the available evidence as well as the structure of the mind is that “... cognitive capacity, the theory of mind has a distinctive rationalist cast. Learning is primarily a matter of filling in detail within a structure that is innate.” (Chomsky, 2007: 39) Before continuing to elaborate Chomsky’s philosophy of mind, it will be necessary to go over his methodology, which is naturalism, the step to rational enquiry that hopefully leads to a science of some sort.

if the mind does not in any way perceive it, other phenomena outside the mind would exist, but would not be understood in any manner.

3.0 Chomsky's Naturalistic Approach to Language

As already mentioned, and contrary to Strawson, Chomsky does not use the label of 'materialism' for his approach in trying to understand and interpret the world. Although materialism once had a clear meaning – that the natural world behaved in a mechanical manner – Newton showed this conception of the world to be false with his discovery of action at a distance. Chomsky then, would call himself a “methodological naturalist”, or the view that the world ought to be studied in a naturalistic manner, similar to what biologists or chemists do when trying to understand a part of the world. The key point in naturalism for Chomsky, so far as consciousness and mental capacities in general are concerned, is that they should be studied in the same manner as all other topics in the sciences. However, Chomsky finds that when mental capacities are talked about, they are often thought about in a dualistic manner, unlike what happens when a biologist is studying organisms. What should matter, in Chomsky's view, is what goes on in the mind of a human being and *not what is happening in the world*. A biologist studying the visual system is not concerned about the sun or the weather. This naturalism is connected to real materialism in taking the world to be composed of one fundamental thing, and the study of this fundamental thing should be approached in a manner that yields explanatory insight by way of theoretical understanding, which is the case in the sciences.

Metaphysics seeks to understand the nature of the world, in the broadest possible manner¹⁷⁰. Naturalism then, is the view that the study of nature should be conducted by taking

¹⁷⁰ Of course, there is still plenty of ambiguity as to what, exactly, 'metaphysics' is or can aspire to do. Thomas However states that “Can there be such a thing as ambitious, yet modest, metaphysics? This is not so clear, in particular it is not so clear if the metaphysical projects we metaphysicians are engaged in these days fall into it... Metaphysics is a diverse discipline. A number of diverse kinds of problems are traditionally grouped together in it, and we should not expect a uniform answer to these questions for all of metaphysics.” (Chalmers, Manley, & Wasserman, 2009: 265-266). That 'metaphysics' is in an ambiguous state is rather clear. What it should be remains an issue, and it certainly covers a lot of questions.

In the context of this discussion, following queues from Chomsky mention of Aristotle, that “He [Aristotle] concluded that we can “define a house as stones, bricks and timbers,” in terms of material constitution, but also as a receptacle to shelter chattels and living beings,” in terms of function and design; and we should combine both parts of the definition.” Furthermore, “the essence of a house involves the “purpose and end” of the material constitution. *Hence a house is not a mind-independent entity.*” (Chomsky, 2016: 44. My emphasis) Already in the original *Metaphysics*, Aristotle found the nature of the world to be crucially dependent on the nature of the mind, which is an epistemic-metaphysical relation, and not something belonging solely to the world.

In this spirit, although there clearly are strong metaphysical aspects in modern science, the 'manifest image', or the world as presented to everyday experience also plays a crucial role in what metaphysics should aim to study. The attempt here is to try and clear up some aspects of the lived world as presented to the mind.

nature and natural laws as the starting point of any enquiry, explicitly ignoring or putting aside other alternatives like supernaturalism, which adds aspects to the world that are not considered natural, such as the belief in God or spiritual entities, which are not subject to scientific enquiry and belong in other fields such as theology. Metaphysics can be naturalistic or supernaturalistic¹⁷¹, depending on how it is approached, however, the ‘analytic metaphysics’ discussed here, are meant to be a naturalistic enquiry into the nature of the world as disclosed by the mind. Dualism too can be taken as a form of naturalism, but it could also be supernaturalistic if one believes in spiritual stuff or ‘spooky stuff’ – as opposed to natural stuff. Naturalism ought to be implicit in most metaphysical views (theology aside), with the caveat that metaphysics soon enters into the domain of speculation and in this specific route may be removed from the available naturalistic evidence, though not necessarily. Naturalism can be taken as being too obvious to deserve discussion because there is no coherent alternative that can be given in order to gain *theoretical* understand the world. It will therefore be necessary to clear up those areas within naturalistic enquiry that either cause confusion, or on examination, prove not to be tied to a rational pursuit of knowledge. When talking about the ‘mental’ in the case of the naturalism Chomsky is discussing, there will be no consideration, as opposed to Strawson, about the totality of the experiential: “I keep here to the human mind (visual system, reasoning, language, etc.). There is no quest for a unified science of locomotion, ranging from amoeba to eagle to science-fiction spaceship; or of communication, ranging from cell to poetic discourse to imagined extraterrestrials.” Rather, what is under consideration here is quite modest. As “biologists study how dolphins swim and ants communicate... they have little interest in how these terms “dolphin,” “communicate,” etc. are used in the informal [normal-everyday] discourse in which the questions are originally posed.” (Chomsky, 2000: 75-76) Instead of using a term like ‘communication’ to signal all *possible* forms of communication, “... [biologists] develop concepts appropriate to their purpose of explanation and understanding. Ordinary discourse and ‘common sense’ thought is in no way denigrated by the procedure; *rather they are liberated from inappropriate... demands*. The same is true of other scientific inquiries with broader concerns...” (Chomsky, 2000: 76) (Emphasis mine) The goal of studying reality within a rational framework attempts to do away with, as much as possible, ‘ordinary’ or ‘common sense’ terminology. A physicist, for example, does not use ‘energy’ to

¹⁷¹ When it is used in combination with theology, for example.

mean what ordinary people mean when they use the same word anymore than a scientist uses the word ‘theory’ as opposed to the ordinary usage of this term, which more-or-less means ‘having an idea’. Scientists also use ‘common sense’ terminology when communicating to each other because only some of the words they use are technical – it would be almost impossible and without much practical use to communicate exclusively using technical jargon. What is important, though, is that in scientific inquiry, the language that is used is for the purposes of investigating the relevant data is very different from what ordinary people may mean when using similar words in ordinary life, in that science seeks accurate descriptions of the world.

Chomsky’s ‘methodological naturalism¹⁷²’, is focused with the actual world and the way the mind interprets it, hence it is inherently epistemic-metaphysical. Chomsky states that “[s]uch ‘methodological naturalism’ can be counter-posed to what might be called ‘methodological dualism’, the view that we must abandon rationality when we study humans [mental capacities] ... becoming mystics in this...domain” which results in “imposing arbitrary stipulations and a priori demands of a sort that would never be contemplated in the sciences, or in other ways departing from normal canons of inquiry.” (Chomsky, 2000: 76) It is worth keeping in mind that although Chomsky rejects dualism, when this account of the mind first arose under Descartes’ original formulation, it was a sensible and scientific move to make or so Chomsky argues, given the underlying assumptions of the mechanical philosophy: “the existence of the Soul, Descartes’s second substance, is a scientific proposition: it is false, but it is not irrational. Had he elaborated his theory of the soul to an explanatory theory, he might have created a new science to supplement speculative physiology. He was completely right to propose new principles and to seek out their consequences.” (OL. p.97) However, since Newton proved the mechanical philosophy as conceived by Descartes to be false (see pp: 175-186 below), that is, it did not reflect the nature of

¹⁷² Strawson is also ready to call his ‘real materialism’, ‘methodological naturalism’, at least in the essay found in *Chomsky and His Critics* (pp.49-88). He later removed this sentence in *Real Materialism and Other Essays*. In so far as Strawson is also a naturalist, he states that “I don’t think anything supernatural or otherwise exists. One can’t, however, classify anything as supernatural or nonnatural until one has an account of what is natural. I do have one. I take it that reality- concrete reality, anything that exists in space and time- is physical... I don’t believe there’s any nonphysical concrete reality.” (Strawson, 2018:154) The rest of the essay is dedicated to defending the reality of experience, and the plausibility of panpsychism. There is no mention in this essay, however, of what the ‘abstract’ could be, *if* it can be said to contrast with the ‘concrete’, which is not obvious. In *Real Materialism*, however, Strawson points out that numbers are abstract.

reality under scrutiny, it is no longer tenable to consider human beings, or the world to be machine-like.

Dualism - as also discussed by Strawson¹⁷³ - talks about the mind (or the mental) as being something which is distinct from the body, is difficult to justify in contemporary scientific enquiry, and as Priestley pointed out, mental phenomena have always been seen and associated within an organized system of matter, so dualism is not even properly formulated. All this being stated, this does not mean that methods that depart from naturalism, as can be argued to be the case in theology, for example, are of no use, on the contrary they can be very useful, but not for the goal of clarifying problems within the study of the mind or the world. The topic of skepticism can lead people to believe that no knowledge is certain at all, and it *could* follow from this that naturalism and science do not provide information that is of better quality and more-well grounded in reality than anything else.¹⁷⁴ However as Chomsky states, "...skeptical arguments can be dismissed in this context. We may simply adopt the standard outlook of modern science...", skepticism or seeking secure, infallible knowledge in any domain, cannot be refuted. As Chomsky points out "Richard Popkin [philosopher and historian] describes it: "the recognition that absolute certain grounds could not be given for our knowledge, and yet that we possess standards for evaluating the reliability and applicability of what we have found out about the world" ... while recognizing that "the secrets of nature, of things-in-themselves, are forever hidden from us" (Popkin 1970: 139ff.). (Chomsky, 2000: 76-77) The topic of thing-in-themselves will rise again in the final section of this

¹⁷³Strawson clarifies an issue related to dualism when he asks "what are materialists doing when they talk... as if the mental and the physical were entirely different? What they may mean to do is to distinguish, within the realm of the physical, which is the only realm there is, according to them... between mental (or experiential) features of the physical, and non-mental (or non-experiential) features of the physical. It is this difference that is in question when it comes to the 'mind-body' problem; materialists who persist in talking in terms of the difference between the mental and the physical perpetuate the terms of the dualism they [attempt to] reject..." (Strawson, 2008: 21-22)

¹⁷⁴ One such example of taking such a skeptical attitude to such an extreme, is to look at Jean- François Lyotard's *The Postmodern Condition*, one of the most important work within postmodernist thought. Lyotard states that "I have said that narrative knowledge does not give priority to the question of its own legitimation and that it certifies itself in... its own transmission without having recourse to argument and proof. This is why its incomprehension of the problems of scientific discourse is accompanied by a certain tolerance: it approaches such discourse primarily as a variant in the family of narrative culture." (Lyotard, 1984: 26)

Not only does Lyotard claim, with no evidence, that scientific discourse is simply 'a variant of the narrative culture', he claims, further down the same page that "This unequal relationship between scientific discourse and other types of discourse] is an intrinsic effect of the rules specific to each game. We all know the symptoms. It is the entire history of cultural imperialism from the dawn of Western civilization." There is much to be said about *scientism*, the view that essentially holds that the methods of the natural sciences are the best way to solve all kinds of problems, but it is harder to accept, and few people would believe, that all knowledge is on equal epistemic footing.

work but can be put aside for the moment. As stated, naturalism should be straightforward and is the method employed in contemporary scientific methodology, which should include mental phenomena and the mind in general. “Naturalism, so understood, should be uncontroversial... and the dualist alternative should be highly controversial. I think the opposite has been true. Explanatory theories of mind have been proposed, notably in the study of language.” Thus, in areas concerning the mind, arguments are given to try and show why naturalism, as construed by Chomsky and modern science generally “are successful, but do not deal with “the mind” or “the mental” [adequately].” Furthermore, Chomsky states that “I will suggest that such critiques are commonly a form of methodological dualism and... [this] stance has been a leading theme of much of the most interesting work in recent philosophy of mind and language.”

While the topic in this section is naturalism as opposed to dualism when talking about the nature of the mind and language in relation to the world, metaphysics refers to experience of the world in general and, many aspects of the world plainly, are not encompassed by naturalistic enquiry. This does not prevent rational discussion when talking about the world nor does it “exclude other ways of trying to comprehend the world... we learn much more of human interest about how people think and feel and act by reading novels or studying history or the activities of ordinary life than from all naturalistic psychology...” the point, then, in stressing naturalism in the case of the mind is that “we are speaking... of theoretical understanding, a particular mode of comprehension. In this domain, any departure from this approach carries the burden of justification. Perhaps one can be given, but I know of none.” (Chomsky, 2000: 77) There is much more to life than what ‘science’, narrowly construed¹⁷⁵, can attempt to describe, and when talking about many aspects of the world, science has many limitations – connected with the way the mind interprets the world. Nevertheless, as argued by Charles Sander Peirce, and even more clearly developed by Susan Haack¹⁷⁶, synechism, the idea that tries to look for continuities in nature rather than sharp

¹⁷⁵ Though things can quickly become quite tricky if one wishes to say something like ‘literature isn’t naturalistic’. All reflections about the world are based on nature in some form or other, whether concretely as in the case of science, or through quite convoluted and complex abstract affairs pertaining to organized thoughts of all kind, though this latter topic will say very little about the nature of the world. There is also a movement in literature known as naturalism, but this can be set aside for present purposes.

¹⁷⁶ See Haack’s *Not Cynicism but Synechism: Lessons from Classical Pragmatism* (2007) for an overview of what synechism consists of. Also See *Defending Science: Within Reason* (2007) for a sensible approach to the philosophy of science. Finally, see Haack’s *Six Signs of Scientism* (2009) to get a good idea of the pitfalls of using the methods of science for everything. Haack points out that “the work picked out by the word “science” is far from uniform or monolithic, it makes sense to say, rather, that the disciplines we call “the sciences” are best thought of as forming a

distinctions, is helpful when attempting to synthesize information that pertains to science with information that belongs to other areas of life, and since metaphysics deals in both areas, this doctrine – of looking for continuities in nature instead of making sharp distinctions (when possible) – is useful when doing epistemic metaphysics.

loose federation of interrelated kinds of inquiry.” (p.13. *Six Signs of Scientism*. Haack, Susan. 2009) Chomsky also shows signs of a synechistic approach to reality: “Disciplines don’t exist in themselves. We construct them... there’s no boundary to what’s in chemistry. There’s no boundary to what’s in philosophy... there’s a range of questions which have come to be in the domain of philosophy, and they can extend all over the place.” (Ludlow, 2011: 87)

3.1 Chomsky's Naturalism

Naturalism should provide clues of how language works in relation to the mind. Chomsky puts the manner in the following way: “To help frame the discussion, let’s consider for a moment where methodological naturalism leads us in the study of mind, language in particular... The brain has a component – call it “the language faculty” – that is dedicated to language and its use. For each individual, the language faculty has an initial state, determined by biological endowment.” (Chomsky, 2000: 77) So far, the characterization is general, all that is being stated is that the brain has an innate capacity for language, and that all human beings have this capacity, no single area of the brain has yet been singled out.¹⁷⁷ “The environment triggers and to a limited extent shapes an internally-directed process of growth, which stabilizes... at puberty.” The environment is necessary in so far as the brain uses external data to ‘feed’ the corresponding areas of the brain, which then allows language to grow as a child turns into a teenager. “A serious study will attempt to determine what “pure” states of the language faculty would be under ideal conditions, abstracting from a host of distortions and interferences in the complex circumstances of ordinary life, thus hoping to identify the... nature of the language faculty and its manifestations.” There is too much noise and information in the world, and *very* few of the sounds people hear are considered as belonging to a language. To simplify and become more accurate in trying to find out what the language faculty does, one could consider the following example: that which interacts with the language faculty of the brain, but does not play a role in the development of language must be put aside, in order to understand this particular phenomenon of human beings. Furthermore, considerations of which areas of the brain – via neuroscience - are pertinent to language use should be taken with a degree of skepticism, as there are numerous factors that can skew that relevant data¹⁷⁸. What, then, is the picture of language that emerges if one takes all these considerations into account? What’s most likely is that “[a] state attained by the language faculty [should] character[ize] an infinite class of linguistic expressions, each [having] a certain array of phonetic,

¹⁷⁷ Though there are areas of the brain that are associated with language use and processing. As Baars and Cage point out “Language is a distinctive human capacity, one that makes it possible to transmit cultural knowledge and skills over space and time. Broca’s area for speaking and Wernicke’s for speech comprehension are only a part of the large regions involved. Current work has expanded and fractionated the traditional language areas... There is constant interplay between sensory motor and language areas.” (Baars & Gage 2012 :325) For more information on the neuroscience of language see *The Fundamentals of Cognitive Neuroscience* Chapter 11: Language pp.313-328.

¹⁷⁸ See Tallis and the limits of neuroscience below, to get a better idea on how brain scans could be misleading when trying to understand how the brain works.

structural, and semantic properties.” This “state specifies the properties of the last sentence; yours is similar enough so that your mind can (sometimes) find an appropriate analogue to what I say, in which case you have means for determining my intentions. “All the relevant factors are automatically taken into account by the mind, in such a way that whatever may be going on in a person’s head could well be expressed in a manner that another person can understand, given relevant background information, culture, context, and so on. This type of complex procedure of understanding probably uses such skills as inferences, deductions, estimations and other factors involved in a kind of corresponding affair that allows people to (more or less) understand each other given the proper context a person may find herself in. The relevant aspects of this procedure occur inside the mind, with the external world playing a very limited role in determining the outcome of such calculations. Thus “the state attained is a computational (generative) system. We may call that state... an *I-language*, “I” chosen to suggest that the conception is internal, individual and intensional...” Internal language in the sense given should not be confused with an external or E-language. E-languages appear in the public domain, and e-language does not encompass the whole process that is involved in forming a sentence or articulating a complex thought. What matters in the scientific study of language then, is what happens in the mind: “... the notion I-language is straightforward; that the brain is a complex system with states and properties is not controversial. It remains to spell out this conception of “state of the brain” and to discover its properties. Other notions of “language” require some further justification -, which, I believe, is not easy to give.” (Chomsky, 2000: 78)

If Chomsky is correct in his arguments about how language grows and how people actually use it, some rather large consequences follow this picture. What appear to be radical differences between spoken languages, such as, French, English, Spanish or Mandarin, are actually superficial differences in phenomenal aspects of language use in the public domain. “Slight changes in an intricate system may yield what appear to be drastic phenomenal differences; thus, languages may appear to differ radically from one another, though they differ only in rather marginal ways, it appears.” Any deviation from an account of language that does not take into consideration primarily what goes on in the brain is not naturalistically studying language and is not making a proper distinction between E-language and I-language. “Comparable assumptions are taken for granted without discussion in the study of growth and development generally. A naturalistic approach makes no distinction in the unique case of mental processes.” (Chomsky, 2000: 79) A

scientist attempting to learn something from the visual system does not study a tree, any more than someone who is interested in people's capacity for hearing will attempt to study stereo equipment. Naturalistic enquiry should seek to find simple phenomena as relevant data, because as soon as something becomes too complex (such as a visual recording of what is happening outside the window) it is not possible to proceed with a systematic enquiry, as there are too many variables to be taken into account.

3.2 Other ‘forms’ of Naturalism

One can talk about various areas of enquiry which are more interesting to a particular person, but it makes little sense to argue that there are many forms of ‘naturalism’ or different kinds of ‘science’, ‘epistemology’ and ‘metaphysics’. There is the world¹⁷⁹, and people attempt to understand it through rational means. There is ‘naturalism’, ‘science’, ‘epistemology’ and ‘metaphysics’ with each one focusing on particular problems, but so far as depth of *theoretical understanding* and explanatory power is concerned, there should not be more than one such general guiding principle¹⁸⁰. If there is such a thing as ‘naturalism’, then it should not be contentious to argue that there should not be more than one methodology that has this name, however, this is not the case. Chomsky will address a few of the problems related to the idea that there are other ‘naturalisms’ that should be pursued. Having given a general outline of how naturalistic enquiry should proceed in the case of language in the mind, Chomsky goes on to discuss other forms of naturalism that have been presented by other thinkers. Chomsky’s methodological naturalism does not mean what Thomas Baldwin has in mind in his *Two types of Naturalism*. “He [Baldwin] opens

¹⁷⁹In relation with the idea of there being only *one* world, Susan Haack’s ‘Innocent Realism’ can be illuminating: “There is one real world, the Innocent Realist holds—a world largely, but not entirely, independent of us and our actions, beliefs, etc. This one real world is, manifestly, very heterogeneous—including (in [Lewis] Carroll’s words) “shoes and ships and sealing wax, and cabbages and kings,” or simply (in Quine’s word), “everything.” However, even though this world is extremely varied and complex, there is a sense in which “When I say that there is one real world, I mean, negatively, that there isn’t more than one. There isn’t a world of Being and a world of Becoming, for example, or a physical world and a spiritual.” From this it also follows that “... when I say that there is one real world I also mean, positively, to insist that diverse as the world is, it is also, in an important sense, integrated, unified. This, however, is emphatically not to commit myself to any grandiose form of reductionism. Rather, it is in part to acknowledge that the artifacts we and other creatures make are constrained by the physical properties of things and stuff we make them from.”

Finally, it is worth pointing out that, in the case of Innocent Realism, “What about “real”? It can’t mean “independent of us (humans),” which would imply that there can’t be, as there obviously are, real human artifacts. Nor can it mean “mind-independent,” which would imply that there can’t be, as there obviously are, real thoughts, dreams, etc. We best understand “real” by noting that it contrasts primarily with “fiction, figment, imaginary.” What properties an imaginary beast or a fictional character has depends on what properties its creator gives it.” (*Susan Haack: Reintegrating Philosophy*. Springer. 2016 Chapter. 2) There is *much* more to develop regarding Innocent Realism, but as a first approximation of thinking about studying the world, for there is literally only one world, this description by Haack would suffice, and Chomsky would likely agree with many of the points which Haack is elucidating.

¹⁸⁰ This is in relation to naturalistic enquiry, and although the guiding principle is the same – to discover the way things work, approaches may vary. Obviously the way sociologists study the world is, in many respects, quite different from what a chemist is studying, but the way to *approach* all these problems is the same, one looks at the world, with all its complexity, and one attempts to give an accurate account of what people and particles are doing, while keeping in mind that in the case of the ‘social sciences’, there are many more factors to be considered, and it is a legitimate question to ask whether ‘social sciences’ are ‘sciences’, despite there being good work in all domains of human knowledge. The main point is that *guiding principle* for inquiry should be the same, to find out the provisional truth given the relevant factors involved in each respective field.

by noting that “A prominent theme of current philosophy is that of the ‘naturalisation’ of philosophy.” Not only Baldwin but “Daniel Dennett has [also] written that ‘[o]ne of the happiest trends in philosophy in the last twenty years has been its Naturalisation’” ... That the trend is prominent is doubtless true; that it is happy seems to me open to question.” (Chomsky, 2000: 79) It is not at all clear what ‘naturalisation’ means in these cases, as if this label indicates that what previous philosopher were doing either ‘artificial’ or ‘supernatural’ naturalism, which is either incoherent or an oxymoron, respectively. This trend of the ‘naturalisation’ is elucidated as follows: “Baldwin finds two different types of naturalism at work in current philosophy,” what he calls *metaphysical* and *epistemic*. The former is what “Dennett has in mind... as he puts it [when he says that] “philosophical accounts of our minds, our knowledge, our language must ... be continuous... with, the natural sciences (p.172)” to be continuous with the natural sciences is “...unlike, say, Fregean Platonism, which is not continuous with hypothesis “advanced by the natural sciences,” so it is alleged.” (Chomsky, 2000: 79-80) Why this should be considered ‘metaphysical naturalism’¹⁸¹ as opposed to ordinary ‘naturalism’ is not clear. This picture of reality, logic and mind given at very different times in history, with vastly complex and varied background customs, assumptions, goals, etc. given by the followers of Frege and Plato, are apparently not ‘natural’, though reasons are not given as to why this is the case.

The case of *epistemic* naturalism “derives from Willard Quine’s “epistemology naturalized,” which stipulated that the study of knowledge and belief must be incorporated within a narrow branch of behaviorist psychology...” The epistemic naturalism that is considered by Baldwin “observes, [and] considers “natural relations” between external situations and mental states without arbitrary structures. The broader version can be viewed as an outgrowth of the rational psychology of the seventeenth century...” This form of ‘epistemic naturalism’ is a supposed improvement on the older and traditional type of naturalism. “Baldwin cites Thomas Reid as the

¹⁸¹ While this section focuses on naturalism, it’s not as if metaphysics as is considered here by Strawson and Chomsky is a separate enterprise from naturalism. Metaphysics is a naturalistic enquiry which has in mind the broadest aspects of the nature of reality, when the aspect under consideration is how the world works or how the mind works, then it’s should be clear that physics and neuroscience ought to be the fields in charge of enquiry, when speculations or interpretations are given as to the impact or significance of the results in these fields, then it falls to metaphysics, not physics or neuroscience, to seek the most plausible explanation. As Strawson says “to be a materialist is to go beyond the empirically available evidence and into metaphysics” (Strawson, 2010: 48) It’s also worth noting that Strawson, at least in respects to Dennett (not Baldwin), does not agree with him in respects to the nature of consciousness. For more information see *Things That Bother Me*, Chapter 7, specifically pp. 164-166.

source of “naturalized epistemology,” [which while] expressing a similar point of view... [is] “freed from Hume’s [or any earlier] commitment to the theory of ideas” (Baldwin 1993: 181); that is, freed from earlier attempts to spell out what Reid calls the “original and natural judgments” [that make up people’s common sense].” What’s curious about this Baldwin’s articulation is that “... nothing [new] replaces the outline of the theory that is abandoned, it is hard to see how this “naturalization” progresses beyond earlier versions.” (Chomsky, 2000: 80)

There are consequences that can be extrapolated from Baldwin (and to a lesser extent, Dennett’s) ideas about ‘epistemic’ or ‘metaphysical’ naturalism. For one, the philosophical tradition that stretches back to the Ancient Greeks and passes through figures like Descartes, Locke, Frege, etc., are all concerned with the nature of reality. Each particular philosopher had only the tools and lived in the intellectual climate that were available to them at a specific time period and not some other time. Thus, if one takes Plato inserts him in to 17th century Europe, he would likely have been a kind of rationalist, and if one were to take certain aspects of Hume, he could be considered, in contemporary times a psychologist as well as a philosopher of science.¹⁸². As Chomsky argues “The epistemic naturalism of the seventeenth and eighteenth century was science, and attempt to construct an empirical theory of mind...” (Chomsky, 2000: 80) What was being studied and thought about by Descartes, Cudworth, Kant and others was a scientific enterprise with plenty of philosophical aspects which continue to be subject of dispute, such as the nature of consciousness, the self, dualism, free will and the nature of matter, among many other issues. One could argue that philosophy and science are more distinct and separate than what Chomsky says, and this may be true in contemporary times, but it was not an issue in the 17th and 18th centuries. “We plainly cannot read back into earlier periods a distinction between science and philosophy that developed later. We would not use the term “visual naturalism” to refer to the empirical study of the growth and functioning of the visual system... implying that there was some coherent alternative for the same realm of problems.” It is not at all clear why there should be a ‘new naturalism’ in areas

¹⁸² Plato’s theory of forms as expressed in Allegory of the Cave is in some respects similar to Descartes ‘innate ideas’ hypothesis – the point in both cases being that there must be more to the mind than can be accounted for by looking at empirical reality. Chomsky uses the term ‘Plato’s problem’, to refer to human beings innate cognitive capacity, which goes way beyond what exists in the world. There is much scholarship on the topic of Hume in respect to causation, and Galen Strawson has written plenty on the topic see chapters 16, 17, 18 and 19 in *Real Materialism* for more information, as well as his book *The Secret Connexion* and *The Evident Connexion*, for detailed discussion about causation and identity.

concerning the study of the mind even though the ‘mind-body’ problem continues to be discussed¹⁸³ as if it were still a problem that necessitates a new methodology or new science to develop. So, talk about *epistemic* naturalism would be, for “a methodological naturalist... normal science...however we evaluate particular implementations.”

What appears to be important for philosophy, according to these new ‘naturalisms’, is for it to be continuous with science, which apparently, was not the case before. Entering into the domain of language again, Chomsky considers the case of a man, Jones and he asks the reader to consider “the informal locution “John knows (speaks, understands, has) English.” The informal observation focuses attention on a state of the world, including a state of Jones’s brain, a cognitive state, that underlies Jones’s knowledge of many particular things: his knowing how to interpret linguistic signals, or that certain expressions mean what they do, and so on” All science begins as what is called ‘folk-science’¹⁸⁴, which is the normal, ordinary everyday way in which people seek to understand the world¹⁸⁵. Folk science is not enough for a *theoretical* account of the world, so other explanations, in accord with natural laws, should be pursued. In the case of language, “[i]nquiry into this matter leads to empirical hypothesis about biological endowment, interactions with the environment [etc.] ...” What seems to be happening with people, of which Jones is a sample, according to the “[r]esulting theories of the growth of language” is that there is something which is “sometimes called “Language Acquisition Device” (LAD), which effects a transition from the initial state of the language faculty to latter states, mapping experience to [the] state [which is] attained; the theory of the initial state sometimes called “Universal Grammar” (UG)” The

¹⁸³ See for example Nagel 2011, Tallis (2011) among others.

¹⁸⁴ Talk about ‘folk-science’ an often be confused with metaphysics, as understood by Strawson and Chomsky, but this is misleading for several reasons, as metaphysics seeks principles which go beyond the available empirical evidence, folk-science takes immediate experience to create a rough account of how the world works. Although both fields take experience as a starting point the goals of each field vary drastically. As Thomas Robert Murray states “the term folk psychology is used... to mean a collection of beliefs, shared by members of a cultural group, regarding how people think when they interpret life’s events.” (Murray R., 2001: 1)) Metaphysics is not concerned with the *cultural* interpretation of how the world works, but with the *actual* way the most general principles of the world as-interpreted-by-the-mind functions, hence a ‘mind-world’ metaphysics.

¹⁸⁵ Which is a complex process that has a rich history in western philosophy. Dualist conceptions, the idea of there being two substances or aspects, a mental or soul-like substance and a physical component in nature, antecede Descartes by thousands of years and appears to be an intuitive way of understanding reality. To see a broad overview of dualism in western philosophy as well as the evolution of what came to be known as the ‘mind-brain’ problem in contemporary science and philosophy see Murillo, José Ignacio. 2019. "Mente - cerebro". En *Diccionario Interdisciplinar Austral*, editado por Claudia E. Vanney, Ignacio Silva y Juan F. Franck. URL=<http://dia.austral.edu.ar/Mente - cerebro>

technicalities of LAD and UG are not relevant here, suffice to say that this is the framework has revolutionized modern linguistics, and is an area where much contemporary research is being done. These explanations are the natural development and sophisticated evolution of 16th and 17th century thought, of which Descartes and Reid were a part of.

This theory of linguistics may be wrong in some respects, but what matters is that the approach is the correct one, in that it is scientific in character, and it helps one to try and understand how the mind interprets the world. The goal in the larger field of metaphysics, if it is to achieve a ‘scientific character’ as Peirce would say, is to approach reality from the perspective of naturalism (as opposed to supernaturalism which can be implied by theology). In so far as general observations about the character of language and experience can be advanced through naturalism - even if empirical evidence ends and metaphysics is to continue through well-grounded speculation - then it should at least come from a sensible position. It would seem reasonable, then, to try and give an account of science through naturalism. What then, is ‘natural science’? “A possible answer is whatever is achieved in pursuing naturalistic enquiry. But that doesn’t seem to be what is intended; let us put the question aside for a moment.”¹⁸⁶ What more can be said about naturalistic inquiry? One could ask something different: “A related problem is to explain what are “philosophical accounts of our minds, our knowledge, our language,” and how they differ from “scientific accounts,” particularly if they are “continuous with the natural sciences” (Baldwin 1993: 172)” (Chomsky, 2000: 81) It is not clear why naturalistic enquiry should be different in method depending on what area of knowledge one chooses to focus on, thus it does not make sense to argue that “a theory of mind should be “continuous” and “harmonious” with today’s physics... this is surely unacceptable” because “tomorrow’s physics may well not meet that condition.” Not only has physics changed throughout its history¹⁸⁷, the domain of mental phenomena may not have

¹⁸⁶ Phillip Goff makes essentially the same point when he says “...we might offer an a posteriori definition of naturalism: the natural truths are whatever the natural sciences tell us they are.” (Goff, 2017: 34) These comments are rational, though one should be aware that the term ‘naturalism’ does not have a neatly delineated sphere of inquiry, as Galen Strawson states early in *Mental Reality*: “In fact, the term ‘naturalism’ is no more determinate than the terms ‘physical’ and ‘material’.

All it really involves is a rejection of anything classified as supernatural relative to a given concept of the natural. But we do not know the limits of the natural. We cannot be sure we know the nature of the natural, any more than we can be sure we know the nature of the physical.” (Strawson, 2010: 2)

¹⁸⁷ See, for example E.A. Burt’s *The Metaphysical Foundations of Modern Science* (1932) for an account in the “evolution” of science, including physics, and how this drastically changed how human beings interpret the world around them.

a direct causal bearing with physics, as they may belong in different domains of knowledge. One does not look *at* physics to study psychology, nor does one need to look *at* biology to study chemistry, though clearly there are some areas in which these fields intersect. If the goal is to try and reduce all natural sciences to physics, then much care and qualification is needed as “[l]arge-scale reduction is not the usual pattern [of the sciences].” (Chomsky, 2000: 82)

3.3 The Limits of Naturalism:

There can be little doubt that naturalism has been the most successful method in understanding the world that human beings have ever developed. Nevertheless, one should be aware that naturalism, like any other type of human activity has its scope and its limits. In fact, Chomsky considers naturalistic inquiry to fall within a capacity of the mind called the science-forming faculty or SFF, this faculty allows the discovery of some natural phenomena, but not others. The SFF seems to be a chance interaction between human cognitive abilities and aspects of the mind-independent world. Within this chance intersection some degree of science is capable of being developed. Nevertheless, Chomsky considers that instead of lamenting the fact that human beings have limited cognitive capacity, these limitations should be celebrated. If human beings did not have such limitations, it would not be possible to have any scope at all, making intelligibility and understanding impossible. Understanding is only possible within a framework of restrictions that allows for comprehension, without such a framework, nothing could be developed. In these respects, human beings should be grateful to have such a rich and complex structure that makes the world rich and multi-faceted. One way of framing this development of the SFF is to argue that there are ‘problems’ and ‘mysteries. Those questions that fall within the SFF which are *sometimes* explainable would be called ‘problems’, ‘mysteries’ on the other hand, are those questions that do not fall within the SFF and no answer can be given, remaining perhaps forever outside of human cognitive capacity. Examples of mysteries would include the problem of ‘free will’, intuitive understanding of motion, questions pertaining to the origins of the universe, many facets of human psychology and issues pertaining to political organizations, among a vast array of other topics.

3.4 Problems and Mysteries

When talking about ‘naturalism’ in relation with reductionism (explaining ‘higher order, more complex phenomena’ with the smallest available ‘parts’ or ‘units’), what problems could arise for ‘metaphysical naturalism’ as opposed to ordinary naturalism? One such broad issue that stems from wanting a naturalism that is “continuous” and “harmonious” with physics is that, as has been stated, physics is bound to change in the future, so making a-priori stipulations about the

mental in relation to current physics assumes more than can currently, if ever, be accounted for¹⁸⁸. People don't know "how far human intelligence can reach in attaining such understanding of the natural world; we are, after all, biological organisms, not angels." By 'angels' Chomsky is simply pointing out that people are not super-natural beings that have infinite cognitive capacity, and consequently have no problems understanding anything. So far as Chomsky (and Strawson) are concerned, people have difficulty in understanding the simplest phenomena, as far as theoretical understanding is concerned. Clearly, there are aspects of the world that are amenable to some form of scientific inquiry: "Among the aspects of the mind are those that enter into naturalistic enquiry; call them "the science-forming faculty" (SFF). Equipped with SFF, people confront "problem situations," consisting of certain cognitive states... [and] questions are posed [that could yield some answers]" however, one issue is that "[o]ften the SFF yields only a blank stare." (Chomsky, 200: 82) Sometimes what happens is that the SFF allows people to pose better questions and abandon other questions that are either misleading or not clearly posed. The topic of mechanistic 'materialism' for Chomsky, is one example of a framework that had to be abandoned and reformulated in light of new evidence, as Strawson has discussed, and of which Chomsky's comments will be later be talked about. The situation is that the science forming faculty allows the postulation of intelligible (understandable) questions. However, the fact that there are a range of questions that can be labeled as 'intelligible', by necessity creates a situation in which other questions and domains of life are closed off from serious naturalistic inquiry. One could speculate that issues pertaining to freedom of the will, aesthetics and, *perhaps* to a lesser extent, a more rational and fair political organization are domains which human knowledge simply cannot comprehend¹⁸⁹, much less offer any kind of explanations or solutions.

Just as some aspects of psychology and sociology may signal the outer limits of the SFF - as the options that remain for the study of human beings after psychology and sociology would be non-naturalistic literature, history or aesthetics - are not subject to clear formulation and may be forever

¹⁸⁸ Here Rosenberg's comments are a clear example of arguably mistaken view about the mind, see footnote 48 for more info on such a perspective.

¹⁸⁹ One should note that, as there are mysteries for humans, this need not be a black or white affair in terms that, some things may be *complete* mysteries, such as the question of what actually exists in the external world, outside of human perception, and things which are mysteries in part, people can understand some aspects of the topic, like political organization, but the reason for this not being realized and sustained all over the world could be a sign of cognitive limitations.

out of the reaches of naturalism: “Like other biological systems, SFF has its potential scopes and limits; we may distinguish between *problems* that in principle fall within its range, and *mysteries* that do not. The distinction is relative to humans; rats and Martians have different problems and mysteries... The distinction need not be sharp, though we certainly expect it to exist...” Any creature that belongs to the natural world, is subject to the distinction between problems, which are potentially subject to some understanding and explanation and mysteries, which are not capable of being solved nor understood. This distinction also hints at what the natural sciences are “[t]he successful natural sciences, then, fall within the *intersection* of the of SFF and the nature of the world; they treat the (scattered and limited) aspects of the world that we can grasp and comprehend by naturalistic inquiry, in principle.” (Emphasis mine) Importantly, “[t]he intersection is a chance product of human nature.” Thus, science as currently exists is a product of chance or accident, in that it is not necessary for survival but can be very useful once such a SFF’s development reaches a certain stage of sophistication.

It is crucial to emphasize that scientific knowledge of the world is *accidental* and not necessary, and only in those places which people’s science forming faculty intersects with some aspects of the external world is it possible to have this kind of knowledge. This observation also has important implications for metaphysics (and human thought in general), in which it will be argued in the last section of this work, that only those aspects of the world that intersect with the mind are the areas in which any kind of metaphysics is possible at all, including speculative metaphysics. This thought however, need only be registered for the moment. Returning to science, and specifically the science of mind, “it is unknown whether aspects of the theory of mind – say, questions about consciousness – are problems or mysteries for humans, though in principle we could discover an answer, even discover that they are mysteries...” (Chomsky, 2000.: 83) One could point to various issues that seem to elude the grasp of human understanding, and some look obvious now issues concerning peoples’ conception¹⁹⁰ about infinity or trying to find an explanation for free will seem

¹⁹⁰ Even in the case of consciousness, it might be the case that people are facing a mystery. The psychologist Donald Hoffman point out, that when it comes to consciousness, modern theories that posit consciousness as a kind of ‘simulation’ simply fail: “Could conscious experience bubble out of a computer simulation? Some scientists and philosophers think so, but no scientific theory can explain how.” In fact, Hoffman observes that “... no one has any idea what principles could tie a class of [computer] programs to a kind of experience. In short, we have no idea how simulations might conjure up conscious experience... if we assume the world is a simulation, then the genesis of conscious experience remains a mystery.” (Hoffman, 2019:182) Although Hoffman goes on to develop his own particular type of approach to consciousness, he is consistent in his view that current science will not be able to explain

to fall within the domain of mysteries, as no significant advance has been achieved in understanding these phenomena for millennia. When entering the social domain, questions about the best political organization or certain topics in psychology related to human behavior are so complex, that they might well belong to the area of mysteries, as mentioned previously. However, there are other, simpler examples in the history of human thought that should suffice as proof that there are mysteries in nature that elude understanding: natural science has a limit, as too does human understanding and reasoning in general. It is not possible to give any account of “things-in-themselves”, that is, objects as they are independent of human cognition. More importantly the issue of ‘materialism’ as the fundamental metaphysical substance that lies behind everything (hence belonging to naturalist philosophy) including the external world, needs to be elucidated by showing the extent of human ignorance about the world. Thus, the question of what ‘naturalism’ is, besides being identified with its results, as well as the topic of ‘materialism’, can be seen in a new light when one considers the history of human thought, as will be explored next.

consciousness. Although the quote only focuses on ‘simulation theories’, more theories of consciousness are discussed in part 3.

3.5 Mysterianism: the limits of human cognition

In contemporary philosophy those philosophers who think that there are such things as ‘mysteries’ in the world are labeled ‘mysterians’. Chomsky is accused of being a ‘mysterian’, but he thinks that ‘mysterianism’ is simply common sense. If human beings belong to the biological world and are not gods or supernatural beings, then, like all other creatures in the natural world there will things which are mysterious for each creature. Chomsky goes through a crucial period during the scientific revolution *that provides clear evidence that there are irresolvable mysteries for human beings*. During the 17th and 18th century (and perhaps much of human history¹⁹¹) there was a concept of materialism which was connected with the idea that the world is a giant machine, similar to a master clock. If an artisan could build something mechanical, it was assumed to be intelligible, as mechanical thinking based on direct ‘push-pull’ contact appears to be the intuitive way people make sense of the world¹⁹². Along comes Isaac Newton and he shows that the world does not work with direct contact (there is action at a distance) and the picture of the world as mechanical is demolished – the world does not work like a machine and its nature is now explicitly mysterious to human beings. Chomsky not only quotes Newton’s disbelief at his own discovery, he also quotes Locke and Hume, who reach similar conclusions on the mysteries of the world based on Newton’s work. Locke talks about people’s “incurable ignorance” concerning how nature works, and Hume says - concerning Newton - whom he considers to be the most intelligent human being in history, that his greatest achievement was not only in showing how some part of nature works, but it also lies in proving that parts of nature will *forever* remain in obscurity for human beings. Chomsky considers this part of history important, as it is forgotten, not known about, or glossed over, which leads back to the same problems which were already clearly visible to people like Newton, Locke and Hume. Human beings start off with a view of the world that could be reasonably called ‘common sense’, a view that can be taken to mean that the functioning of the world is rather obvious and intuitive, which is based on ordinary observation of the interaction between objects in the world. There is no deep mystery in ‘common sense’ intuition that the world

¹⁹¹ See Dijksterhuis, 1986. Princeton paperback. For a detailed history of this current of thought.

¹⁹² Cognitive scientists Friedrich Wilkening and Trix Cacchine point out that “Most children, and even half of well-educated adults... [beliefs] are consistent with a pre-Newtonian, medieval theory of motion: the impetus theory. According to this theory, each motion must have a cause.” (Gosawi, 2014:478) For more info *see Childhood Cognitive Development* published by Wiley Blackwell, specifically chapter eighteen, *Children’s Intuitive Physics*.

as *observed by people* is the way the world *actually is*. In fact, this ‘common sense’ conception of the world was accepted during the 17th century, and was called ‘the mechanical philosophy’, until Isaac Newton showed its untenability, this was all considered to be part of naturalistic inquiry, though it can now, with the added benefit of time, be debated as to whether such a mechanistic view of the world was naturalistic given contemporary understanding of what ‘naturalism’ is. Chomsky argues that “[t]he mechanical philosophy that Newton had undermined is based on our commonsense understanding of the nature and interactions of objects, in large part genetically determined and, it appears, reflexively yielding such perceived properties as persistence of objects through time and space, and as a corollary their cohesion and continuity, and causality through contact,” which appears to be “a fundamental feature of intuitive physics.”¹⁹³ This historical aspect, which is extremely relevant for contemporary debates about the nature of mind and world, is that the theoretical justification for this ‘mechanical philosophy’, was a view called *materialism*, which is quite distinct from Strawson formulation of this doctrine: “the materialist conception of the world that animated the seventeenth-century scientific revolution...” whose conception, which is not too far removed from ‘materialist eliminativists’, in many curious respects, viewed the world as “as a machine, simply a far grander version of the automata that stimulated the imagination of thinkers of the time much in the way programmed computer do today: the remarkable clocks, the artifacts constructed by master artisans like Jacques de Vaucanson that imitated animal behavior and internal functions like digestion [etc.]” This ‘common sense’ vision of the world sought to be articulated and legitimized by scientific rationality and experimentation, with the goal of gaining an understanding of the nature of the world.

This materialist world-view, however, was not without its own problems, as Chomsky states “Descartes claimed to have explained the phenomena of the material world in mechanistic terms while also demonstrating that the mechanical philosophy is not all encompassing, not reaching to the domain of mind...” (Chomsky, 2016: 82.) The domain of mind could not be explained by appealing to machines in order to show how reasoning and apparent creativity that is evident in all

¹⁹³ Sean Carroll states that “Newtonian theory is a good approximation in a certain domain of applicability, but ultimately it breaks down and we need a better description of reality.” This ‘domain of applicability’ is somewhat related to our intuitive sense of how the world works, but if science was to proceed, it needed a better description for the phenomena that dispensed with intuition: “Newtonian gravity works very well for the Earth or Venus; it eventually breaking down when we consider the orbit of Mercury, whose tiny precision became some of the strongest evidence in favor of Einstein’s general relativity.” Carroll (2017: 191)

human beings works.¹⁹⁴ Newton also struggled trying to explain properties of the mind, (which could also be captured by the word ‘spirit’) and maintained some concerns about ‘spirit’ that are roughly tackled in a modern-day, albeit slightly different formulation by Strawson’s articulation of panpsychism. “In Newton’s own words, “spirit” may be the cause of all movement in nature, including the “power of moving our body by our thoughts” and “the same power in other living creatures, [though] how this is done and by what laws we do not know. We cannot say that all nature is not alive.” This mysterious property of ‘spirit’ which animates the human mind *could* be a fundamental property of all nature, though it is impossible to explain how these phenomena came into being. Other important historical figures¹⁹⁵ also contemplated this idea, in this specific case, Locke, whom Chomsky quotes, states that: “[Locke] writes that “whether Matter may not be made by God to think is more than man can know. For I see no contradiction in it, that [God], should, if he pleased, given certain systems of senseless matter, put together as he sees fit, some degrees... of thought.” ... [Locke argued that] God has added inconceivable effects to motion...” (Chomsky, 2016: 83) These ‘inconceivable effects’ of motion as relating to the mechanistic materialist philosophy, are related to such concepts such as ‘action at a distance’ and ‘gravity’, in which no direct physical contact is needed for the motion of objects, an idea which was inconceivable at the time.

The idea of nature being some grand machine resembling a clock could not be sustained, and the limits of thought not clearly delineated, and there is no reason to think that there are two fundamental substances, matter *in addition* to mind. Thus, there is no difficulty in arguing that “...GOD can, if he pleases, superadd to matter a faculty of thinking, [rather than believing that] he should add another substance with a faculty of thinking.” There is no warrant, then, for postulating a second substance whose essence is thought.” (Chomsky, 2016: 83-84). The issue can be stated in another, similar manner, namely, that there are no instances which one could point to when there have been thoughts or ideas separate or independent of matter. It is also an issue of simplicity and

¹⁹⁴ Though as Dijksterhuis points out, machines cannot even imitate simple non-sentient processes that occur in the natural world: “Even the most skillful mechanic is unable to construct apparatuses in which material objects move in consequence of their mutual gravitation; yet people quietly continued to designate the gravitational explanation of planetary motion as mechanistic.” (Dijksterhuis, 1961: 497)

¹⁹⁵ For a comprehensive account of the history of panpsychism, which takes a historical perspective on all the major philosophers and scientists who have entertained this idea from antiquity to contemporary times see *Panpsychism in the West* by David Skrbina. 2007. MIT Press.

coherence; it makes more sense to argue that mental is an outgrowth of the physical than to postulate the mental *independent* of the material. Furthermore, it's not clear if there *are* limits to the physical, since in “[h]aving no intelligible concept of “matter” (body, etc.), we cannot dismiss the possibility of living or thinking matter, particularly after Newton undermined commonsense understanding.” Notice that what Newton and Locke are considering is the possibility of something like micropsychism, though not as articulated by Strawson. It is also not a direct endorsement of this view, nor does Chomsky refute the idea that either all nature is alive or that all nature could have thinking properties, but only that he thinks it is not the case, which will be expressed further on. Returning to Newton, he did not simply “demolish” the mechanical philosophy, he tried “to the end of his life... to find some way to account for the mystical principle of action at a distance that he was compelled to invoke to account for the most elementary phenomena of nature... there might be “a most subtle spirit which pervades and lies hid in all gross bodies,” by making such a speculation Newton hoped that this ‘spirit’ might¹⁹⁶ “somehow yield a physical account of gravitation and cohesion and offer some hope of rescuing an intelligible picture of the world.” (Chomsky, 2016: 85)

By ‘intelligible’ what Chomsky means here is understandable from a perspective of ‘common sense’, which would also be intuitive. Though Newton’s work proved that the world is not a giant machine, the wish of wanting to understand the world directly was no longer possible, and while this view of a theoretical understanding of the world is now natural to scientists, it was not this image of the world that was prevalent in the 16th and 17th centuries. A ‘theoretical understanding’ of the world is no longer a view that is in accord with ‘common sense’, and thus what is taken to be ‘understanding’ is quite removed from any ordinary conception of this word. Chomsky cautions his readers that “[w]e should not lightly ignore the concerns of “the greatest and rarest genius that ever arose for the ornament of the species,” [Hume’s statement on Newton] or of Galileo and Descartes, or Locke and Hume.” (Chomsky, 2016: 85) The issue of mentality, of how there is a

¹⁹⁶ In philosopher Howard Stein article about Newton’s metaphysics, he cites a passage by Newton. In this passage Newton states that “I wish we could derive the rest of the phenomena of Nature *by the same kind of reasoning from mechanical principles*. For I am induced by many reasons to suspect that they may all depend upon certain forces by which particles of bodies, by some causes hitherto unknown, are either mutually impelled towards each other and cohere in regular figures or are repelled and recede from each other; which forces being unknown, Philosophers have hitherto attempted to search Nature in vain.” Crucially, however, Newton adds that “...I hope the principles here laid down will afford some light either to that, or some truer, method of Philosophy.” (Cohen & Smith eds. 2002: 283) (Italics mine).

faculty or property of mind as a consequence of some specific configuration of matter, as well as the topic of how this mental activity could be a fundamental facet of the universe is not an idea that should be glossed over as mere curiosity, it signals that the best minds in human history had serious discomfort and unease in thinking about how is it that the world can function with all its complex dimensions in a manner that is far removed from ‘common sense’. Nor was Newton universally praised for his accomplishments. To the contrary, his contemporaries such as Huygens and Leibniz were critical of Newton’s discoveries: “Christiaan Huygens described Newton’s principle of attraction as an “absurdity”. Gottfried Leibniz argued that Newton was reintroducing occult ideas... of the much-ridiculed scholastic science” with an emphasis on Newton not offering “*physical* explanations for phenomena of the material world.” It was not easy to let go of the idea that the world could be understood by man completely,¹⁹⁷ nor that the world was not intelligible.

Not only were Huygens and Leibniz accusing Newton of introducing obscurity to the people’s understanding of the natural world, Newton himself “...largely agreed with his scientific contemporaries. He wrote that the notion of action at a distance is “inconceivable.” It is “so great an Absurdity, that I believe no man who has in philosophical matters a competent Faculty of thinking, can ever fall into it.” By invoking it, we concede that we do not understand the phenomena of the material world.” It is worth pointing out that when Chomsky talks about the ‘material world’, in this specific case, what he has in mind is similar to what Galen Strawson has in mind when he uses the term ‘non-experiential’¹⁹⁸. One consequence of this exposition about the ignorance people have about the physical world is that new, and far more complex issues, specifically the problem of consciousness, which is currently considered to be *the* ‘hard problem’ in philosophy, aren’t particularly surprising in light of that fact that it was recognized in the 17th century that motion, which might seem easier to understand than consciousness, is impossible to

¹⁹⁷ E.A Burt frames the historical perspective that preceded Newton nicely when he says “For the Middle Ages man was in every sense the center of the universe... Toward this conviction the two great movements which had become united in the medieval synthesis, Greek philosophy and Judeo-Christian theology, had irresistibly led. The prevailing world-view of the period was marked by a[n] ... assurance that man, with his hopes and ideals, was the all-important, even controlling fact in the universe. This view underlay medieval physics. The entire world of nature was held not only to exist for man’s sake, but to be likewise immediately present and fully intelligible to his mind.” (Burt, 2003:18) Though much of medieval thought had faded away by the time Newton came along, the thought that the world could be comprehended by man remained alive.

¹⁹⁸ Though of course, this terminological choice of ‘non-experiential’ vs. ‘the material’ can soon become very complex. Biology studies things which may have experiential components, at least in the case of animals but not necessarily bacteria.

understand. Chomsky, citing Thomas Nagel says that “[t]o take a contemporary analog, the absurd notion of action at a distance is as inconceivable as the idea that “mental states are states of the brain,” a proposal “we do not really understand [because] we are still unable to form a conception of how consciousness arises in matter, even if we are certain that it does.” It appears to be the case that many of the same intellectual mistakes that were made by Newton - with good reason given the historical period - are now arising again in much more complex fields of knowledge such as neuroscience¹⁹⁹ in respect to the phenomena of consciousness and the numerous aspects that come with it. However, Newton’s conception about the nature of the world prevailed and some very important conclusions were reached, of which Hume’s articulation, whom Chomsky quotes, puts the matter concisely “... Hume carried that failure of conceivability a long step by concluding that Newton had restored these ultimate secrets of nature “to that obscurity, in which they ever did and ever will remain’ – a stand that we may interpret, naturalistically, as a speculation about the limits of human cognitive capacity.” (Chomsky, 2016: 86-87) One cannot state adequately enough how significant Newton’s achievement was in relation to human beings’ capability of understanding the nature of the world.

¹⁹⁹ In fact, Patricia Churchland released a critically acclaimed book *Neurophilosophy* (1986), in which she attempts to show that ‘folk psychology’, that is, *normal* everyday psychology, which people use to navigate the lived world and try to understand it as well as other people, is in some sense erroneous, or so she seems to argue: “...there is already evidence that the folk psychological categories of belief and desire are bound to fragment at the hands of science... the difficulty is that belief ascription [in ordinary life] is context-relative, and depending on interests aims... and other considerations...” She goes on to say that “the first problem is that folk psychology as it stands does not have a *single*, unified notion of content, but rather a vogue notion flying in loose formation. This may be all very well for a folk theory going about its humdrum business, but if there is no such thing as *the* content of someone’s propositional attitudes, then the project for finding a place for propositional attitudes in cognitive psychology, let alone neurobiology, is severely hampered.” (Churchland, 1986.: 382-383)

There is no evidence given as to why ordinary psychology fails, other than pointing out that it is very complex to have a science of mind in relation to beliefs, propositional attitudes, because in ‘folk psychology’ there are too many factors to consider in order to turn folk psychology into a ‘hard science’. It would be hard, if not outright incoherent, to argue that people do not have mental content at any given time, but to attempt to find these contents in neurobiology (of which neuroscience is a branch) misses the point: psychology, less reflexively considered and hence called ‘folk’, is the domain in which human beings experience the world. That the brain plays a role in these experiences is not in doubt, but studying the brain alone leaves out most of life, and the ‘folk’ aspect of psychology remains no less illusory, and hence a *fact* of human life, as sure as any other fact of the natural world.

It is difficult to ascertain what is gained by attempting to show the inadequacy of ‘folk psychology’, but it is very unlikely neurobiology in general, and neuroscience specifically will give people a science of psychology. It is also necessary to mention that ‘folk psychology’, as is used in this context, refers to the mental, and it is hard to make sense of the notion that mental life – experience - is wrong. Strawson’s comment in relation to such views are worth pointing out: “The eliminativists make the same initial mistake as Descartes- the mistake of assuming they know more about the nature of the physical than they do... They are so certain that the physical excludes the experiential that they are prepared to deny the reality of experiential in some (admittedly unclear) way – to make the most ridiculous claim ever made in philosophy – in order to retain the [non-experiential] physical.” (Strawson, 2008: 46)

These considerations should cause philosophers to be extremely cautious when thinking about people's capability to comprehend the world "[i]n the light of history, there seems to be little reason to be concerned about the inconceivability of relating mind to brain, *or about conceivability altogether*, at least in inquiry into the nature of the world." [Emphasis mine.] This is a crucial point to register, but it is quite difficult to fully understand, because, as has been argued, even the simplest of phenomena cannot be so understood, if by understanding one has in mind an intuitive grasp of the world. If motion is a mystery, what can be said about consciousness, a vastly more complex subject? There are no reasons "... for qualms about [an] "explanatory gap" between the *physical* and consciousness, beyond the unification concerns that arise throughout efforts to understand the world." (Chomsky, 2016: 87) *Not only is motion a mystery* and consciousness arising from matter a good candidate for 'mystery status' phenomenon, but even the notion of the physical (or material, or non-experiential) is far from being clear at all, though it would not make much sense to dispense with it altogether, because if the physical (the non-experiential, matter) is removed, there are no terms that remain as a reference to the study of reality²⁰⁰, unless one sticks to naturalism - which is intimately related to real materialism, as articulated by Strawson. Though Chomsky may have no use for the philosophical doctrine of materialism, a good case can be made that *ignorance* is the distinctive feature of materialism, which will be discussed in the conclusion.

Furthermore, the radical shift that was caused by Newton's discoveries marked a new path in the sciences, as "[h]istorians of science recognized that Newton's reluctant intellectual moves set forth a new vision of science in which the goal is *not to seek ultimate explanations but to find the best theoretical account we can of the phenomena of experience and experiment.*" (Chomsky, 2016: 89) (Italics mine.) Given all that has been said – including the discovery that matter does not work like a machine - is there anything that is of any use in the concept of 'matter'? What one can say, given the relevant history is that people do not know what 'bodies' are, and as a consequence of this, it is not possible to say what the limits of matter are. But then what can be said of materialism, beside the fact that everything is physical? These are difficult questions since they belong in the border of what can be sensibly talked about, though there have also been alternatives to

²⁰⁰ One can say, alongside Chomsky, that we talk about the world, and people attempt to understand it's physical or mental aspects. Nevertheless, it's difficult to talk about all kinds of things, and refer to them as 'world things', instead of 'physical' things. So, besides the concept of physical, there are also semantic considerations for choosing a type of materialism.

materialism, which seek to give some kind of unity between the aspects of the world that are called ‘physical’ and ‘mental’, such as ‘neutral monism’. Neutral monism, which has been discussed at some length, can be taken to mean that reality is in some fundamental sense “neither mental nor physical as we currently understand these terms”, to use Strawson phrase. As Russell was elaborating “... his neutral monism, Russell carried further the seventeenth- and eighteenth-skepticism about matter, and recognition of the possibility (or for some necessity) of thinking matter.” Russell came to a conclusion which Chomsky agrees with, namely that “[he] held that there are “three grades of certainty. The highest grade of certainty belongs to my own percepts; the second grade to the percepts of other people; the third to events which are not percepts of anybody,” constructions of the mind established in the course of efforts to make sense of what we perceive.” Thus even when knowledge of the world seems to be immediate, this information is already mediated by the mind in such a manner as to make a portion of the world intelligible to human beings, which highlights the point that even though there should be no doubt that there is some contact with the external world (unless one thinks a form of idealism is tenable), what is certain is that it is the mind that comes into contact with some features of the external world, but *not* the external world in a manner which is separate from people’s mental construction of it²⁰¹, it is all an ‘internal behind the eyes’ inquiry of what *may* be facets of the mind-independent world. Thus, the world as appears to human beings could be called a ‘mind-world’ and the most adequate articulation for metaphysics is to consider it to be an epistemic-metaphysics, that is, a view of the world which is mediated by human knowledge.

This label of ‘mind-world’ is not too dissimilar to Russell’s point, as can be seen when Chomsky quotes Russell saying that “A piece of matter is a logical structure composed of [such] events [which are various perceptions in succession],” he therefore concluded. We know nothing of the “intrinsic character” of such mentally constructed entities, so there is “no ground for the view that percepts are not physical events.”” As is the case with Strawson, Chomsky, through Russell, is arguing that given the lack of alternatives and people’s limited comprehension, there are no good arguments that can be given to think that mental events are metaphysically different from the

²⁰¹ As Cudworth states “...sense is when the soul is so affected as if there was such a corporeal thing existing. So that all reality that is necessarily required to sense is only this, that there really be a passion in the soul, or that the soul be really so affected as if there were such a thing.” Cudworth continues by saying “That is, that it have really such a seeming or appearance, *but not that thing really be, as it appears*. For as to a thing’s being such and such, its having such a mode or quality... is in this respect... ideas... [of]... fantastical things.” (Cudworth, 1997: 65)

domain of the physical. Continuing with his explanation of Russell, Chomsky points out that “Physics itself seeks only to discover “the causal skeleton of the world, [while studying] percepts only in their cognitive aspects; their own aspects lie outside its purview” – though we recognize their existence, at the highest grade of certainty in fact.” (Chomsky, 2016: 100) In other words, the only access human beings have of perception are the way they are given by the mind through experience, and thus appearances, because there is no manner of studying these perceptions outside of what they appear to be. It is somewhat similar as trying to theoretically understand a painting or a music piece by looking at colour gradation or pitches in sound – the overall meanings are already given and cannot be analyzed outside themselves.

By way of illustration, Russell devised a famous thought experiment in which “a blind physicist who knows the whole of physics but does not have “the knowledge which [sighted] men have” about, say, the quality of the color blue.” This hypothetical physicist knows everything there is to know about how colours work but has *never seen* or experienced any colour, as she was “confined to a black and white room” but was eventually released into the world and thus introduced to colour experience. Does this physicist, which will be called Mary, now know something new about colours that she did not know before? Mary is an expert in explaining the non-experiential process that happens when people see colour, so is she really learning anything *substantial* about the world? It seems that the obvious answer is ‘yes’, that Mary does learn something new and important about the world, she finally has the *experience* of the colour blue, the qualitative ‘what-its-likeness’ of seeing something that is coloured blue. However, as is often the case in philosophy, few arguments go by without counterarguments. Chomsky states that “[o]ne popular though contested proposal is that what Mary lacks is not the knowledge of the world that we have but a range of abilities, a species of “knowing how”.” However, this does not cast light on the issue as “there is an irreducible cognitive element in “knowing how,” which goes beyond abilities [that try and explain this phenomenon theoretically] ...” (Chomsky, 2016: 101)

‘Knowing how’ implies that there is a way to know an aspect of something that already exists. One may choose chess as an example. One may not know anything about chess, except for the fact that it is a game. One can proceed to learn all the relevant chess pieces, and then learn that the goal of the game is to capture the opponents king, and after playing a few times one can say that one ‘knows how to play chess.’ Another argument is not “knowing how”, but “knowing *that*”

something is blue or sweet, or any other related experiential phenomena. In the case of ‘knowing that’, there appears to be an extra fact or piece of information that is achieved, that was obscured before: thus, it is perfectly fine to know that red balls are filled with hydrogen, are round and bounce when they come into contact with the floor, but one may not know *that* red balls are used in various sports, like dodgeball. However, “[t]he knowledge that *we* have but Mary lacks is a body of knowledge that does not fall within the knowing-how/knowing-that dichotomy: it is knowledge *of* – knowledge of rules and principles that lead unbounded capacities to act appropriately.” (Chomsky, 2016:101-102) The aspect of the world which includes experiential ‘knowledge’, which is in no way limited to colours, but also to sounds, tastes and so on, are a *separate* faculty of knowledge, a different epistemic domain, which is guided by certain rules and abilities in the mind that allow a person to access an area of the world that would otherwise be ‘shut off’ as a form of experience and knowledge²⁰². This type of ‘knowledge of’, in the case of human beings must be quite restricted, with the consequence that many areas of the world exist and are as real as anything else in the world but are forever distant from the modes of understanding people have. This also means that when talking about the nature of the world, the only things that can be talked about are those parts of the world that fall within the scope of human understanding, and there is an argument that can be made that most of the world is unintelligible to people due to limitations of the ‘knowledge of’ capacity.

One topic that clearly falls inside the ‘knowledge of’ capacity is experientiality, or consciousness in general. Chomsky says that “Russell’s knowledge intuition led him to conclude that physics has limits: experience in general lies “outside its purview” apart from the cognitive aspects that provide empirical evidence, though along with other mental events, experience is “part of the material of the physical world,” a phrase that seems to mean no more than “part of the world”. The problem Chomsky sees in using the words ‘physical world’ or ‘material world’ is that it’s not quite clear what is meant by ‘physical’ or ‘material’. For Chomsky it is “...uninformative until some clear

²⁰² As Bryan Magee puts this point: “What can be conceived depends on our powers conceiving, but what can exist does not... The fact that we can apprehend only what the apparatus we have for apprehending... is a fact about us... not a fact about what exists independently of us. It means only that *we* can apprehend nothing else, not that nothing else exists. *Anything* else may exist.” Magee points out an example that would be easily understood by people “Just as, if no creature had ever had eyes, the visual world would be permanently sealed... so also is the existence of any and all of the worlds that would have been available to us by the indefinitely large number of senses and mental capacities we might contingently have had but do not have.” (Magee, 2016.: 76-77)

conception of physicalism/materialism is offered.” He further points out that “[c]lassical interpretations [of materialism] have vanished, the notions of body, material, physical are hardly more than honorific designations for what is more or less understood at some particular moment in time, with flexible boundaries...” (Chomsky, 2016: 102) In addition, not only is materialism not well defined, other than saying that it is the terminological designation of the study of whatever there is, but the term ‘non-material’ is arguably even more obscure, as all it seems to mean is that whatever phenomena are called ‘non-material’ are phenomena that are not understood, such as the topic of consciousness, though when something exists which is intelligible in some manner, it is honorifically called ‘physical’. In order to try and make some sense of something like “a “mind-body problem,” it would be necessary to characterize *physicalism* (*matter*, etc.) in some fashion, or to argue that the problem arises even if the concepts [‘mental’, ‘physical] are abandoned.” What remains then, when trying to seek out the nature of the world? Would Strawson’s ‘real materialism’ be simply dismissed as terminologically empty? Not quite, for reasons already given. What *can* be done is to start off with what is certain about the world, and in this case, Russell’s suggestion of “three grades of certainty” is adequate in this regard. Since the highest grade of certainty is people’s conscious percepts, then the starting point of understanding comes from mental constructions of the world: “...we might say that, like all animals, we have internal capacities that reflexively provide us with what ethologists call an *Umwelt*, a world of experience, different for us and for bees – in fact, differing among human beings, depending on what they understand.” (Chomsky, 2016: 103)

Furthermore, the concept of *umwelt* points at a difficulty that could become hard to disentangle in the field of metaphysics, as it becomes elusive to try and give an account of the world if there are so many differing versions of the world of experience. The *umwelt* covers a vast field of experiential phenomena that takes into account many different aspects of the world. While certain experiential aspects, such as being able to experience the world through the eyes of an eagle are impossible for people, even in case of human beings there are differences *between* groups: there are many cultural, economic, religious, geographic facts, as well as the limits within the range of understanding that each person has, varies significantly not only on a culture to culture basis²⁰³,

²⁰³ See, for example Richard E. Nisbett *The Geography of Thought* (2003) as well as Gish Jen’s *The Girl at the Baggage Claim: Explaining the East-West Culture Gap* (2017) for information on how eastern cultures differ from western cultures, while at the same time sharing significant similarities.

but within a given culture, people may well interpret the world in different ways. Perhaps it is simply not possible to unify such vastly different forms of understanding and interpreting the world, and the step that must be taken is related to Strawson's observation that to engage in metaphysics already implies going beyond the available empirical evidence and simply attempt to give an account, based on well-reasoned speculation, as to what the nature of the world is. On this view, one would attempt to step outside one's cultural sphere of influence and see the world as given as neutral as possible while acknowledging that one could be quite wrong about one's arguments. However, there is one thing that can be said about many living organisms that is not doubted, and that is that they have experience of some kind, though the point of demarcation between consciousness and non-consciousness is not well established. The topic of the non-experiential is different in Chomsky's case than in Strawson's contemporary views, as Chomsky believes that non-experiential exists, as has been pointed out. Another thing that all human beings share, regardless of culture or private experiences is the capacity for creativity that is innate in every person. The topic of creativity can serve as a stepping ground to give further arguments as to how the mind actively shapes the world, which is a feature of epistemic-metaphysic creatures like human beings.

4.0 From Naturalism to Creativity

One theme that can be extrapolated from Chomsky's views on language is the topic of 'creativity', which Chomsky considers to be a unique component to all human beings. Creativity in Chomsky's sense may end up being what is necessary to develop metaphysics beyond its current state, as it shares certain affinities with Peirce's conception of metaphysics. However, it is worth pointing out that as far as language use and the creative aspect the mind has in understanding the world goes, Chomsky is using the term 'creativity' differently from what the term is ordinarily understood as meaning. 'Creativity' as Chomsky uses the word, is a normal everyday human capacity that allows people to interact with and make sense of the world. The everyday use of language, in ordinary speech is a creative act, as is trying to use language to try and find out, what, if anything, may exist in the 'external world'. In a famous debate Chomsky held with Michel Foucault, the issue of creativity arose in connection with human nature – the range of ways human beings may be. The topic of human nature is at the core of Chomsky's philosophy about the way people behave and think and is also intimately related with his conception of creativity. In terms of human nature, he agrees with the Cambridge Platonists, as well as with Kant and his tradition, that there is a structure that allows for the intelligibility of the world, though this structure necessarily involves 'scopes and limits', because the alternative option, that of not having a specific nature is not coherent. As Chomsky says "[i]f in fact man is an indefinitely malleable, completely plastic being, with no innate structures of mind and no intrinsic needs of a cultural or social character, then he is a fit subject for the "shaping behavior" by the state authority, the corporate manager, the technocrat, or the central committee." Although Chomsky is talking here about human nature in relation to political needs, broadly conceived, the 'structure' of the mind applies equally well to cognitive development generally speaking, and language in particular:²⁰⁴

²⁰⁴ Steven Pinker presents arguments to the effect that the way people comprehend the world, so far as language is concerned (and putting aside the non-trivial issue of other cognitive faculties working at interpreting the world), is roughly Kantian and includes the concepts of "...space, time and causality together with logic and substance..." (Pinker, 2007: 158). Further on in the book, Pinker states that "[t]he intuitive materials-science behind the mass-count distinction assumes a Play-Doh world in which objects are molded out of a substance: rocks are made of rocks, glasses are made of glass, beers are made of beer, cats are made of cat." However, "[t]he model breaks down when an object can't be construed as having been formed from a scoop of material. A television isn't made out of something called television... We use the word rice to refer to a cup of it, a grain of it, or even a fragment of a grain of it, but as we zoom closer and closer we reach a point which we aren't seeing rice anymore (presumably there are no rice molecules, or rice atoms, or rice quarks.)" Pinker speculates that "[p]erhaps if humans could see the crystals, fibers, cells, and atoms making up matter, we would never have developed a count-mass distinction in the first place." (Pinker, 2007:171) This last point is essentially impossible to prove experimentally, short of finding an alien species with

“I think that the study of language can provide some glimmerings of understanding of rule-governed behavior and the possibility for free creative action within the framework of a system of rules that in part, at least, reflect intrinsic properties of human mental organization.” (Chomsky, 2008: 89)

In so far as people are a biological organism, like any other biological organism, whether the creature in question is a dog, a monkey or a dolphin, this point of constraints of organization in the brain is essential: “There’s a view in philosophy called mysterianism, which is supposed to be a bad thing. Mysterianism is the belief that our cognitive capacities are part of the natural world, so therefore these capacities have scope and limits, and if you believe that you’re somehow a mystic. That’s a very odd thing – it’s like saying that adopting elementary scientific rationality is to be a mysterian.” (Chomsky, 2012: 97) The term ‘new mysterians’ was coined by the philosopher Owen Flanagan in his book *The Science of the Mind* (1991), which, for sake of brevity, will simply be called ‘mysterianism’. The argument that human beings have no such intellectual limitations (mysteries) is popular among some philosophers, such as Daniel Dennett and Patricia Churchland²⁰⁵. Although mysterianism is associated with the topic of consciousness, it need not be restricted by this area of research. Michel Foucault, on hearing about Chomsky’s arguments about human creativity in relation to the use of language, responded by stating that “when you speak of creativity as conceived by Descartes... [he argued that] the mind was not so very creative. It saw, it perceived, it was illuminated by the evidence.” (Chomsky & Foucault, 2006: 13)

Furthermore, Foucault argues that “[t]o resolve an analogous problem in the field of history [of ideas] ... one has to do the opposite... to introduce the point of view of understanding, of its rules,

different language faculties. Nevertheless, these simple observations help highlight the innate richness people bring to the world. For more detailed information, experiments and evidence on this ‘Kant-like’ structure of language, see *The Stuff of Thought*, Chapter 4: *Cleaving the Air*.

²⁰⁵ Dennett has stated that “Noam Chomsky, who divides all matters of human puzzlement into soluble problems and insoluble “mysteries”. The human mind has its limits, and for Chomsky, the problem of free will, for instance, is simply off limits. This is doctrinally convenient, maybe, but rhetorically unstable, to say the least. In other moods, both Chomsky and Fodor have hailed the capacity of the human brain to parse, and hence presumably understand, the official infinity of grammatical sentences of a natural language. If we can understand all the sentences, can’t we understand the sentences that best express the solutions to the problems of free will or consciousness?” (Dennett, D. (review of C. McGinn, *The Problem of Consciousness*), *The Times Literary Supplement*, May 10, 10, 1991.)

What follows from this line of thinking is that human beings have no limitations in terms of what they can understand, but then this would make human beings *completely* unlike any other creature in nature, in that it would be possible to *understand everything* but as Chomsky has pointed out, Newton demonstrated that people do not understand nature in an intuitive sense, thus there are mysteries which are a necessity based on the fact that people are people and not gods.

of its systems, of its transformations... in the game of individual knowledge... the problem of creativity cannot be resolved in the same way, or rather, it can't be formulated in the same terms, given the state of disciplines inside which it is put." (Chomsky & Foucault, 2006: 19) What Foucault likely has in mind is the following formulation: throughout the history of science, certain individuals, like Copernicus, Galileo and Newton had to use great ingenuity and creativity to discover the laws that govern the universe. In hindsight however, some of these discoveries, such as the argument that the Earth is not the center of the universe, or that there is a force in nature called gravity, that 'pulls' objects, seems rather trivial and in many respects, self-evident. Such a view, though understandable is not justifiable at the time when Copernicus and Newton made these discoveries. There were numerous external factors that includes society, authority and the current state of knowledge that made it particularly difficult to discover the laws of nature. However, because these individuals were extraordinary, they used their creativity in such a manner as to overcome the obstacles present in their times, which led to important contributions in the sciences, particularly physics and astronomy. When people use the word 'creativity' in ordinary speech, they tend to have in mind such individuals and artists. Though this is certainly a legitimate use of the term 'creativity', it is not the one Chomsky has in mind. He says that "...my use of the term creativity is a little bit idiosyncratic.... when I speak of creativity, I'm not attributing to the concept the notion of value that is normal when we speak of creativity. That is, when you speak of scientific creativity, you're speaking [to Foucault], properly, of the achievements of a Newton."

However, Chomsky's use of the term 'creativity' is much broader than Foucault's ordinary use of the word, Chomsky continues: "in the context in which I have been speaking about creativity, it's a normal human act... [creativity as thus conceived is a capacity] that any child demonstrates when he's able to come to grips with a new situation: to describe it properly, react to it properly, tell one something about it, think about it in a new fashion [etc.] ... I think it's appropriate to call those acts creative..." (Chomsky & Foucault, 2006: 19) One can use both conceptions of creativity, but so far as an elaboration of some kind of metaphysical conception is concerned, Chomsky's ideas are quite fruitful. The problem posed by Foucault's arguments concerning the nature of the mind is associated with a belief that human beings have no internal nature, that is, people are essentially malleable to the circumstances and environment that surrounds them. As Foucault states "But to say that these regularities are connected, as conditions of existence, to the human mind or its nature, is difficult for me to accept... I would like to know whether one cannot discover the system

of regularity, of constraint, which makes science [as organized knowledge] possible, somewhere else, even outside the human mind, in social forms, in the relations of production, in the class struggles, etc.” Foucault appears to be arguing that although one can try and place some aspects of knowledge within the mind, what is more relevant is the way the contemporary world is organized, in terms of power and social constraints. Foucault even goes as far as quoting Mao Zedong on the issue of relativizing human nature... “it is difficult to say exactly what human nature is... Mao Tse-Tsung spoke of bourgeois human nature and proletarian human nature, and he considers that they are not the same thing.” (Chomsky & Foucault, 2006: 44)

However, this view, besides being deeply problematic, makes philosophy of mind almost impossible, and metaphysics completely trivial, and is too strong a position. If any (or too many) perspectives on the structure of the world is permissible, then there is no reason to suppose that any view would be better than any other. Furthermore, it becomes impossible to even formulate any theory at all: “With no limits to... our cognitive capacities [these capacities] would also have no scope, just as if the genetic endowment imposed no constraint on growth and development of an organism, it could become only a shapeless amoeboid creature, reflecting accidents of an unanalyzed environment.” The ‘limiting’ role of human nature, then, creates “[t]he conditions that prevent a human embryo from becoming an insect [and] play[s] a critical role in determining that it can become a human, and the same holds in the cognitive domain.” (Chomsky, 2013: 56) Now that Chomsky’s conception of creativity has been explained, in times to investigate further the role the mind has in interpreting the world.

4.1 From Tabula Rasa to the Active Mind

It should be clear that human nature, when looked at closely, shows that the scope and structure that the mind has actively²⁰⁶ *shapes* the way the world is viewed. Whatever there is, when talking about the nature of the world, is closely linked to the way the mind modifies and represents whatever it is that is out there in the world. Such ordinary conceptual objects such as TREES, RIVERS, MOUNTAINS and HOUSES are *not* mind independent entities, if human beings disappeared from the planet, there would be no such things in the world, though one would believe that the non-conceptual entities like tree's, rivers and houses would continue to exist, in some very obscure manner.²⁰⁷ This has important metaphysical implications, in that it is not the external world that is being talked about, but about the relation between *some* aspects of the external world, which stimulate the mind/brain into shaping the way reality is represented to human beings, which is one way of interpreting the world, though evidently not the only one. As mentioned above, there are some opposite views in the history of philosophy that downplay the active role the mind has in interpreting the world. Simplifying the situation, some of the opposing views of this type of 'rationalist-idealist' school of thought, are those who disagree with a 'mysterianism' that would follow from this philosophical orientation, which include postmodernists who think that human beings are the outcome of power and societal relations and also the classical empiricists, such as John Locke and David Hume. Even though there are significant differences in the way these empiricists expressed the nature of the mind in relation to the world, they still maintained a framework, in which the mind is mostly passive. According to Chomsky: "Within an empiricist framework, one approaches the study of the body as a topic in the natural sciences, concluding that the body is constructed of varied and specialized organs which are extremely complex ... these organs interact in a manner which is also determined by human biology." So far, this is a sensible approach, but empiricists "[o]n the other hand, ... [maintain] that the brain is a tabula rasa, empty, unstructured, uniform at least as far as cognitive structure is concerned. I don't see any reason to believe that ... There is no reason to believe that the higher mental faculties are in some manner dissociated from this complexity of organization." (Chomsky 1979: .81) The assumption that the

²⁰⁶ See part 3 below for information on this topic.

²⁰⁷ The capitalization of TREES, RIVERS and HOUSES merely serves to highlight that these are mental entities or constructions. If one is a realist, one would believe that something like trees and rivers, at least, existed prior to human beings, but not as they are conceptualized either in ordinary life.

brain is a tabula rasa, is an attractive position to adopt when thinking about the brain and the relationship it has with the world. This empiricist account of the mind²⁰⁸ can lead to a type of behaviorism that takes into account the behavior a certain creature has to a particular stimulus, while marginalizing what is going on in the brain.²⁰⁹ As Chomsky points out, if the brain has no structure, then it would not have scope nor limits, and this would make knowledge impossible. In any case, under current scientific orthodoxy, the human brain is the most complex biological organism that is known.

The basic thought behind empiricist assumptions is that a person learns things by experience and combining ideas. There is no consideration that children, to name but one example, have anything already in the mind prior to experiencing the world. Thus, John Locke argues that “it is evident, that all children and idiots [severe mental incapacities] have not the least apprehension or thought of them [innate ideas] ... For to imprint anything on the mind without the minds perceiving it, seems to be hardly intelligible.” Furthermore, Locke states that “[t]o say a notion is imprinted on the mind, and yet at the same time to say, that the mind is ignorant of it, and never yet took notice of it, is to make this impression [of the idea] nothing.” (Locke, 2004: 4) In other words, Locke is arguing that, if ideas are innate, as is argued in the rationalist tradition, then the person must be aware of the ideas it knows. If this is the case, then the following problem arises, how is it possible

²⁰⁸ Bryan Magee articulates the issue well when he argues that: “Empiricism...starts from an assumption, which it then finds impossible to validate...[its] problems are rooted in the fact that it cannot justify what it pre-supposes...it mistakes...an epistemology for an ontology: it ascribes independent existence to entities which are sense dependent or mind dependent...there are no terms in which we can have any apprehension of whatever exists other than through the categories [of our form of understanding] ... and thus we all grow up assuming that things are in the terms we perceive them”(Magee, 1997:83)

²⁰⁹ Strawson gives convincing arguments that seek to refute neo-behaviorism, which according to him is “the view that mental life is linked to behavior in such a way that reference to behavior enters essentially and centrally into any adequate account of the nature of... mental states and occurrences.” (Strawson, 2010: XI) In a similar exposition to Strawson’s article *Red and ‘Red’*, chapter 8 of *Mental Reality* is titled *Pain and ‘Pain’*. Similar to *Red and ‘Red’*, Strawson says “Whatever pain is, it is what the word ‘pain’ means... But when one asks the question about the word rather than the thing, one runs into... difficulties.” Furthermore “the word ‘pain’ is indeterminate in a certain way. It does not undermine the idea that ‘pain’ is... a word for a class of (private) sensations... and hence considered independently of any publicly observable causes and effects.” (Strawson. 2010: 233) Just as in the case of the color red, it is inadequate to point to a person and utter the words ‘that is pain’ and take the behavior of the person to be proof of being in pain. Another strong refutation of these empiricist assumptions found in *Mental Reality* is chapter 9, *The Weather Watchers*.

Although to be clear, Strawson does mention that “Comparison of ‘pain’ with words like ‘red’ is instructive. It seems that there is a sense in which... [neo-behavioristic and/or Wittgenstein Theoretic] ...arguments may require us to revise our ordinary understanding of ‘red’ in a way that has no parallel in the case of ‘pain’, because of the greater generality of the latter word.” (Strawson, 2010: pp-225-226 n8). Although Strawson mentions this in a footnote, in the end neither ‘pain’ nor ‘red’ require reference to something in the world, in order to make sense of what these words means.

for a person to know something before he is aware of the idea? Locke is hinting at the notion that the mind is an empty vessel, and under such assumptions, his arguments are reasonable. How then, does Locke answer this question? He states that “...suppose the mind to be... white paper, void of all characters, without any ideas: How comes it to be furnished?... To this I answer, in one word, from experience. In that all knowledge is founded... Our observations employed either, about external sensible objects, or about the internal operations of our minds perceived and reflected on by ourselves, is that which supplies our understandings with all the materials of thinking.” (Locke, 2004: 53) All knowledge is, is the process of taking sense-data from the world, in whatever form it may come, and creating from this data an intelligible picture of the world. This view of the mind as an empty vessel, does not withstand critical examination – especially in contemporary times, when a good deal more is known about the brain than in Locke’s era.

To pick but one²¹⁰ topic as a refutation of empiricist philosophy, as is appropriate in the case Chomsky, the case of human language is instructive. As Chomsky argues “[t]o come to know a human language would be an extraordinary intellectual achievement for a creature not specifically designed to accomplish this task. A normal child acquires this knowledge on relatively slight exposure and without specific training.” This in turn allows them to “... quite effortlessly make use of an intricate structure of specific rules and guiding principles to convey his thoughts and feelings to others, arousing in them novel ideas and subtle perceptions and judgments.” (Chomsky 2007: 4) It takes but moments of reflection to realize that there is simply too much²¹¹ information in the external world for Locke’s account of the mind to be plausible. If every single impression of the mind was named, and thought of in a different and independent manner, there would be way too much sense data to allow any kind of mental structure to develop²¹². Furthermore, among the

²¹⁰ A consequence of the tabula rasa view of the mind, is that the mind has no limits, but this cant be right. Putting colour aside for the moment, one could also point to animals and sounds as an example of things in the external world, that undoubtedly exist, but which the human mind has no access. Acoustic engineer Trevor Cox says that “Beyond the human hearing range is an extraordinary ultrasonic world. Bats exist in a plane of hearing where nearly all sounds exceed 20,000 hertz... the upper threshold of our auditory perception ... [s]ince the echolocation calls are at too high a frequency to be heard by humans, we [need] ... electronic assistance [to hear them]” (Cox, 2014: 101) Clearly there are many sounds people cannot hear, thus this is an indication of the filtering process of the mind, given the vast amount of data that is available in the world. Also see Dehaene (in part 3, below) for information on how the brain actively filters out knowledge.

²¹¹ There is too much information in the world if it is thought that the world remains as it is absent human beings. On the other hand, if the idea that the world is a construct of people’s mental faculties in reaction to external sense-data, then the world *by itself* would contain virtually no ‘information’.

²¹² Strawson quotes Schopenhauer who makes a similar point: “While another person is speaking, do we at once translate his speech into pictures of the imagination that instantaneously flash upon us and are arranged, linked....

numerous sounds that are heard in the external world, only a fraction of the things people hear are called and labelled as 'words' that belong to a language. So, a humming noise in the background, or the sound of a keyboard or typewriter, or the sound a car engine makes, are not considered part of language, thus a 'filtering' process is involved in the mind/brain. Now that Chomsky's views on how the mind interprets some of the world has been laid out, it is time to explore another topic of great relevance for metaphysics, the referential doctrine in language use.

According to the words that stream forth, and to their grammatical inflections? What a tumult there would be in our heads while we listen to a speech or read a book! This is not what happens... The meaning is immediately grasped..." [1819:39] (Strawson, 2008: 263.)

5.0 The Referential Doctrine: Background and Psychic Continuity.

The mind is an active participant in the creation of the world for human beings and naturalism as is used in the sciences is the only way to gain theoretical insights into the nature of the world. From this, *it does not* follow that there aren't some intriguing properties that human beings have that could be described and elucidated. In fact, most facets of human life, such as political organization, economics, international relations and human psychology are all fundamental to human beings, but they are so complicated that it is difficult to make them scientific in the manner of the natural sciences. If such scientific theories cannot be offered, the next best thing is to give accurate descriptions of the relevant aspect of reality. At the very least, such a description can serve to highlight the immense complexity and sophistication that goes into almost any human activity, though in this specific case language use will be explored in relation to referring, the act of talking about things in the world. Contrary to what may seem intuitive in common sense, referring is not a simple nor primitive act that all animals use to communicate about things in the world. On the contrary and closely related to the topic of the mind being an active participant in world creation, it will be shown that language use is also an extremely sophisticated, mysterious and active property that human beings bring to bear on the way they interpret the world.

It has already been discussed at length at least in the case of colors, that reference to the experience of the colour 'red' plays no role in its meaning. For Strawson, at least, words like 'red' and 'blue' help people *discriminate* colors, but this is a separate topic from the colour word 'red' *itself* being a colour judgment, as judgement is related to inner experience and is not subject to 'public observability' as a necessary requisite for people to understand what the word 'red' (or 'blue', 'yellow', etc.) means. There is certainly no mind-independent experience to which colour words refer to. In Chomsky's case, his arguments against the referential doctrine - the doctrine that words themselves refer to things - has even more substantial consequences for metaphysics²¹³ and

²¹³ In one very important portion of *What Kind of Creatures Are We?* Chomsky states that "Like Priestley, Thomas Reid argued that failure to attend "to the distinction between the operations of the mind and the objects of these operations" is a source of philosophical error, as in interpreting the phrase "I have an idea" on the model of "I have a diamond," when we should understand it to mean something like "I am thinking." Chomsky continues by stating that "...the Encyclopedist César Chesneau du Marsais... warned against the error of taking nouns to be "names of real objects that exist independently of our thought." The language, then, gives no license for supposing that such words as "idea," "concept," or "image" stand for "real objects," let alone "perceptible objects." (Chomsky,

philosophy in general. For Chomsky, one of the main mistakes of the referential doctrine is to assume that words themselves refer, as opposed to people referring. If one assumes the referential doctrine, then *words* must refer to *things* in the world, so that for example, the word “tree” is connected with an actual tree in the world, or that a proper name like ‘Pavarotti’ refers to the famous opera singer, but this view is not true in the case of human language. In fact, reference is something people do and is a more complex process than may initially appear. In order for people to refer to things in the world, there must be a background of shared assumptions, cultural similarities, similar intentional states, a shared context of meaning, among other things. One *crucial* lesson that can be taken out of this is that objects in the world are *not* recognized by specific physical traits but instead are recognized by the mind on the basis of ‘psychic continuity’. One will recognize a river, even if what it is composed of is mostly chemicals (instead of only water) and one will also recognize a river even if a bridge is built on top of it, nevertheless if rocks are piled up high enough on a river, it will cease to be a river and would be considered a dam. Likewise, minor chemical alterations to a river will render it solid, thus turning rivers into roads. Additionally, if paint is added on top of this concrete structure, the river-turned-road becomes a highway. A plethora of similar cases show that what identifies an object as being that specific object is a mental construction and not some property of the external world. This view of reference strongly indicates that the world that is taken for granted in the manifest image is a mental construction, far removed from the assumed naïve realism people assume to be true.

What does Chomsky think about the relation between words themselves and the things the word supposedly refer to in the mind-independent world? Remember that for Quine, the ontological problem of determining what there is, is simply “everything”, and Chomsky would likely not object to this answer. The difficulty in trying to further clarify this statement, ‘what there is’, has to do with, in part, what ‘reality’ is taken to mean. One initial approach in talking about everything, even at the risk of repetition, would be to point out what things fall into this category ‘everything’. Such a list is not possible to provide, but a sample can be given. Under the rubric of ‘everything’ there are dogs, stars, grass, cars, dreams, offices, glass, novels, roads, wood, plastic, numbers,

2016: 118) It is crucial to avoid confusing the use of concepts in language with features of the world. One way to avoid this solution might be to accept Sellar’s distinction of the ‘manifest’ and ‘scientific’ images, and stipulate that the concepts used in ordinary language *may* belong in the manifest image, but not the scientific one.

Pegasus, events, wars, sandals, scandals, Apartheid South Africa, Imperial Japan, George Orwell and South Americans, galaxies, dust, termites, handwriting, poverty, judgments, morality, friends, money, breathing, history, noise, music, pain, rain, salt, carrots, hobbits, blood, Socrates, logic, jealousy and chairs, among an infinite number of other things²¹⁴. This topic is not easy to tease out, not only because it is not possible to make a list of everything. Other issues pertaining to the ontological status of mathematics, fiction, hallucinations, fake objects and many other domains are not trivial to characterize and may be excluded from conversations concerning the nature of reality. Nevertheless, Chomsky is quite open from an epistemic-ontological perspective.²¹⁵

Regardless of the many difficulties attached in attempting to talk about things in the world, a person can try and use words to refer to things. Thus, to take the last item of the list of everything provided above, in ordinary life, one can point to a four-legged object and utter the word ‘chair’ to try and make it clear to other people that the object under consideration is what people ordinarily take to be a chair. If one is able to fix the conditions for reference, one could think that it would be possible to give a broad outline of what connects all the things in the world. This sounds plausible enough, but further reflection presents some complications. The philosopher Paul Elbourne²¹⁶, who Chomsky cites, points out that “[d]espite 2,400 years or so of trying, it is unclear that anyone has ever come up with an adequate definition of any word whatsoever, even the simplest.” Surely a chair would be an exception? Not so, as a chair can be defined “as an item of furniture”. But this does not suffice as “...there are plenty of things that are items of furniture that are not chairs – tables, desks, footstool and so on.” (Elbourne, 2011: 1) This exercise may initially appear empty, but if one allows this argument to further develop, some curious points arise. What is a necessary

²¹⁴ The only thing that can reasonably left out of such an infinite list would be the concept of ‘nothing’, not because it is not real or useful, it is clearly a concept that is used in all different manners but including such a word to the list can lead to unnecessary semantic complications, e.g. ‘How can nothing be everything?’ and other variations that could only lead to confusion, though if such problems are put aside then it naturally falls into the list of everything.

²¹⁵ The topic of ‘reality’ can be confusing. One can claim that what the mind uses to understand the world are representations, so people can look at tables or books but say that tables and books don’t really exist, as what they are is, at bottom, atoms coalescing in such a way as to create the image of book and tables. In this sense one could say that ordinary objects are not real, because, on closer inspection they are revealed to be elementary particles.

Chomsky does not agree with this formulation: “‘Real’ is an honorific term. You can say it any way you like... if I say something is true, and then I add... it’s the real truth, I’m not saying they are two different kinds of truth, the truth and the real truth.” (Ludlow, 2011: 180) It stands to follow that under this formulation all things, including hallucinations, numbers and fiction are things that belong to the ‘mind-world’, but how these things relate to the world it is a matter of investigation and reflection.

²¹⁶ Who Chomsky quotes in his essay “*Denotation and Denoting*”, found in *From Grammar to Meaning: The Spontaneous Logicality of Language*. Caponigro, Ivano. & Cechetto, Carlo (ed.) Cambridge University Press. 2013.

condition for a chair? As Elbourne points out, it can not be the number of legs, as there are chairs that have three, five or more legs – the object could even have no legs and it could be a chair. The fact that a ‘chair’ is usually used for sitting is not enough to define something as a chair. After all, dogs have four legs, but no one, save a psychopath, would consider a dog a ‘chair’. One can also sit on the floor, but nobody would call the floor a chair. Perhaps, Elbourne suggests, one should consider the intent of a definition of a word in a dictionary to know what a chair is. Using the 1989 Oxford English Dictionary as a guide, which states, among other things, that a chair is “a seat for one person”. Is this the case, must the word uttered as ‘chair’ *need* be a seat for a single person? According to Elbourne (and by extension to Chomsky) “...imagine a society in which... all chairs are designed to support two people... and are in fact generally used like this. Would these items of furniture still be chairs? Of course.” (Elbourne, 2011: 4) Nor *must* all actual chairs be something which one must sit on, even if they are ordinary chairs. One can imagine going to a museum and seeing a 17th century replica of a grand table surrounded by chairs. Although if these chairs are taken away from the museum context they could easily be taken to be like any other chair, the chairs in the exhibit are surely not meant to be sat on. If the number of legs, the categorization of a ‘chair’ as a piece of furniture, and the fact that chairs are used to sit on do not explain the meaning of such a simple word, what is wrong with the definition? Perhaps the fact that most chairs are built with intent by people, has something to do with the difficulty of saying, what exactly a chair is.

Perhaps another term should be considered. It could well turn out to be the case that the word ‘chair’ just happens to be one of those curious things that can not be found in the mind-independent world. It is worth choosing another item, almost at random, to see if it is possible to point at it and say, ‘this is an object that belongs to the world’. One object that can be found in almost all rooms, offices as well as on the streets are trashcans. Trashcans are receptacles for disposing of one’s trash, whatever the trash may be. Trashcans are ubiquitous and easy to use so; this must be an instance in which one can point and say a ‘trashcan’ *must* refer to this object. However, one soon finds out that it is not as simple as it may first appear, for one can easily take a trashcan and use it as a basket to store clothes, or books or anything else. Alternatively, one can remove the bottom of a trashcan place it high on the wall, and it can be used to play a game, like basketball. If there is a pet in someone’s house, and the trashcan is put sideways, it can be a house for a dog or cat. If an intruder is about to attack someone, then a trashcan can be used as a weapon, or if there are

papers in a stack and the wind is blowing strongly then the trashcan can be used as a paperweight. Alternatively, one can seal the top of a trashcan and use it as a box to reach for things that are too high to be reached without assistance. Trashcans can also become useless and be thrown into another trashcan, nor do trashcans have to be made out of plastic or metal, they could be found in nature. A hole in the ground can be used as a trashcan, as can a hollow tree trunk. There appears to be no fixed item ‘trashcan’ or ‘chair’ in the external world. This of course, may be a problem that is only associated with things made by *people*, as is the case with technology, broadly defined. After all, laptops can be used (albeit in a poor manner) as frisbees, cars are not only suited for transportation but for killing as well or, alternatively, cars can be used as a mobile home. Remote controls could perfectly well be used as a dog’s toy, TV screens need not be for watching movies, as they can be used as background decoration, sneakers can be used to hit nails and thus become a kind of hammer, windows can be used as mirrors, or if broken, as knives for cutting one’s food, USB drives can serve as bookmarks, tables could be used as a bed, clothes can be used as a curtain or as a sponge, cigarettes can be used as money or a substitute chess piece, a rubber band can be used as a sling shot and so on.

All of this is not to say that it is not possible to talk about sneakers, cars, chairs and trashcans. People talk about these things all the time. The point is that these *words* ‘cars’, ‘hammers’, ‘chairs’ do not *refer* to a singular and unique car, hammer or chair in the external, mind-independent world. Perhaps the problem is that the objects which one has attempted to elucidate are too malleable to people’s interests, and what needs to be done is to look for something very simple to succeed in pointing towards it and saying ‘*this*’ is what this word is referring to. A good candidate for simplicity is the word ‘thing.’ Chomsky points out that “[p]resumably the word “thing” should be a compelling candidate for thinghood.” This seems obvious enough, but “...what are the identity conditions for things and how many are there?” Putting the problem in another manner, Chomsky says that “[s]uppose we see some branches strewn on the ground. If they fell from a tree after a storm, they are not a thing.” They are ‘branches’ and can be clearly recognized as such. Change the situation slightly and the perspective becomes quite different “[b]ut if they [the branches] were carefully placed there by an artist as a work of conceptual art, even given a name, then they are a thing (and might win an award).” (Caponigro & Cechetto, 2013: 40) If placed in a certain manner and set within a certain framework, the ‘branches’ are now in such a situation that they can correctly be called a ‘thing’, as apparently a requisite for thinghood is a certain amount of

vagueness, as can be the case with conceptual art. The same kind of considerations apply to other such words like ‘stuff’, ‘object’, ‘being’, etc. These words are used frequently and are understood without any difficulty, but there is no case of reference between the *word* and a thing in the world, these words do not apply like a bandage over a wound, though intelligibility is not an issue as is evidenced by living life ordinarily, like people do all the time.

However, there are still other possibilities that may linger in the mind of skeptics. It could be the case that words referring to artificial objects, or words referring to relatively abstract phenomenon are simply too narrow, and thus are liable to be used in a variety of ways, but this must be different for certain things which all people agree on, such as historical events, like World War II or the American Revolution. There is no doubt that these two events ‘World War II’ and the ‘American Revolution’ occurred. There are also no qualms that Winston Churchill and George Washington were important figures in each respective event. What is much less clear, then, is what is it that constitutes those things that fall under the term ‘American Revolution’. Are there *mind independent* things which people would have no trouble in accepting as belonging to the ‘American Revolution’, such as George Washington being an important figure in this event? Do the terms ‘American Revolution’ and ‘World War II’ refer to everything within each event? It is not clear at all, as Chomsky points out, as in the case of the American Revolution “...[it] was an important event in history. Does that event include the fact that the man who the indigenous population called the Town Destroyer took off a little time in the middle of the Revolution to destroy the Iroquois civilization? Is that part of the event called the American Revolution? Well, not if you study it in school.” (Ludlow, 2013: 181) ‘Events’ span a certain period, with no exact starting point, and no exact endpoint, while there certainly are figures and occurrences with an event that most (though probably not *all*) people recognize, there is simply too much complexity in any historical event to isolate all the important features, such as the destruction of the Iroquois: “...here comes hard questions about what ...[one is] going to call events in the outside world, and those questions don’t have independent answers because they’re heavily dependent on our interests, our perspective, our goals; all kinds of factors.” (Ludlow, 2013: 181-182) On a similar note, though the Holocaust is commonly associated as an important part of World War II, is the

fact that western corporations such as Coca Cola²¹⁷ and IBM (among many)²¹⁸ conducted business deals with the Nazi's part of the history of the event called 'World War II'? Again, this depends on what sources one looks at, the perspective one may have, as well as interests, passions, etc. The problem of words referring to such complex²¹⁹ things like historical events does not appear to be true either, though this does not deny that there tend to be somewhat consistent figures and occurrences within these events. What the referential doctrine appears to suggest is that in the case of events, in part because they are so complex, is that they cannot really be studied in a 'scientific' manner because there are simply too many things to consider, and much of it can be arbitrary and interest-specific, which in turn does *not* imply that there can not be good, reliable scholarship done in relation to history, just that it can not be a 'hard science', which is by no means a critique of history or historians, but a fact related to complexity. There is a probable exception to the referential doctrine within the sciences and mathematics, and these will be discussed soon.

Before claiming that it is not possible for *words* to refer to things (as opposed to people being the ones that refer), another set of examples should be considered. It has been argued that words don't refer to objects nor events, and the level of abstractness appears to not affect the problem of reference. Surely proper names must be an exception. Who else could the name 'Luciano Pavarotti' mean, other than the world-renowned opera singer? When people utter the name 'Pavarotti', 'Churchill' or 'Michael Jordan', there must be a person who that name refers to, an entity in the world of which it is necessary to conclude that these names are names of individuals²²⁰. Alas, this

²¹⁷ <https://www.haaretz.com/jewish/coca-cola-nazi-germany-the-good-old-times-1.5329934>

²¹⁸ <https://archive.nytimes.com/www.nytimes.com/books/first/b/black-ibm.html>

²¹⁹ Raymond Tallis points at a few of the many difficulties when trying to talk about events when he says "identifying something as a ... cause and something else ... [as an] effect depends on *observing* the causal relationship. The events in question are not self-defining, self-circumscribing. The physical world is not in itself a linear chain of causes and effects... You could not, for example, even in principle, state how many causal pairings there are in a room, any more than you could say how many facts are in the room." There are also many decisions that must be made in order to be able to call something an 'event': "I see you walking along the road and shortly afterward observe a plane pass overhead. They are obviously [you and the plane] causally unconnected events..." (Tallis, 2017: 76-77). All kinds of things can happen in a short window of time, but even if they could fall under the label of an 'event', they could have nothing to do with each other, and most of the time nothing is apparently connected with anything else.

²²⁰ Peter Strawson, Galen Strawson's father, made this point explicit in his paper *On Referring* (1950) Peter Strawson points out the discussing topics such as 'the present King of France', an example used by Russell, are not problematic when talking about reference when he says that "we cannot talk of *the sentence* being *about* a particular person, for the same sentence may be used at different times to talk about quite different particular persons, but only of *a use* of the sentence to talk about a particular person." (Strawson, P.F, 1950: 326) Italics in original.

Strawson further states that "[t]he requirement for the correct application of an expression in its referring use to a certain thing is something over and above any requirement derived from such ascriptive meaning as the expression

too falls apart under scrutiny. As Chomsky points out “... suppose that Pavarotti happens to be an anarchist, and Pierre, who is perfectly rational, knows him as a singer *and* as an anarchist but is unaware that it is the same person.” [My emphasis] Here there is a case in which two very different aspects of life happen to coincide in a single person, who, no doubt has more aspects to him than can be listed for present purposes. Chomsky continues “[s]uppose that attending an opera, Pierre sincerely says that Pavarotti is tall, and at a street rally sincerely denies that he is tall.” But this response is plainly problematic “[t]hus a rational person can sincerely hold contradictory beliefs, which makes no sense. The paradox presupposes the referentialist doctrine, and dissolves when we abandon it.” (Caponigro & Cechetto, 2013: 42) In case the quote is not clear, if the presupposition is that proper names *must* refer to a person, then what ends up happening is that many paradoxes arise, different people may know different things about the same person, and not be aware that they are referring to the same person²²¹ or, alternatively, different aspects may belong to the same person, but people would be forced into contradictions, such as claiming that the same person, is, in one case tall (as is the case in the opera), while in another situation that person is short (as is the case in the rally.) Another way that can help in thinking about proper names is to consider the following scenario: imagine two people having a conversation and one person, John, uses the proper name ‘Eric Arthur Blair’ when talking to Mary. John mentions that this person ‘Eric Arthur Blair’ was a soldier who fought in the Spanish Civil War and was not an author, to his knowledge. Mary responds to John by mentioning that she recently read a book written by George Orwell who fought in the Spanish Civil War but doesn’t know ‘Eric Arthur Blair’, yet they both assume that the names ‘Eric Arthur Blair’ and ‘George Orwell’ *must* refer to specific people, without realizing that they are talking about the same person. This could be a case about two people not knowing that ‘George Orwell’ was Eric Arthur Blair’s pen name, and it need not get this complicated in the first place. This scenario can be refined even more, and the point would remain

may have; it is, namely, the requirement that the thing should be in a certain relation to the speaker and to the context of utterance.” (Strawson, P.F, 1950: 336)

²²¹ One influential philosopher who does believe in the referential doctrine is Saul Kripke, who states, unambiguously that “...I ... hold that [proper] names are rigid designators”. (Kripke, 1981: 58). Kripke says “let’s call something a *rigid designator* if in every possible world it designates the same object, a *nonrigid* or *accidental designator* if that is not the case.” (Kripke, 1981: 48). Kripke discusses paradoxes concerning various famous figures like Socrates, Aristotle and Richard Nixon among others. Although there indeed are puzzles in these presentations, they dissolve if the assumption of reference, including rigid designators, is dropped or abandoned. Once one does this, one can talk about all types of situations, including a situation in which Nixon was not president of the United States and dressed up like Santa Claus for fun, there is no difficulty in imagining or understanding this scenario. For more info see *Naming and Necessity*. (1981)

the same, John could think that ‘Eric Arthur Blair’ was both a soldier *and* an author, but under referential assumptions, ‘Eric Arthur Blair’ and ‘George Orwell’ cannot be the same person, since *each name* refers to different characteristic of a person. In another situation, John could know that ‘Eric Arthur Blair’ and ‘George Orwell’ were the same person, and John could choose either name in talking about this person, but each name does not have the necessity of being about a *particular* person, there could be many ‘Eric Arthur Blairs’ and ‘George Orwell’s’, so the proper name cannot be a unique feature of an individual, nor does the name of a person carry forth referential implications as a form of necessity or entailment. People carry referential implications, using words but words themselves carry no such referential implications. These paradoxes all disappear once the referential doctrine is abandoned, and people can continue talking about Orwell and Pavarotti without additional complications.

The solution to these conceptual confusions is, in this case easy, one only needs to drop referential arguments about natural language²²². That is, if both John and Mary leave behind the assumption that names refer to specific individuals no problem, besides lack of knowledge about a person, would arise. The same applies to historical figures most people know like ‘Jesus’, ‘Mandela’, ‘Socrates’ and ‘Columbus’, the names of these individuals do not have to apply to any specific person, though this does not prevent people talking about them in any way, the only thing that should be established is that words, so far as ordinary language is concerned, do not refer to things. What is true is that human beings – people - refer to things using words, and this is different from saying that words necessarily must involve or be related to things in the world. People referring is a normal occurrence in everyday life, and can be done so without much conscious consideration, as is often the case. The problem with arguing that words refer to things, as discussed above, is that these things can vary drastically depending on concerns, interests, culture, knowledge etc., in such a manner that it would be practically impossible to say what conditions would have to be fulfilled in order for a word such as ‘desk’ to mean the same thing for every person on the planet

²²² Contra Quine, who holds the opposite view about reference, when he says that: “In debating over what there is, there are still reasons for operating on a semantical plane. One reason is to escape from the predicament noted at the beginning of this essay: the predicament of my not being able to admit that there are things which McX countenances and I do not. So long as I adhere to my ontology, as opposed to McX’s, I cannot allow my bound variables to refer to entities which belong to McX’s ontology and not to mine.” (Quine, W.V.O. 1948) In the case discussed in this paper *On What There Is*, Quine is attempting to clarify how it is possible to refer to Pegasus, even if there is no entity ‘Pegasus’ existing in the world. All these complications do not arise and need not be addressed if one drops the referential doctrine and say that it is people who refer, not words themselves.

and even if such conditions could be met, not much is discovered in this process, other than the immense difficulty and complexity involved in the apparently easy task of people using reference to communicate. Of course, people using words can be confusing, offensive or funny (among many possibilities) but *words themselves* are not confusing, offensive or funny. So far as human beings are concerned, and not other animals²²³, there seems to be no reference entailment between words and things. All this discussion might lead one to now conclude that under *no* circumstances would words refer to things, but this would be false, as there is one domain of human knowledge in which a word can be taken to mean that there is something in the world that corresponds to them, and this is a special domain of human knowledge, namely science.²²⁴

Science is a special domain within human knowledge, it seeks to find the nature of the world and explain it in the simplest possible terms under an explanatory theory that looks for general laws that help scientists understand very simple. Chomsky says that “[w]hat we call science [that is, natural science with explicit, formal theories and the assumptions that what they describe should be taken seriously or thought of as ‘real’] is extremely recent, and very narrow. Galileo had a [hard]... time trying to convince... the aristocrats... that there was any point in studying something like a ball rolling down a frictionless plane” This simplicity is a new aspect of science²²⁵

²²³ There is good evidence to suggest that at least some animal cries are associated with things in the world in such a manner that there is a reference between sound and object. Thomas Suddendorf talks about experiments carried out by Ethologists Dorothy Cheney and Robert Seyfarth in which certain predator calls were recorded in a device and played back to a group of vervet monkeys. “The animals make different alarm calls when they see a snake, an eagle, a leopard, or a human. When played back the monkeys tend to react differentially and appropriately to such calls. That is, they hide under a tree if the call is the eagle alarm, but they run up the tree if it is the leopard alarm. These calls are gradually learned but limited to alarms only.” (Suddendorf, 2013: 80) This is quite removed from human language and communication, and it is unclear if these monkeys have concepts relating to snakes and eagles, instead of a general outlook relating to predators generally.

²²⁴ To prevent a potential confusion, it’s worth mentioning that people are needed for any intelligible explanation of anything – a play, a theory, psychology – but in science, when a term is used, it is assumed that the term is connected or indicates a property or feature of the mind-independent world. Even if people did not exist, things posited by scientific theories such as atoms, planets and H₂O should exist, though this area, as well as mathematics, are the only known exceptions to the referential doctrine, which is explained above.

²²⁵ Chomsky even states that “...such ordinary expressions as ‘the rock is rolling down the hill’, ‘flowers are growing’, ‘he’s getting fat’, ‘the aeroplane is descending’, ‘the hawk is swooping down to catch its prey’... None of these [expressions] – in fact, virtually nothing we say about the ‘physical world’ – can be translated into the sciences.” In fact, Chomsky goes as far as saying “[t]here is no... reason to expect that some future science of the mental... will care about translating such sentences as ‘John speaks Chinese’ or ‘John took his umbrella because he expected rain’.” The reason is that “[s]cientific inquiry looks at the problems in its own and generally different ways, perhaps using different faculties of mind.” (Chomsky, 1996: 59) At least part of the problem here has to do with the complexity involved in talking about “airplanes landing” or “John speaking Chinese”. Another issue is that science tends to be quantitative, dealing with measurable things, as opposed to qualitative things, which can’t be measured. There is more to this issue, but these remarks suffice.

“[t]he idea of not looking at the world as too complicated, or trying to narrow it down to some artificial piece of the world that you could actually investigate it in depth and maybe even learn some principles about it that would help you understand other things...” (Chomsky, 2012: 18) As James McGilvray stated in his introduction to Chomsky’s *Cartesian Linguistics* that “...reference for the group of participants (mathematicians and scientists) is virtually determinate, and the terms they use really do seem to refer.” Crucially however, the reason for this is “not... because the symbols of technical work really *do* refer ‘by themselves’” rather the case is that “all of the participants can be assumed... ‘to grasp the sense’, and the sense is taken by all to characterize an entity or a class of entities drawn by the subject matter of their joint project, whether it be mathematics, elementary particle physics, or formal linguistics.” (Chomsky, 2009: 11) Mathematics will be discussed more in depth below, but the point of the words used by scientists referring is important. When scientists speak of the moon, the amygdala, or the Higgs Boson they are attempting to pick out a mind-independent object. Thus, when ordinary people, meaning non-specialists, speak about the moon glowing brightly or the amygdala being a part of the brain they are often not speaking about same object that scientists have in mind when they use these words. When scientists use these words they have a very specific framework in mind in which it would be strictly true to say that the moon is 384,400 kilometers away from the Earth but not strictly true to say that the moon rises or falls, these are different phenomena, one being a scientific conception of the ‘moon’, the other being the ordinary conception of the moon. This happens in most domains of science, such as the case, discussed above, of people using the word ‘H₂O’, in a manner that is strictly different from what a chemist means when they say the word ‘H₂O’. In the case of the chemist she is interested in the atomic composition of water, whereas in ordinary use of this term, people often mean the glass of water that is often seen at homes or in restaurants, but these two cases do not strictly refer to the same phenomena, one is the technical use under a theoretical framework, the other is ordinary everyday discourse.

Besides scientific enquiry there is one domain in which appear to refer to things by necessity, and this is in the domain of mathematics, as Elbourne points out: “I know of only one area where it seems likely that we have good definitions of words: mathematics. I can see nothing wrong, for example, with the statement that *prime* means ‘integer greater than one that has no factors other than itself and one’...” (Elbourne, 2011: 11) The same goes with other mathematical terms like ‘one’, ‘three’, ‘five-hundred’, even and odd numbers, etc. This unique property of mathematics is

quite surprising in scientific work, particularly in physics, as it is done using mathematical formulas, and as mentioned in Strawson's section, all mathematical formulas tell us is about the structural or skeletal properties of the world. The number one refers specifically to the mathematical concept of one, and so on down the list of numbers. Not only do number words refer, they are true by definition. There is nothing more to discover once one knows that the number one refers to the concept of the number one, no further work can be done in this area. How all this works is a mystery²²⁶ but suffice it to point out that outside of science, hopefully, and mathematics by way of necessity, there is no word-object relationship in natural language that can be used in the manifest image of the world. Now that it should be clear that, according to Chomsky words do not refer, how is it that people make sense of the objects that are talked about in ordinary life? If a river or a tree are not being picked out by words, as common sense may assume, how do people differentiate objects? These questions are difficult, and the answer provided by Chomsky is that people pick out objects by an act or process of the mind, namely psychic continuity. 'Psychic continuity', then, will be discussed next.

²²⁶ This property of mathematics is not lost to Steven Hawking, when he famously asked "Even if there is only one possible unified theory, it is just a set of rules and equations. What is it that breathes fire into the equations and makes a universe for them to describe? The usual approach of science of constructing a mathematical model cannot answer the questions of why there should be a universe for the model to describe." (Hawking, 1998: 174)

5.1 Identity Ascribed to Objects

Having argued that words do not refer to things, it is time to talk about an issue that is intimately related to reference, and this is the identity people ascribe to objects in the world, or put in another way, the manner in which people experience the phenomena of the world. People experience and talk about things in the world – ships, trees, mountains anything – with relative ease. If the words people use do not refer to things in the world, it is normal to wonder how people manage to do this. The question that now arises is when talking about, for example a ship, is: are people referring to the *same* ship as time passes? In other words, if there is an agreement that what is being referred to is a ship, does that reference hold over time? There is a classical thought experiment on this topic, called ‘the ship of Theseus’, which Chomsky discusses: “[o]ver the centuries, people have made up impossible conundrums about when we would say that [something] is the same ship.” Thus, it is often the case that in philosophy courses, one is introduced to this thought experiment in which “if you keep replacing the planks [of the ship] at sea, it’s the same ship.” Furthermore, “if somebody takes those same planks that you threw away and makes a replica of the original ship, somehow it’s not the same ship.” (Chomsky, 2012: 125) In other words, there is a specific ship that is being talked about, and over time, some of its wooden planks have to be replaced due to maintenance issues, and the original wooden planks are stored in some place, while new planks replaces the old planks. If this process continues for a long enough period of time, one reaches the point in which the original ship is made up of brand-new planks, but it is still referred to as ‘the ship of Theseus’. What makes this thought experiment particularly perplexing is that if one takes the discarded planks and creates another ship, identical to the original ship, it would not be called the ship of Theseus. Similar thought experiments can be done with all kinds of objects, such as cars, computers and even natural objects such as trees, in which ‘original’ identity is effortlessly recognized. Chomsky poses the following issue: “[s]uppose you transplant a tree to somewhere else, cut off a branch and plant it in the original place, and find ten years later that the two objects are indistinguishable.” The question now becomes “[w]hich is the original tree?” And Chomsky concludes that “We know the answer, and it is a curious one – one illustration of many complexities.” (Chomsky.1996: 65) Another way of saying the same thing is that if a tree₁ is in a specific location, next to a river, for example, and a branch is broken off the tree₁ and placed next to the tree₁, and then the branch grows and also becomes a tree₂, virtually identical to the first tree₁, and people see two identical trees, one tree₁ next to the river and another tree₂ further

removed from the river, the original tree₁ is taken by everybody to be the former (the tree₁ closest to the river), and the reason for this is something called ‘psychic continuity’²²⁷ in the mind which attributes properties of constancy and ‘sameness’ to objects.

While this observation may seem trivial, it has serious consequences. The constancy objects have are ‘properties’ that the mind ascribes to the world – thus, in one instance something liquid can become something solid, with very important practical consequences. Chomsky asks people to “[t]ake the Charles river... [n]ot only might it remain the Charles river if it comes to be constituted mostly (perhaps entirely) of chemicals from factories upstream... but also if its flow were reversed, or it were directed in a different course, or made to end up in a lake instead of flowing into the sea...” (Chomsky, 1996: 64) Similar considerations apply to all kinds of objects, as argued above (see p.186). There is nothing about the world – whatever it is that exists external to the mind – that should make these mental constructions a fact about the world, instead of it being a feature of people’s mental constitution. There is nothing in trees, rivers or trashcans themselves that should lead one to think that these concepts are fixed or stable. On the contrary, every single object that can be pointed to in the world is the way it is given the mental constitution of human beings. The general point should be clear²²⁸, when talking about things in the world, the mind plays a crucial role in determining the purpose of an object, using intent, context and many other factors that are not found in the object itself. It is very difficult, if not impossible, to know what the object independent of the mind would look like or what purpose it would serve to attempt to figure this out, as these considerations are made by people, though certainly animals, such as pets, may use

²²⁷ Locke is a crucial figure in regards to these observations. He points out that “When we see anything to be in any place, we are sure... that it is that very thing [the same object], and not another, which at the same time exists in another place, how like and undistinguishable soever it may be in all other respects: and in this consists identity, when the idea it is attributed to, vary not at all from what they were at that moment... For we never finding, nor conceiving it possible, that two things of the same kind should exist in the same place at the same time, we rightly conclude, that whatever exists anywhere at any time, excludes all of the same kind, and is there itself alone.” (Locke, 1997: 296)

²²⁸ However, Strawson also points that “‘The concept RIVER’ is shorthand, in so far as it is being questioned whether there is a single concept river that we all possess. It stands for something like ‘the concept that is, in any given one of us, the best candidate for being the concept RIVER on the assumption that there is only one river concept’ (Strawson, 2008: 266, footnote 31). Notice that the argument here is not that people are not able to refer, they clearly are, but words do not. However, *concepts*, may very well be more uniform than individual words, and this allows for a certain ease of communication and mutual understanding. Chomsky follows a similar line of thought when he says “...they’re universal [elementary concepts] – if you go to a New Guinea native he or she’s going to have *basically* the same concept RIVER that we have. But we have no idea how it got this way.” (Chomsky, 1998: 47) There is an interesting distinction between concepts and words, as it seems that people have much more words than elementary concepts, though this distinction does not affect the referential doctrine, but is worth registering.

objects in the world for purposes of survival, without the animals attributing a ‘function’ or a ‘significance’ to the object. The continuity that is ascribed to objects is a crucial component in the way people understand the world, without some form of continuity it would not be possible to differentiate objects or to live in the world as complex organisms. It is worth contemplating the meaning and depth that is given by the mind to objects, as the picture of the world that emerges is quite different from people’s ordinary-everyday understanding of the world of a naïve-realism that assumes object constancy. For more about how the brain and the mind work in relation to the world, see the section on neuroscience below.

5.2 Machines “Thinking” and Conceptual Confusions

It has been argued that with sole exception of science and mathematics, natural language does not refer to things in the world, yet, despite this fact, people have no trouble in talking about the world around them. Once one understands this, one can begin to discern how the way people talk about the world arises which can lead to conceptual confusions and this is in part related to terminological word-use which are often mistaken for facts about the world. The point is easily understood but may take some effort to fully comprehend: One needs to take into consideration the fact that many of the things people attribute to the world are aspects or properties of the mind which do not belong in the mind-independent world. However, if one is aware of how terminological usage belongs to the way people *use* words and furthermore that these technical vocabularies need not *necessarily* apply to the world then misleading ways of trying to understand nature can be avoided. It’s a common occurrence for people to talk about airplanes ‘flying’, scanners ‘seeing’, cars ‘moving’, rocks being ‘old’, animals ‘talking’ and more importantly, given its philosophical consequences, computers ‘thinking’, which has even led to a relatively new discipline, Artificial Intelligence or AI, for short. What’s the problem with talking about the world using these terms? After all, airplanes do reach elevations beyond the reach of birds, and animals certainly communicate with each other and so on. There are a few potential misconceptions in talking about the world in this manner, that needs to be clarified. When people look at an object, it can be any object or thing, what one is seeing is an interaction between the mind and the world that results in the person getting a certain image of the world that looks, roughly, the same for every person.

Complications begin to as soon as one attempts to clear up what belongs to the object, and what is a projection of the mind which is not inherent in things in the world. Centuries ago, Locke, formulated the ‘primary quality’ and ‘secondary quality’ distinction, which was further radicalized by Kant so that, roughly speaking, both primary and secondary qualities are constructions of the mind²²⁹ as it engages with the world. The consequence of this and ‘airplanes flying’ or ‘rocks falling’ is that, although it is not wrong to speak this way, it is a mistake to think that airplanes *actually* fly, or that rocks *really* fall or even that animals *talk*. This kind of ordinary everyday talk is intelligible, but these attributions should not be taken literally. Instead of thinking about airplanes actually flying or submarines swimming, one should be aware that what is happening is that people are making terminological decisions as to what words are used to talk about things in the world, but this does not necessarily mean that what people are saying is what actually occurs in the world. Chomsky points out that “There is no answer to the question whether airplanes really fly... Fooling people into mistaking a submarine for a whale doesn’t show that submarines really swim; nor does it fail to establish the fact. There is no fact, no meaningful question to be answered...” This, however, does not stop with airplanes ‘flying’ as the same can be said about machines “thinking” as “The same is true of computer programs, as Turing took pains to make clear in the 1950 paper that is regularly invoked in these discussions. Here he pointed out that the question whether machines think “may be too meaningless to deserve discussion,” being a question of decision, not fact” These terminological decisions in the end “...amounts to the replacement of one lexical item by another one with somewhat different properties. There is no empirical question as to whether this is the right or wrong decision.”²³⁰

The dangers of AI are not due to scenarios of machines taking over the world, or some other science-fiction situation, but because arguing that machines ‘think’ is a misleading way to conceptualize the mental. Of course, ‘thoughts’ are something people have, putting aside questions pertaining to animal minds – which would be a different topic. A danger of extreme anthropomorphizing results in confusing what machines can do, with what people do, and these

²²⁹ Although for Locke, secondary qualities are not qualities of the thing themselves, merely that the ideas of secondary qualities do not resemble the actual object in the world: “*Secondly*, such *qualities*, which in truth are nothing in the object themselves, but powers to produce various sensations in us by their *primary qualities*, i.e. by the bulk, figure, texture, and motion of their insensible parts, as colours, sounds, tastes, *etc.* These I call *secondary qualities*” (Locke, 1997: Book II Chapter VIII. 10.)

²³⁰ <https://chomsky.info/prospects01/>

are not the same thing at all. Perhaps another thought experiment could help clear up the question of machines ‘thinking’. Chomsky states that “[w]e breathe. Roughly speaking what happens is that air comes into the nose and carbon dioxide goes out after a lot of things go on. So, there is an input-output system, air to carbon dioxide. We could get a machine that duplicates that completely by some crazy mechanism. Would that machine be breathing? Well, no, the machine would not be breathing for trivial reasons.” The hope here is that whatever the machines does, can shed some insight into what people do, “[b]reathing is a thing that humans do, therefore the machine isn’t breathing. Is it a good model of humans?... we’d look and see if it teaches us anything about humans... [and if] it doesn’t teach us anything about humans, send it to Hume’s flames.” (Chomsky, 1993: 90) Perhaps the example given is not too convincing, because breathing and thinking are different things and it is safe to say that most living organisms breathe, in some way or another, but thinking is something that in certain crucial respects, is unique to people, thus creating a complex machine might be able to be replicate this process. One could, for example, proceed to create a machine that plays chess, which is a game that requires thought and anticipation. Would the scenario shift in these circumstances? Chomsky is not convinced “[l]et’s say somebody could come along with a chess-playing program that behaved exactly like Kasparov [Russian Chess Master], made exactly the moves he would every time. Would it [the machine] be playing chess? Well, no, just as in the case of “breathing.” Playing chess is something that people do.” True, it is likely that conscious thought comes to fruition through some process in the brain, but brains are not computers, they are biological organisms, while computers are not: “Kasparov has a brain, but his brain doesn’t play chess. If we asked, “Does Kasparov’s brain play chess,” the answer is no, any more than my legs take a walk. It’s a *trivial* point.” (Chomsky.1993: 91) The questions about computers thinking are simply not well posed, and if these questions are not well posed for human beings, there is no sense in asking them about artificial creations like computers. There is also the dubious tendency to attempt to study the brain as if it were a computer, and to treat computers as if they were human beings, which may seem intuitive, but is strictly speaking false, and since this analogy is false, then people’s understanding of ‘thinking’ may well be way off the mark.²³¹

²³¹ Raymond Tallis states that “...machines are described anthropomorphically and, at the same time, the anthropic terms in which they are described undergo a machine-ward shift. These same terms, modified by their life amongst the machines, can then be re-applied to minds and the impression is then created that minds and machines are one.”

The main focus of this work has been to attempt to show the different manifestations of a single kind of thing, matter and try to explain why it is consistent to say that thoughts are material things composed in a certain way. Saying this does not in *any* way diminish what thoughts are, but to claim that an artificial creation - which people create as is the case with machines - can trick people into thinking that they (the computers) are 'persons' does not help clarify what thoughts are, in fact, AI can obscure naturalistic attempts at understanding that the mental is, aside from it being a configuration of matter. Arguments to the extent that modern computers are also a configuration of matter miss the larger point, which is that an attempt to understand 'mentality' one should proceed by studying human beings, because people are the only *known* creature which is known to have such exotic properties. No matter how sophisticated a computer program may be, it is not a brain, much less a full-bodied person. Computers are not biological organisms, nor do they "work" in any way that remotely resembles a brain. That a computer can fool a person no more indicates that a computer is thinking than does claiming that a reflection in a mirror has 'mentality', even if one grants that computers can be more complex than mirrors, or reflections on a pool of water.

The confusion between mind leads people "To cross the machine/mind barrier..." as "it is not sufficient to make the mind machine-like; one must do so using terms that have already unobtrusively mentalized machines." (Tallis, 2004: 35.) For more information on the topic see *Why the Mind is Not a Computer: A Pocket Lexicon of Neuromythology* (2004). To be fair, one can speak of the brain 'computing' or 'processing', so long as one keeps in mind quite clearly that this is not what a brain literally does, and even then, it's best to proceed with caution.

5.3 Inner and Outer: 'Mind-World' Metaphysics

Chomsky has given arguments explaining why he thinks many of the traditional metaphysical problems are best thought of as epistemological concerns, when the issue is related to the identity the mind ascribes to things: “If these questions – what’s the ship of Theseus, what’s a person, what’s a tree, and so on- if they’re re-interpreted as they should be, cognitively, epistemologically rather than metaphysically, well, then, they can be explored as topics of cognitive science.” (Chomsky, 2012: 126). Under these constraints, one way to talk about metaphysics would be to subsume it under epistemology, and then argue that in Chomsky’s case, metaphysics is an attempt to talk about the world as created by mind on the occasion of sense-experience, whereas strict epistemology will focus on evaluation and justification for any body of knowledge. While it should be acknowledged that there can be no easy separation and distinction to be made between metaphysics and epistemology, if metaphysics is proceed as a field of enquiry, it should be viewed as a field of investigation that examines how the world appears under epistemic consideration, which can be called 'mind-world' metaphysics. Talk about ‘inner’ and ‘outer’ when trying to understand the world can lead to some confusion, though this is another topic where Strawson and Chomsky coincide. Chomsky’s views on these topics strongly suggest that when speaking about things in the world, it is what is in the mind that can be considered as tentative knowledge, because people’s best scientific theories are often changing to accommodate a description of the way the world is. Ideally what is in people’s minds captures some aspects of the world - especially in the sciences - whereas in other domains, this becomes extremely difficult to articulate. When Chomsky was being interviewed about these topics by philosopher Peter Ludlow, Chomsky stated that “...what philosophers are talking about... when they talk about external content is that they’re saying a part of talk about meaning has to be analyzed in terms of thinking about the human organism in relation to its environment.” Thus, when talking about the environment, people often have in mind the world. To use an even simpler case, scientists can try to understand how an ape interacts with the environment, where the environment is taken to be external to the ape. One should, however, be cautious when making such moves, as Chomsky points out “...you don’t just look just look at the anatomy of primates. You look at the physiology of primates, also what you might call the mental processes of primates. The way they seem to be interpreting the world, the perceptual abilities of primates.” This should be the goal of rational enquiry, because “what you try to do is exploit to the extent you can what we know about an

individual ape or other animal. You want to learn what we understand about that ape, and that information we will bring to bear in the study of how the ape interacts with other apes and with the rest of the environment...”

The goal of scientific inquiry should relate to the mental construction of the mind and not on the structure of the world, as it is incoherent to study, for example, a complex eco-system like the jungle, without taking into account the creature that interacts with that environment. “...we should ask... what do we understand about ... the internal nature of the creature that’s doing all these things, and to the extent that we understand [these topics] ... we can ask sensible questions about how it interacts with the external world...” (Ludlow, 2013: 176) Still, what matters is the context within which sensible questions can be raised, as the very same environment can ‘mean’ very different things depending on the creature in question. Thus, a rainforest is not the same for a bird as it is for a snake, or monkey or a human being²³². Questions may arise as to whether the environment in question is the ‘same jungle’ in so far as it is one environment that is being studied, but this, again, is a misleading way of thinking about the issue. Whereas the object in enquiry is a complex eco-system which people may call a ‘jungle’ it is far from obvious that for *each creature* it is the same environment that is being experienced, as this depends on the way each animal interprets the environment for specific purposes. In another section of the interview, Ludlow is arguing that, in the case of insects (though it applies just as strongly to any other creature, including human beings) the reason for which they can navigate or function in the world is because the representations they have exist because they are “extrinsically anchored” to the world. That is, the way animals react to the world is due to the existence of the ‘external world’ – it could be the sun, or a predator, water, shelter or some fruit that exists which happen to cause an insect to react the way do. Chomsky would not formulate the issue of the external world in this manner, because, as he argues, in the case of studying biological organisms “yeah, you’re talking about the way it actually happens in the real world.” But science does *not* study the *whole* world, instead it opts to understand aspects of the world “in an experimental setting where you don’t have the external world.” (Ludlow, 2013: 184) In fact, in the case of any biological organisms, the external world is

²³² In fact, so far as is known, there is no such thing as a RAIN FOREST for a bird or a monkey or any other non-human animal, as they have no concept RAIN FOREST. People have such a concept, and this helps people give sense and meaning to a particular environment.

not needed to understand what is going on in the minds of creatures: “You could... [have] an experimental situation in which you don’t have a light.”

Even more counter-intuitive is the observation that, in this particular case of insects using the sun to navigate in the world you could “... stimulat[e] the sensory organs of the insect. It would all be internal there doesn’t have to be a sun there” (Ludlow, 2013: 184) Though for the purposes of mind-world metaphysics, which relies on experience, it is not entirely possible to do away with the external world. The way science proceeds is to see how the mind works²³³ using naturalistic enquiry, the whole world is too complex to understand reliably, outside relatively simple controlled experiments²³⁴. This does not in any way mean that people are not interested in the external world, it is *obvious* that they are, but it cannot be studied, because there is too much complexity and too much information as well as conflicting data involved. “Of course [one] is interested in the external world. But if your taking a physics course... they don’t use videotapes of what’s happening outside the window because that’s useless. It doesn’t let you figure out how the world is working.” While what may inspire scientific enquiry begins with “apples falling from trees, that sort of thing [referring to Newton] ... as soon as you get anywhere, you start designing artificial situations called experiments in which you try to refine the evidence that will shed light on principles, which you ultimately will bear on what’s going outside the window.” (Ludlow, 2011: 188) If one knew enough about the brain of any organism, any experiment that would be of any use “could go on as it’s... a brain in a vat. The studies are internalist because we don’t know what else to study.” (Ludlow, 2011: 184) While this is the way the mind works, it is extremely dubious if human knowledge would ever reach a state in which things like actual ‘brains in vats’ could be created. Nevertheless, science works only because some internal human capacities interact with features of the external world. Physics, chemistry and biology study simple phenomena in a manner that helps explain how objects, chemicals and some creatures move and interact in the world. However, an

²³³ Though such argumentation is correct, a clarification is in order. One could stimulate the relevant sensory organs as long as this sensory organ is accompanied by the relevant parts of the body that accompany the brain. Thus, while one could study vision for example, by stimulating the mind, the insect or person needs to have eyes, the same would be true for hearing, tactile sensations etc. As Chomsky and Tallis point out, it is the totality of the creature that matters, not a specific part of the brain *alone*, thus insects use their bodies to navigate the world, and people use their eyes to see the world. Of course, if there is no brain, it is not possible to navigate the world, but bodies and eyes are equally important for the relevant sensations to arise.

²³⁴ In comparison to the whole world. Psychologists, sociologists, etc. often rely on clever experiments to understand a facet of a person or group of people, eliminating much complexity and noise along the way.

important caveat remains in terms of how science proceeds, and that is the fact that in the case of physics, for example, what apparently happens is that some features of the world coincide with aspects of our higher mental faculties – especially mathematics - that help explain certain aspects of the external world. In other words, and quite trivially, if people’s minds did not conform to any aspect of the external world, modern physics (or chemistry and biology) would not be possible and hence not exist, and even modern physics is subject to change based on new theories and evidence, this situation would not change, science is largely dependent on human cognitive capacities.

These observations of the world conforming to the people’s mode of cognition are not new, they can be found in numerous philosophers such as those already mentioned, specifically Cudworth in the case of Chomsky, as well as Kant, albeit indirectly. What is important to point out, so far as the aim of this section is to attempt to describe Chomsky’s epistemic metaphysics, is to try and give an account of how epistemology can be differentiated from metaphysics, even if they share broad areas of similar concern. While it is true that the so-called ‘internalist’ approach to the mind is the only way of acquiring scientific knowledge, what should differentiate metaphysics from epistemology is that the latter’s primary area of concern should be the justification and evaluation of knowledge, whereas the former should attempt to give the broadest, most general observations about the nature of the world. In this respect, when one looks at the world, even though there is a mind always interpreting the sense-data that is received, from a phenomenological (subjective-descriptive) standpoint it is metaphysics, knowledge *of* the world that comes first and it is only after some of this knowledge is attained, can this knowledge be subjected to strong epistemic concerns related to justification and evaluation. Even in acknowledging that the mind actively interprets the world and that without this fact there would be no world to analyze, the concern for people is the world first, followed by mental considerations. However, once the starting point is acknowledged, it soon becomes clear that although metaphysics is primary in terms of a naïve outlook on the world, this world would be completely unrecognizable if epistemology would be put aside, as anything that is looked at, thought about, or studied goes through people’s specific way of understanding the world, which are epistemic objects which can be conceived of as ‘objects of cognition’²³⁵. This leads to the reversal of what appears to come first to experience, the world,

²³⁵ It is important to keep in mind the distinction between traditional epistemology, which focuses on evaluation, justification and beliefs, from *descriptive* epistemology, which describes the world from a cognitive framework. Descriptive epistemology would be essentially the same as epistemic-metaphysics.

and the formulation now becomes the world as presented by knowledge or a mind-world metaphysics based on “rationalistic idealism”.

A consequence of all of this is not stated explicitly by Chomsky but can be gathered by the quotes given above. As mentioned previously, the initial scientific worldview could be accurately labeled the ‘mind-world’, and within the mind-world, depending on the field of study the focus is either on the one hand the mind, which is the main focus of psychology, neuroscience and aspects of biology, and on the other hand there is the ‘world’ as revealed by the mind, and this is the area in which physics, chemistry and some aspects of biology focus on. Another way of formulating this thought is that the so-called ‘hard-sciences’, in particular physics, attempts to study aspects of the external world, but it does so only in so far as the human mind allows some understanding of the world. When theories change, the external world remains²³⁶ a certain way, but people’s ideas about it do not remain the same. This formulation does *not* imply that studying the mind involves more ‘mental’ aspects than when one is studying the world, it is simply a point of emphasis as to what aspect of the world-revealed-as-mental is described. Incidentally, one view which has not been explicitly expressed by Chomsky but could be extracted from his words is not a type of “crypto-idealism”, as Ludlow suggests, but this move, is, on the whole, misleading. (see Ludlow, 2013: 183). Besides the mind-world, there is the external world, to which people have but limited access, and which feeds, in *some manner*²³⁷, to the picture people have of the world. This external world is a stronger variation of Locke’s primary qualities, because, even these primary qualities are constructed by the mind by being stimulated by whatever is external, and do not necessarily

²³⁶ This argument is rather tricky, because it could be the case that the external world is changing. The best theories people may have at any given point in time may ‘map’ onto certain aspects of the external world, or they may not. If a theory is partially successful, but is superseded or complimented by a deeper more accurate theory, it is possible that peoples’ conception of the external world becomes more accurate, but there is no guarantee that in many respects what actually exists in the mind-independent world is changing or can be described in other ways that human beings have no access to. It is likely that whatever ‘maps’ onto the external world is not a perfect map of what exists, and represents, as Strawson and Russell say, ‘a skeletal picture of the world’, were even the skeleton is subject to change in important respects.

²³⁷ One can, for example point to Hubel and Wiesel’s experiments on kittens, which suggests that if a kitten’s eyes are forced shut and no visual stimulation is given for three months after birth, the kittens eye’s will not be able to see light even if the eye is allowed to open. This might well indicate that some parts or at least certain aspects of the stimuli comes from the external world and influences the function of certain organisms. For more information on the kitten experiments see *Effects of Monocular Deprivation in Kittens* (1964). Hubel, David. and Wiesel, Torsten. <http://hubel.med.harvard.edu/papers/HubelWiesel1964NaunynSchmiedebergsArchExpPatholPharmakol.pdf>. Similar arguments about the effects of external stimuli can be given in the case of children, where early in childhood there is a critical window for the development of mental faculties, if the child is not properly stimulated she will not develop properly: <http://www.oecd.org/education/ceeri/33835210.pdf>

resemble the mind-independent world. A consequence of taking ‘mind-world’ metaphysics too far is that one could end up denying the existence of the external world, in that idealism becomes not only very seductive, but simultaneously very difficult to defend – unless one wants to go so far as to claim that the mind creates everything called external.

The decision to choose the term ‘mind-world’ as an accurate description of Chomsky’s views concerning the nature of the world is not arbitrary. As the above-mentioned quotes indicate, the goal of scientific enquiry (or most types of rational investigations) is to try and find those features of the mind that, in some fashion, relate to the external world. Chomsky calls this capacity of the mind, the ‘science forming’ faculty (or SFF) : “There is a science forming capacity that is -to *some* extent – put to use throughout human history when people make up mythological stories about creation or engage in magic – the transition between magic and science is not so clear.” However, as human thought developed and became more sophisticated through trial and error this science forming capacity “takes a very different form in the modern period when it becomes a very self-conscious endeavor, trying to establish both empirical and epistemological criteria ... It may change, [as] it’s not fixed ...” (Chomsky, 2012: 128) As different people have contemplated the nature of the world, various explanations have been given. The most basic of these explanations is called ‘folk-science’, in which people try to understand the world by making appeals to what would now be called ‘super-natural phenomena’ such as different gods creating the planets and being responsible for all kinds of occurrences ranging from pregnancy to famine.

As human thought became more sophisticated, supernatural elements did not help people understand the world in a theoretical manner and the establishment of scientific rationality sought to find theories that explain the phenomena of the world. The SFF has a special feature – it coincides with some aspects of the world that yield testable results that reveal how the world *may* be mind-independently. It is the combination of the science forming capacity in the mind-world that somehow connects with the external world to give people some understanding of the nature of reality. Though, as Chomsky states, science is rarely a settled enterprise, and thus people’s science-forming capacity is apt to get refined as more is discovered about the world²³⁸. The point

²³⁸ This of course, is closely tied with Popper’s talk about ‘falsification’ being the fundamental difference between science and pseudo-science. Though the point about theories being submitted to criticism and about science being so construed such that some aspects of theories can be falsified, Popper finds few adherents in contemporary philosophy.

is this: the external world has a character that is extremely obscure to people, but the human mind is able to at least point at some of its mind independent features thus, even if people are limited to the mode of cognition they have, the mind is able to come in contact with the external world. With no mind, there is no world to speak of, though with no world, scientific theories would be empty and could not be developed. However, the case is that human beings have at least partially successful scientific theories, thus some part of the external world must exist in some manner.

If it were the case that everything that exists is made of ideas which are ‘produced’ in the mind, then in principle all the laws of science and all the phenomena of the social world could be *thought* to their logical conclusions. As the philosopher Bryan Magee once pointed out, some strands of idealism could suggest that all the fantastic theories of science, great works of art, in short, all the grand accomplishments done by human beings, would be a product of a person’s mind, and while this thought cannot be refuted, it is very unlikely: “If reality had consisted only of perception, or only of experience, then it would presumably have been possible for us to encompass it exhaustively in perception or experience, to know it through and through, without remainder. But this is not so...it is possible for us to think and envisage only in the categories [of our minds] ...whatever exists cannot in itself exist in terms of those categories, because existence as such cannot be in categories at all” (Magee, 1983: 73)

In any case Chomsky’s focus is not “...to do with internalism and externalism... it has to do with... the right [level of] idealization or a wrong idealization, and we’re always facing that.” (PGL. p.191) Although it is apparent that there is a difference between ‘inner’ and ‘outer’ worlds, with people only having sure access to some aspects of the ‘inner’ world, and only a very partial, and potentially distorted view of the external world, the issue for Chomsky is not so much whether a particular facet belongs to either, but rather one should focus on what makes sense to study in order to try and reach sensible, though tentative theories about the nature of the ‘mind-world’. Trying to discover the simplest of phenomena is also closely related with a feat of the mind which, for Chomsky, is a potentially confusing label, and that is the topic of ‘idealization’, as mentioned above. Since the external world is so complex, and it is of no use whatever to use a “video-camera” to examine the external world, human beings have to perform a feat, namely ‘idealization’, that is,

For a comprehensive summary on some of the problems found in Popper’s philosophy of science, see Susan Haack’s *Just Say ‘No’ to Logical Negativism*.

abstracting particular phenomena that belongs to this ‘mind-world’, in order to isolate the relevant data in a given experiment. It is not realistic, nor is it possible, to accommodate *all the facts*, nor is it particularly illuminating. It is evident that metaphysics works within a framework of high abstractness, trying to isolate or point out what features of the world which are common to almost every aspect of reality. This in turn has the necessary consequence that whatever is being said about the nature of the world is very general, though by no means trivial. Talking about ‘reality’ includes, by definition, talk about many features of the world, ranging from the tiny and very simple but rich-in-explanatory-success that is the concern of physics to the very complex but relatively superficial-in-explanatory success of the social sciences going all the way up to literature (though literature is not naturalistic in terms of theoretical understanding) , which seeks to illuminate many aspects of human life that resist theoretical explanation, and everything in between. One way to talk about everything would be through the already discussed referential doctrine in which people seek to clarify what is being talked about when a person refers to something, whether a windmill, an atom or a fictional entity like Pegasus. In this respect, *most* (but not all) rational investigation of the world should treat most topics in the same way, though the more complex the scenario, the less ‘scientific’ it is bound to be. In any case, it now worth looking at some of the results of the sciences, to see how Strawson and Chomsky’s philosophies, concerning metaphysics and epistemology fare when looking at empirical evidence, in this case the brain as seen in neuroscience will be considered below.

6.0 Similarities and Differences Between Strawson and Chomsky

It is clear that both Noam Chomsky and Galen Strawson are very different kinds of thinkers. On the one hand, Strawson can be considered a contemporary analytic philosopher whereas Chomsky is a linguist that on numerous occasions deals with philosophical issues. Having said this, there are plenty of similarities between both thinkers. Both thinkers believe that naturalism should be the starting point for investigations concerning the nature of reality, even if they differ on the conclusions they draw from naturalism, as Chomsky tends to stress our ignorance about the world somewhat more than Strawson does. Both Strawson and Chomsky agree that issues pertaining to substance dualism generally and the mind-body problem specifically, are issues that usually can not be properly formulated and thus are a waste of time. Having no knowledge of what the limits of the physical is, both thinkers believe that it is simply not possible to articulate where matter or body “stops”, and mind begins: as far as can be discerned, mind is a part of body, and should be thought and treated as such so far as scientific theories are concerned. The consequence of not subscribing to dualist doctrine is to adopt a monist view of reality, in which, at bottom, there is only one kind of thing - ‘matter’ or ‘the physical’, and everything else is a configuration of it, though Chomsky would be less likely to use the word ‘materialism’ than Strawson and would choose the term “methodological naturalist”. In the case of language, both Strawson and Chomsky appear to agree that words do not refer to things, although people refer all the time, and have no difficulty in doing so – Chomsky spends more time articulating arguments against the referential doctrine, partially as a consequence of his work in linguistics, whereas Strawson most explicitly deals with reference in his essay *Red and ‘Red’* as well as a chapter in *Mental Reality* called *Pain and ‘Pain’*. Most of the puzzles pertaining to reference are thought to disappear once the referential doctrine is abandoned.

Strawson and Chomsky are skeptical in relation to the field of AI and think that ‘intelligent machines’ tell us virtually nothing about intelligence in people nor do machines offer much insight into the nature of intelligence generally. Also, both philosophers think that the most obvious and indubitable fact of existence is conscious awareness and that non-experiential being, if it exists, is a puzzling aspect of reality, because the knowledge people have of it is, for the most part, based on mathematics. Mathematics, so far as Chomsky and Strawson are concerned and quoting Bertrand Russell, only describes the *structure* of the non-experiential material, while revealing

almost nothing about the essential ‘inner nature’ of the phenomena which is being studied. As a result of people’s ignorance about the nature of the world, Strawson and Chomsky equally reject ‘eliminativist materialism’ – the view that the ‘manifest image’ of the world, is in many respects illusory or misleading – in Strawson’s view it is ridiculous and even the most irrational idea in human history to deny or doubt the most obvious, immediate and evident facet of human existence, namely experientiality or conscious awareness. Chomsky on the other hand, simply wants to know what exactly is it that needs elimination – as the limits of matter are not known. Although Strawson discusses all possible varieties of monism in conjunction with different metaphysical views, both him and Chomsky reject idealism as the doctrine that states that there is no external world – or that there are only ideas - as both of them believe that there is an external world that is studied with varying degrees of success in the sciences.

Besides these central points, some divergences in opinion start to become apparent. When talking about the differences between the two, an important topic, the subject of ‘free will’, will be put to the side, as this has not been a concern in this work. Suffice it only to say that Strawson does not believe that free will in terms of ‘ultimate moral responsibility’ is possible, whereas Chomsky thinks ‘free-will’ is one of the most obvious facts about human beings. Under the topics that have been discussed here, the biggest difference between Chomsky and Strawson could well be that while Strawson considers himself to be some kind of panpsychist, Chomsky does not. Strawson does not believe that it is possible for nature to be constituted in such a manner that it would be correct to say that completely non-experiential matter can give rise to experiential phenomena. Chomsky does not endorse the ‘no-radical emergence thesis’, and essentially considers radical emergence to be part of normal science. An important distinction between Strawson and Chomsky is of a more epistemic nature, even though the difference is rather slight: in Strawson’s case he argues that we essentially have some access to how nature is ‘as it is in-itself’, though how much of that nature is revealed to human beings is not discussed at length. Chomsky, on the other hand, has a more traditional, roughly Neo-Kantian view about epistemology, and thinks that we have no access to ‘things-in-themselves’. The difference on this topic is rather small, as Strawson could be read as arguing that it could be the case that we have no access to things themselves, but is unconvinced, whereas Chomsky does not have such ambiguity in his position. Another disagreement, though largely terminological in nature is that Strawson calls himself a ‘real (or agnostic) materialist’, whereas Chomsky does not use this term for himself as he considers it to be

misleading, thus he simply prefers to say that there is the world, and people study different aspects of the world, including its material and mental aspects, whatever their ontological status may be. Chomsky adopts a 'methodological monism' to the study of the world, though he uses no label in his philosophical orientation, though he could well be called a type of 'critical rationalist' or a 'rationalist idealist' of the tradition specifically developed by the British Neoplatonists, Henry Moore and especially Ralph Cudworth.

Besides sharing certain similarities as well as having clear differences, there is also the issue of them having different interests concerning the study of reality. Strawson seeks to establish what the most fundamental aspect of reality is, and experience may be the answer. Strawson is dedicated to more 'purely' philosophical pursuits than Chomsky, so topics ranging from the nature of the 'self' to intentionality and phenomenology, are all topics that Strawson has written about at some length. Chomsky, while interested in many of these fields, does not develop ideas on 'purely philosophical' (or mostly philosophical) subjects, outside of a few books and articles related to philosophy, as Chomsky focuses mostly on the nature of language and how it relates to biology and the larger human organism. Strawson is not much interested in politics, whereas Chomsky is heavily involved in political activism, and this activity consumes most of his time. One way to distinguish Strawson and Chomsky would be to claim that, *under contemporary understanding of these terms*, the former is a philosopher who uses and respects science to try an answer long established philosophical problems, whereas the latter is more of a scientist with plenty of interest in philosophy. Nevertheless, the terms 'philosopher' and 'scientist' can be misleading as they share plenty of interest, but the general orientation just mentioned can serve as a rough guide. It could be argued that Chomsky's interest in politics fuels his more philosophical interests concerning human creativity, a topic that Strawson barely talks about. Chomsky's views concerning naturalism are aimed more at directing where fruitful inquiry concerning the nature of the world could be found rather than merely pointing out a type of monism or developing a detailed epistemological position, whereas Strawson actively wants to highlight the more speculative aspects of thought and reality. As things currently stand, Strawson is also, generally speaking, more comfortable in talking about a-priori mental stipulations than Chomsky and is also more comfortable in making metaphysical claims, Strawson often goes beyond the available evidence, Chomsky usually (though not always) stops short of making any outright metaphysical statements once all the evidence has been presented. Finally, it should be pointed out that both have about an

equal respect for the claim made or discovered by the sciences, they both take the evidence and provisional conclusions seriously, but are not hesitant to go against mainstream opinion – nor do they both think that science tells us everything about the world, in fact they both recognize how much *more* there is to be said about the world, once science is taken into account.

Part III: Neuroscience and Recasting Metaphysics

Further empirical research... within the current way of understanding the problem will not take us any closer to a[n]... explanation of consciousness. What is needed is a revolution in the way in which we approach the problem. This may require us to see that it is more than a problem... It is a mystery.

- Raymond Tallis

I am particularly pleased to note that... one can, after all, not get along without “metaphysics”.

- Albert Einstein

1.0 Introduction: The Brain and Reality:

The relevant parts of Strawson and Chomsky's metaphysics have been laid out. It has been argued that Galen Strawson believes that the most viable option concerning the nature of reality is to consider experientiality – consciousness- as the most fundamental aspect of reality people can know. Strawson has also argued that everything that exists is physical, including thoughts. An attempt has been made at teasing out Chomsky's philosophy and what can be stated is that he agrees that there is fundamentally only one kind of thing – 'the world' – and unless or until someone can provide a convincing argument as how to proceed in separating the 'material' from anything else, talk about the physical and the mental are mostly words used for clarifications rather than statements concerning the status of the world. Both philosophers agree that language is not referential – though it can be used to refer by people in everyday circumstances with no problem whatsoever. The question now becomes, how do these essentially philosophical claims stack up against empirical enquiry, specifically science? Since there are far too many sciences to consider when talking about the role of consciousness and language, one field will be selected that deals with both language and mind which is also entirely relevant for metaphysics namely neuroscience. When it comes to neuroscience, it will be argued that no mysterious or distinct force is at play in the brain, and while this is true, non-experiential observations or facts simply *do not* explain subjective experientiality, and thus the so called 'hard problem of consciousness', among other experiential features of the world remain untouched in this field, perhaps as a matter of principle.

Neuroscience tells people plenty of facts about the brain, but it as yet does not explain consciousness, even if it is admitted, that there has been no case in which a person has been able to talk, think or describe the world without a brain. There are some conceptual clarifications that need to be made in neuroscience and the thought of both Strawson and Chomsky will help establish some of these. These clarifications will serve the function of showing that monism is the most logical outcome given the relevant data. The main goal of this section, however, is to show that far from being an unnecessary distraction for the sciences, philosophy generally and epistemic-metaphysics specifically play a key role in understanding the nature of the world and ignoring this leads to an impoverishment of the sciences and as a consequence can mislead the general public who are reliant on scientists to understand the world.

Enough background philosophical material has been reviewed, it is now time to see what scientific studies of the brain reveal about conscious experience and how this information can relate to metaphysics – the world. Different perspectives will be given concerning approaches to neuroscience, different theoretical frameworks will be looked at, as well as crucial studies concerning non-conscious processes in the brain. It will be shown that, so far as neuroscience is concerned, these experiments remain at the level of studying non-experiential aspects of reality. Even when one considers damage to certain brain areas, or cognitive deficiencies, the study of these and the way they are described in a scientific manner is non-experiential. This raises questions as to how neuroscience could directly talk about experience, if at all. The study of non-experiential aspects of the brain show that the vast majority of unconscious brain processes related to sensory - and many other types information - do not reach the level of conscious awareness. Given these experimental results, it is all the more puzzling that there should be conscious experience at all. The fact that people have conscious experience, and presumably other animals too, is thus more confusing than what may initially come to mind when one thinks about consciousness.

1.1 Neuroscience: The Brain and Vision

One of the recurring themes in this work has been the topic of materialism, or, to be more accurate, the topic of *realistic* materialism, to use Strawson's terminology. The topic of physicalism may appear to be an abstract affair, but, on close inspection, is anything but abstract. A good starting point to enter into thinking about the sciences would be to take a 'birds-eye's' view of the brain and contemplate it as a special configuration of matter. The biologist Gerald Edelman points out that "[t]he human brain weighs about three pounds. Its most prominent feature is the overlying wrinkled and convoluted structure known as the cerebral cortex, which is plainly visible in pictures of the brain. If the cerebral cortex were unfolded... it would have the size and thickness of a large table napkin." Furthermore "It would contain at least 30 billion neurons, or nerve cells, and 1 million billion connections, or synapses. If you started counting these synapses right now at a rate of one per second, you would finish counting them 32 million years from now." (Edelman, 2004: 15-16.) Beyond this first impression of the brain, there are further subdivisions that are worth pointing out "[t]he cortex is subdivided into regions that mediate different sensory modalities, such as hearing, touch, and sight. There are other cortical regions dedicated to motor functions, the activity of which ultimately drives our muscles." (Edelman, 2004: p.17) Before pointing out further subdivisions in the brain, it is worth taking a step back and consider a few elementary aspects of biology, as the brain is evidently a biological phenomenon.

For the purpose of clarity, it is worth pointing out some elementary biology viz a viz the brain. It is worth going into some detail into some of the technical aspects of biology to then compare this knowledge with the metaphysical project presented above and to see what conclusions may follow from the relevant information. Neurologist Adam Zeman points out that "[c]ells are the smallest potentially independent living units of the body, the 'atoms' of biology. Each contains a full complement of genetic material, consumes energy, generates waste and constantly repairs and refashions itself. Given the right conditions and sufficient care, most human cell types can now be teased apart from their owner and grown in the laboratory." Furthermore, cells are also remarkably complex organisms, as "[t]hey are bounded, and protected by a 'membrane', a surrounding double layer of fat and protein...." If one shifts focus from the outside of the cell to the inside, one finds "... minute fibers [which] help organize its various residents, known as 'organelles': the work of the cell is divided among them..." One organelle in particular has important philosophical

implications. Adam Zeman states that “The ‘nucleus of the cell is the chief of the organelles. It contains the genes, the inherited instructions, coded in our chromosomes, which are required to build and to maintain the body. These are an identical copy of the instructions contained in a fertilized egg, from which the newborn babe and all its cells are formed over the 40 weeks of gestation.” (Zeman, 2002: 38-39) Consider the following fact: “[b]ecause these instructions are present in every cell, it should in principle be possible to grow you – more accurately, to clone your identical twin – from any single cell among your many millions.” (Zeman, 2002: 39-40) So much for the topic of monism being considered an abstract philosophical affair, when people’s basic constituents are virtually identical to each other at a biological level, not to speak of an atomic level.

Among the cells which are of concern for this overview, it is the cells in the brain which are important as they allow for crucial processes that allow the brain to work: “The most striking superficial difference between neuronal cells and others, for instance the red cells of the blood, is their shape... They tend to resemble trees, with branching roots to receive incoming messages, a smooth trunk to transmit them and a bushy crown through which they send their message on.” In this case, the description of a neuron is accurately described by the designated technical vocabulary which has surprising descriptive force “...the vocabulary with which we describe parts of a neuron originates in the forest: the neurons branching roots are its ‘dendrites’ from the Greek *dendron*, a ‘tree’; its trunk is an axon... and its crown is an ‘arborization’.” (Zeman, 2002: 42) Far from this being the case of merely clever labeling, the neuron possesses some quite extraordinary properties that lend good credence to the belief that the mind is a completely natural (albeit complex) phenomenon “Among other remarkable properties, all the cells of the body are minute batteries: that is to say, they concentrate a small amount of electrical charge.” Furthermore, this electrical charge is crucial for the sending of the relevant data in the brain “...the inside of the cell contains an excess of negative charge when compared with the outside... A momentary reversal of the electrical difference can be transmitted down the cell – to send a message.” (Zeman, 2002: 42-43) What is the connection between electrical impulses in the brain and the rest of the world? Is it of particular importance to the nature of reality that the brain works in a particular way rather than in a different manner? To this question it must be replied that yes, the configuration of the brain as it

has developed²³⁹ is very important. The configuration of the brain allows people to perceive and react to the world around them, and the neuron is far from being ‘alone’ in this process: “although neurons are tightly packed, they are separate from one another, meeting at junctions known as *synapses*, tiny clefts between one cell and the next.” These synapses turn electricity into chemicals that “on arrival... make[s] it more or less likely that the cell on which it impinges will discharge an electrical impulse.” Taken together “The synapse, and the chemicals that cross it, complete our picture of a simple nervous system. Its function is to enable an animal to respond to events it senses in its environs with appropriate actions...” (Zeman, 2002: 45-46) Thus at a bio-chemical²⁴⁰ level what is literally happening is that the brain is reacting to stimulus from the world and is usually reacting appropriately to relevant circumstances.

Zeman points out that “[t]here are 100,000 million neurons in the human nervous system... There are around 20 times as many neurons in your brain as there are human beings on earth. The number is more remarkable if one recalls that there is a sense in which each of them enjoys an independent life.” (Zeman, 2002: 48) In short, the three pounds in between a person’s ear is the single most complicated piece of matter known to mankind. And while there are many subdivisions of the brain, with specific areas focusing on certain aspects of the human organism, such as seeing or hearing, there is nothing in the empirical study of the brain that warrants the conclusion that there is a *separate* entity or substance in addition to the human body and brain. However, when talking about the brain, one has to be careful so as to not appear to be claiming more (or less) than what the evidence allows. While in all the previous discussion there has been no indication of a second substance in addition to body, *the description of the brain has remained non-experiential*. Talk about small things like neurons and synapses, to larger brain areas such as the pre-frontal cortex are all talk about non-experiential things – they are “third person”²⁴¹ accounts that do not explain

²³⁹ For an interdisciplinary approach to mind and brain in relation to vision see *Historia de la Neurociencia*. Blanco, Carlos. Biblioteca Nueva. 2014

²⁴⁰ It is important to keep in mind that when the brain is being talked about in terms of neurons and synapses, what is being left out of this picture is the external world, which is basically everything that is not the brain, thus the level of description of the brain remains bio-chemical, but this should not be taken as implying that the external world does not matter, it absolutely matters and all real-time reactions of the brain often, if not always occur in co-relation with what is going on in the world, but the world is not susceptible to this kind of scientific analysis, as there is simply too much information at any given time.

²⁴¹ Although, strictly speaking, in science there is no such thing as a “third person” perspective: “Being reflective creatures... we go on to seek to gain deeper understanding of the phenomenon of experience. These exercises are called myth, or magic, or philosophy, or science. They reveal... that the modes of interpretation that intuitive common sense provides do not withstand analysis, so that the goals of science must be lowered in the manner recognized in

first-person subjectivity – or experientiality or simply consciousness. Some areas of the brain will be discussed in relation to the role they play in interpreting and processing data, mostly through the works of Bernard Baars, Nicole Cage and Adam Zeman. After looking at some of the functions of the brain, the topic of ‘conscious awareness’, which has been studied significantly by Stanislas Dehaene, will be discussed to show the scientific limits of consciousness, as well as to connect the issue of the brain and consciousness to the larger question of metaphysics and the nature of reality, which is the main focus of this work. After going through some of the details of the brain and it will be argued, using Raymond Tallis as the prime interpreter of the data, that although the brain is a necessary condition for almost any human activity whatever, it is not sufficient to explain the complexity of the mental so far current understanding of the brain is concerned.

One starting point for looking at how the brain works that appears to be relevant for metaphysics would be to see how the brain processes visual data. Metaphysics is often based on careful observation on the world, thus looking at the brain reacting to external stimuli could give people some clue as to how part of the world is interpreted in non-experiential terms and how it can compare to experience, if possible. Baars and Gage point out that when it comes to vision, “it becomes clear that visual perception is far more complicated than taking a picture with a digital camera... Visual perception is what happens *after* the picture reaches the eyes. The image forms a pattern of activity on the array of receptors in the eye, and the detailed pattern is analyzed by the visual centers of the brain, thereby revealing what is where.” It becomes clear rather quickly that this type of process does not support an empiricist account of perception, as there is more to the act of the mind than simply seeing an image, the brain too gets involved in making sense of what is out in the world. What does the brain do, when it is ‘processing’ an image? Again, one of the ‘key players’ are neurons, which apparently preform quite complex tasks: “Most neurons in early visual areas of the brain are highly tuned to specific features. Some may fire very strongly to a line shown at a particular angle, to a particular color, or to a particular motion direction.” At least some of these neurons are constantly at work: “These neurons respond to a very small region of the visual field i.e., your current field of view, ranging from a fraction of a degree to a few degrees of

post-Newtonian science.” Crucially, what this relatively new perspective shows, is that “[f]rom this point of view, there is no objective science from a third-person perspective, just various first-person perspectives, matching closely enough among humans so that a large range of agreement can be reached, with diligence and cooperative inquiry.” (Chomsky, 2016: 103-104). Although this point is worth registering, occasional references to the term “third-person” perspective will be used to indicate epistemic distance from lived-world experience and common sense.

visual angle.” This raises several questions, as the neurons in question represent a “small part of the visual field...”, and this small part of the visual field includes “whether a small patch of the visual field contains vertical or horizontal, red or blue, motion or something stationary”, then “how is the brain able to combine this information across many neurons?” The answer given is telling, as the authors claim that “*Somehow*, the brain is able to organize these basic features into *organized perceptual groups*.” (Baars & Gage 2013: 144) [First italics mine]. There is much that is not understood about this process, and although there is bound to be more research on this area, it’s not clear that relatively simple process will ever be fully understood. Nevertheless, the organization of visual information is an important part of how people acquire a type of knowledge, and the brain process does not stop at this early stage.

Putting aside the actual eye, which is fundamental for vision – for simplicities sake, what else does the brain do when it is dealing with visual data? Some of the following parts of the brain are involved in different types of visual information: “the primary visual cortex, [is] sometimes called V1 because this region is the first cortical visual area.” Neurons will behave differently depending on what area of the brain they happen to be located, so for example “V1 neurons provide a *neural representation* of the orientation of visual features that comprise the contours and shape of objects.” (Baars & Cage, 2013. p.153) Other parts of the brain, for example ‘area’ V4 “is known to be especially important for the *perception of color* (Zeki, 1977) and *some* neurons in this area respond well to more complex features or combinations of features (Pasupathy & Connor, 2002).” (Baars & Cage, 2013: 154-155) It is important to keep in mind that these areas of the brain, ‘V1’, V4’ and others do not neatly delineate into symmetrical areas in the brain, although there are areas in the brain which are correctly labeled as ‘V1’, for example, other parts of the brain overlap with the whole of V1, which may suggest that other parts of the brain are also active in the seemingly simple act of seeing and interpreting something in the world. So far, two areas of the visual portion of the brain have been selected, more or less at random, ‘V1’ and ‘V4’, and it has been argued that even in these small areas of the brain there is much that is not known. It is not necessarily true that further investigation will reveal all (or even most) of the secrets of the brain, though hope remains, and inquiry should continue.

Furthermore, it is important to note that it is often easier to study the brain when something is *not* working properly, than when something is working smoothly, as it is somewhat easier to pinpoint

differences between brains. One specific example is “[d]amage to ventral area V4 can lead to cortical blindness, or what is sometimes called achromatopsia... Patients report that the world appears to be drained of color, almost like [seeing] shades of gray...” (Baars & Cage p. 163) This is one clear case in which damage to the brain *directly* leads to a loss of subjective sensation, as is the case with colour vision and colours considered more broadly. Notice an important distinction: the fact that damage to ‘V4’ area can cause the loss of colour discrimination, this still does not explain colour *sensation* or color-experience. Although the capacity to distinguish a vast array of colours is lost objectively, the subjective experience of seeing or not seeing colours is not touched by these observations. Likewise, “[d]amage to V1 can severely impair or eliminate conscious vision, although remaining activity in extrastriate areas may support the ability to detect visual events even without being visually conscious – the condition is called blindsight.” It suffices to point out that what we ordinarily call ‘vision’, an aspect of human life that is often taken for granted, is extremely complex and issues like blindsight hint at the difficult that are often found when trying to talk about experientiality, using non-experiential means. Nevertheless, vision is one of the most studied aspects of human beings, and research into how the brain incorporates and processes vision is still ongoing: “A consistent finding is that primary visual cortex seems to be important for the ability to perceive any visual feature at all, while higher brain areas may be important for perceiving *particular* visual features or objects. Further studies will improve our understanding of how the brain gives rise to our subjective visual experiences.” (Baars & Cage. p. 171) It is worth pointing out what *may* well be a serious error on the part of the scientists. While there is no doubt that the brain plays a vital part in vision (as does the eye), going from the claim that higher brain areas ‘may be important’ in relation to various facets of perception, there is no warrant that these studies will actually explain ‘subjective visual experience’. If the goal is to try and understand, in as much a degree as possible, which areas of the brain are involved in the operation of vision, perception, motion and the like, this is a sensible research objective, but to go from studying these aspects of the brain to wanting to find out how ‘subjective visual experience’ works or comes about is a conceptual confusion. It seems that it is not possible to explain subjective affectations and perceptions on the basis of an objective scientific theory. Some subjective aspects of experience, such as color discrimination - mentioned in Strawson’s analysis of the colour word ‘red’ - can be honed in on *in so far* as one can claim that a certain area of the brain is associated with colour-vision, but one cannot study the subjective experience that is felt when one is looking

at colours: these are different areas of knowledge. Of course, there is always the possibility that one is selectively choosing evidence to fit a specific hypothesis, so it will be helpful to take a look at another area which is very important to metaphysics, the study of language and how it relates to the brain, to see if it is possible to attempt to give an objective account of subjective experiential phenomena.

1.2 Language and the Brain

One of the most important ‘tools’ people have at their disposal in order to try and understand the nature of reality is language. It has been argued, notably by Chomsky, that human language is an innate organ that all people have, and that experience simply helps this language organ to develop, this experience is very rich, as it is peculiar to human beings, and furthermore this experience helps people develop even richer experiences once they are able to use a language in an ordinary manner, as language helps articulate and form thoughts. What does neuroscience reveal about language and will this information have any bearing on trying to understand the nature of reality? For starters, it is worth noting that, among other things, human language, as opposed to other such innate organs such as vision or hearing, is a rather recent development in human evolutionary history “[the] ‘language’ cortex has only become specialized during hominin evolution – less than 3 million years out of the 200 million years of mammalian evolution.” Broca’s area, considered to be the part of the brain, which is crucial for speech production, once had a different function²⁴²: “Prior to hominins, Broca’s area was involved with vocal tract control for such roles as reptilian threat sounds.” (Baars & Coge, 2012: 316) This statement suggests that prior to the appearance of human language as it is recognized today, the area of the brain associated with language was used for making sounds associated with warning others to keep away from predators, or so it is presumed. Ever since language mutated and got involved in natural selection, Broca’s area has shown to be remarkably complex: “Broca’s area is now believed to have many more functions than speech production. As neuroimaging reveals smaller and smaller functional

²⁴² The problem with the word ‘function’ is that it can be misleading. As Chomsky points out “...let’s begin with the notion of function. That’s not a clear biological notion or a psychological notion. So, for example, if I ask you what the function of the skeleton is, and you say: “the skeleton is to keep you straight and keep you from falling to the ground,” that is not false.” However, there are other things that can be said about the “function” of a skeleton such as “[this notion] also applies to [the skeleton’s function in] storing calcium or to produce blood cells, or to do with any of the other things it does.” (Chomsky, 2012: 11) Although the word “function” is used for ease of communication, it should be treated carefully, as the function of any organism or organ depends on what you are interested in learning about.

language regions in the cortex, new roles of the left inferior frontal gyrus (LIFG) are constantly being found. The cortex has about a thousand specialized regions...” (Baars & Cage, 2012: 317) Similar to the case of vision, there are overlapping areas of the brain that allow for the ‘production’ of language, contrary to what intuition may tell people, language is a very complex phenomenon that is not straightforward to understand or explain in scientific terms. Human language is a unique phenomenon in that “[w]e can have thoughts even without speaking out loud. Language is not a single fixed skill... [in] 125 brain imaging experiments... [there were] more than 700 speech-related activity peaks in the left hemisphere.” (Baars & Cage, 2012: 318). Clearly these experiments were done in a controlled environment which attempts to extract the relevant aspects that are involved in language, but it is very difficult to determine, a priori, what factors external to the brain are involved in such a process.

Given the amount of brain activity involved in language, one could interpret statements such as these in such a manner that they indicate that the referential doctrine is not tenable, because there are too many factors in the brain as well as in the world to be able to establish such a word-to-world correspondence. This is only speculation, and people can still maintain the referential doctrine while acknowledging the complexity of the brain. Whether language is referential or not is a matter that has been discussed above, what is not doubted is the complexity involved in the apparently simple act of using language “[l]anguage is a distinctive human capacity, one that makes it possible to transmit cultural knowledge and skills over space and time. Broca’s area for speaking and Wernicke’s for speech comprehension are only part of the large cortical regions involved.” Not only is language modular in the sense of relying of various parts of the brain in order to work but “[t]here is constant interplay between motor and sensory language areas... So much of speech and language is dependent on long-term memory... that many scientists believe that we must ultimately look for widely distributed cortical networks to explain vocabulary, syntax and semantics.” As in the case of vision, “[t]hese networks depend on the synaptic connectivities of very large numbers of neurons.” The authors conclude by noting that “[w]e are just beginning to understand such web like patterns of distributed neurons.” (Baars & Cage, 2013: 326) Not only is not easy to separate language from sensory-motor activity²⁴³, which are different activities, even

²⁴³ For some information on how the language faculty is different from other faculties and intelligence in general see chapter 2 of Steven Pinker’s *The Language Instinct*, titled *Chatterboxes*.

within language things like syntax and semantics activate different parts of the brain, which has led to the suggestion that “the left inferior frontal gyrus (LIFG)” should replace Broca’s area²⁴⁴, as it encompasses a larger part of the brain that includes “a place where different features of spoken language are combined *before* being sent to the motor cortex” (Baars & Coge, 2013: 319. Figure. 11.5) [Italics mine]. Not only do neuroscientists have to deal with the various acts the brain is involved in language use, such as syntax, semantics and phonology, they also have to be able to separate language use from sensory motor activity, which adds even more complexity to the situation.

There is no doubt that language needs much more research and study to try and figure out in more detail how they work in the brain. Having said this, and quite similar to the case of vision, there is no mention as to how people feel or experience when they talk about anything. The experiential aspects of language, even in areas where what Strawson calls ‘understanding experience’, or the subjective feeling of understanding that can be evoked by language use via novels, plays, musical lyrics and even ordinary conversation are not within the horizon of ‘objective’ study. As in the case of vision, it could turn out to be the case that in language too, experientiality may not be a suitable area for scientific enquiry, and people are again left with the study of non-experiential phenomena. Only time will tell if future research will shed some light on this topic, but as things currently stand, it is difficult to imagine that this problem will ever be solved. What can be stated with near certainty is that the empiricist account of how knowledge comes about, in terms of the mind being a blank slate in which things in the world enter the mind appears to go the opposite direction of the empirical evidence. Not only is the mind not a tabula rasa, it is much more complex and active than could have been imaged just a century ago. The brain is an active participant in the creation of the world. As Cudworth pointed out, people use their “cognitive powers” to understand the world and the given in experience turns out to be a creation of the mind when dealing with sense experience.

²⁴⁴ In fact, John Hands a chemistry major turned author, surveyed most of the scientific literature in physics, chemistry and biology points out that “...some chimpanzees have a prominent Broca’s area and none has been able to utter a simple sentence despite considerable efforts to teach them.” (Hands, 2016: 448) This suggests that language is more complex than being localized in one area of the brain. For more information on chimpanzee’s Broca’s Area see <https://www.newscientist.com/article/dn17600-why-humans-can-talk-and-chimps-cant/>

1.3 The Brain and Consciousness

Before talking about some of the fallacies that are often involved in neuroscience - mainly through the works of Raymond Tallis - it is now time to talk about one the fundamental aspects of the brain – and the main topic of concern for this work, and that is the topic of consciousness. Vision and language have been briefly discussed in terms of inner mechanisms and active parts of the brain, but the topic of consciousness has yet to be discussed within the perspective of neuroscience. Consciousness presents numerous problems as an object of scientific enquiry and there is no single ‘proper’ way to tackle the issue, as the brain and its relation to consciousness is far from being a trivial issue. Zeman points out that one way to attempt to study the issue is by making the following observation “... the delineation of the brain activity which changes when experience changes without any change in the world around us – in imagination, hallucination and shifts of attention – should help identify the neural process most intimately tied to visual experience.” The property of vision is important in the study of consciousness, for various reasons. One of these reasons is the fact that vision often allows us to remember previous events or occurrences, Zeman asks the following question “Cast your mind to yesterday evening. Where did you have supper... what did you drink... Maybe you had a picnic. The chances are that you can answer all these questions very accurately – perhaps after pause for thought.”

The importance of this seemingly trivial and common activity is that “Doing so [recalling a memory] exercises a particular kind of memory known as declarative memory: it is declarative in the sense that the memory is conscious and can be ‘declared’...” (Zeman, 2004: 280-281) The thing about declarative memory is that it is tied to certain areas of the brain “[i]f critical parts of this pathway [hippocampi in the medial temporal lobes to the thalamus] are removed or gravely damaged, the ability to acquire declarative memory is damaged with them.” While this may not be as bad as losing consciousness outright – the fact that people lose ‘declarative memory’ is significant, in part because consciousness continues to function – which further signals the complexity of the topic.²⁴⁵ Some of the functions that remain when ‘declarative memory’ is lost is that subjects tend to maintain effects associated with “classical conditioning, priming and the

²⁴⁵ For more information about ‘declarative memory’ and the problems associated with it see Adam Zeman chapter 2 ‘*The nerves in the brain, oh damn’ em*’: a sketch of the human nervous system. In particular see p.65 for a real-life case of someone suffering from damage to the relevant brain regions.

acquisition of new motor skills.” (Zeman, 2004: 281) The ability to associate a thing with an experience, for example turning a light switch and getting shocked is an activity that remains with these specific types of amnesiac patients. ‘Priming’ is the ability to lose a sense of bafflement at seeing something new, once something is recognized it will no longer cease to shock people, irrespective of ‘declarative memory’ loss. As for motor functions, abilities related to simple acts such as maneuvering certain new objects is also maintained. All of this serves to simply highlight the point that “The brain has multiple memory systems, and only some of them support conscious recollection.”

These different aspects of memory being pointed out is rather strange in that at a more abstract level, the mind is simply organized matter. From this observation it follows that the simplest of alterations to the configuration of this formed matter may have drastic consequences. More surprising still, is an aspect of everyday life that people take constantly for granted and which is of crucial importance for any metaphysical system whatsoever is the fact that intention - simple awareness -often recedes into the background when anything is being done: “The awareness of intention... slips away... For the seasoned operator, brushing teeth, tying shoelaces or a necktie demands very little attention. Much that we do is habitual.” This comment is reminiscent of one of the bigger points Heidegger tries to articulate in *Being and Time* which is worth considering briefly. One of Heidegger’s observations about the world is that most normal- everyday activity has very little to do with explicit consciousness, as the entire world can recede into the ‘background’ when people focus on an activity. Taking Heidegger’s famous example of an expert carpenter using a hammer, Heidegger says “[i]n dealings such as this, where something is put to use, *our concern subordinates itself* to the “in-order-to” which is constitutive for the equipment we are employing at the time, the less we just stare at the hammer-Thing...” (Heidegger, 2008: 98).

The more people are absorbed into any activity, the less people tend to focus on anything else that may be going on at the moment, thus playing basketball, driving a car, or typing on a computer can become so absorbing that all other aspects of the world *appear* not to affect consciousness – which is shocking given how much of the world is put aside. Another useful Heideggerian distinction is between ‘ready-to-hand’ and ‘present-at-hand’ activities: the former relates to objects when they are being used, thus a person hammering or driving a car or opening a door is using

objects in a 'ready-to-hand' manner. The latter, 'present-at-hand' simply means, one interpretation, to be able to look at any object without taking into consideration any immediate practical implications, 'present-at-hand' is the activity of the world which allows for scientific theory. As Heidegger points out in part II of *Being and Time*: "[t]his making-present is distinguished from the Present of circumspection in that – above all – the kind of discovering which belongs to the science in question awaits solely the discoveredness of the present-at-hand." (Heidegger, 2008: 414-415) *Prior* to being in a mode of analyzing the present at hand, Heidegger states that "[t]he ready-to-hand is not grasped theoretically at all, nor is it itself the sort of thing that circumspection takes proximally as a circumspective theme. The peculiarity of what is proximally ready-to-hand is that, in its readiness-to-hand, it must, as it were, withdraw..." (Heidegger, 2008: 99) In other words, what Heidegger is trying to describe phenomenologically is that when people are absorbed into any activity, what they are doing ceases to be something that requires explicitly attention on and thus 'withdraws' from conscious consideration. How do these observations tie into the scientific study of consciousness? Zeman points out that "Automatic – and 'alien' – action offer a parallel to blindsight [the ability to detect things while being blind]: both occur outside the realm of awareness... although we usually reactivate our awareness of automatic actions at a moment's notice." (Zeman, 2004: 283) These acts have parallels in the brain "...as motor skills become automatic, global brain activation declines. In particular, activity tends to shift away from areas in the 'prefrontal cortex', which are engaged by the acquisition of new skills, to more posterior regions of the cortex and some 'subcortical' regions, like the basal ganglia." (Zeman, 2004: 284) In fact, Heidegger at times seems to be arguing against a particular picture of human beings and the way they perceive an act in the world. Instead of taking as a starting point the whole world as being present-at-hand, Heidegger argues that we are, a good deal of the time anyway, involved with the world, and everything else is peripheral to the conscious awareness: "The ready-to-hand is encountered within-the-world. The Being of this entity, readiness-to-hand, thus stands in some ontological relationship towards the world and towards worldhood." What's particularly important is that "[i]n anything ready-to-hand the world is always 'there'. Wherever we encounter anything, the world has already been previously discovered, though not thematically." (Heidegger, 2008: 114) Different interpretations aside, human beings are constantly doing particular things: walking, driving, writing, talking, eating and so on. It appears to be the case that vast quantities of the world

are known or discovered or registered by the mind in such a way that consciousness need not take them into account most of the time²⁴⁶.

Zeman, besides showing empirical evidence to numerous observations made by philosophers such as Heidegger, Chomsky, Strawson and many others, has also potentially created a circumstance that could have drastic consequences for epistemic metaphysics. If this is indeed the case, that the more a person becomes better at any activity - to the extent that explicit consciousness barely interferes - then it becomes all the more difficult to take a step behind and try to consider the whole of reality without running into the risk of missing some essential aspects of it. Adam Zeman is aware of these complications, and mentions several problems in the study of consciousness, one of them which stands out from the rest "...we do not ordinarily regard experience as being directly observable..... Like particle physics and cosmology, research on consciousness has to be conducted at one remove from the phenomenon itself, reliant on reports and indications of awareness." This is a special problem within scientific study, as the goal of what is to be studied cannot be studied directly and must rely on subjective aspects to get information that may not be as reliable as data would normally be in other branches of the sciences. Putting this issue aside for the moment, if it is not possible to get directly at the phenomena of consciousness, then is it possible to point at what would be the minimal conditions for consciousness? Zeman considers some of these "[I]anguage is probably dispensable: few of us doubt that one-year old's and some animals, or adults rendered languageless by stroke, are conscious." Zeman here states a view that Chomsky has often commented on as well, and that is that although language is crucial for the articulation and ordering of thoughts, it is not all there is to thought.²⁴⁷ The topic of memory has also been talked about, but it also seems to not be requisite for consciousness: "The formation of long-term memories usually accompanies consciousness: but we have encountered research by anesthetists suggesting that it is not critical for awareness." (Zeman, 2004: 285)

²⁴⁶ Steven Pinker points out that "[we have] the impression that our visual fields are rich in detail from edge to edge... In fact, we are blind to detail outside the fixation point. We quickly move our eyes to whatever looks interesting, and that fools us into thinking that the detail was there all along." (Pinker, 2002: 42-43)

²⁴⁷ When asked about musical intelligence, among other types of capacities, Chomsky replied: "My assumption is that the mind is not a uniform system but a highly differentiated system. Like the body, it's essentially a system of faculty of organs, and language is simply one of them. We don't have to go to the level of Stravinsky to find examples of thinking without language. Or, say, the thinking of a cat: that plainly does not involve language." (Magee, 2001: 188) This quote also serves to highlight the point that defining just what thinking is supposed to be, is by no means a trivial task.

2.0 The Prospects of Neuroscience

If language and memory are not essential for consciousness, then what is? It is not clear. One immediate reaction would be to point out that at a very basic level, consciousness means being aware of something – at least for some length of time. Besides this trivial observation, what else can be said about this field of study that could help elucidate the topic of metaphysics so far as consciousness is concerned? As concerning the brain, “not all the activity occurring in the brain is conscious... deep structures in the brainstem and thalami are crucial to arousal while activity in the thalami and the cortex determines the contents of consciousness...” Probably the most popular view of the brain in relation to experientiality is that there is no single place in the brain in which consciousness lies. As has been argued by Chomsky, for example, the brain is a modular system that performs many tasks at the same time. It would therefore make sense to argue that if there is going to be some kind of explanatory theory of consciousness, whatever its ultimate goals may be, the best theories are the ones that look at multiple activities in the brain, instead of focusing on a single narrow region²⁴⁸. Zeman briefly considers the views of Gerald Edelman, Francis Crick and Christof Koch, Antonio Damasio and Semir Zeki among others. It will be instructive to get a brief summary of the views of these scientists, through Zeman, to see where neuroscience is heading, as well as to see how these topics connect with philosophy at large.

Gerald Edelman, a Nobel prize recipient for his contributions to molecular immunology became interested in the problem of consciousness in the latter stages of his career. Edelman, in collaboration with Giulio Tononi thought that “consciousness arises from the integration of activity across [the cerebral cortex in association with nuclei in the thalamus] these areas, as information flows swiftly back and forth, allowing cortical circuits to perform specialized... functions.” This

²⁴⁸ For a compact overview of the complexities involved in brain functioning, see *Competition, Cooperation, and the Mechanisms of Mental Activity*. Carlos Blanco-Perez. *Frontiers in Psychology*. Doi:10.3389/fpsyg.2018.01325. Blanco-Perez points out that “*Although the precise manner in which different cerebral structures enable higher-order cognitive processes (the meticulous path leading “from molecules to mind”) is still a mystery*, a number of influential models of mental function have stressed the importance of competition between neural circuits as one of the main mechanisms behind behavioral flexibility and the sophistication exhibited by higher-order cognitive processes.” (Italics mine) Although some models presented in neuroscience offer glimpses into how the mental works, Blanco-Perez notes that the large problem of experience arising from non-experience remains elusive. This aspect of human life could turn out to be a ‘mystery’, as Chomsky point out. However, one should not proceed in these domains with a-priori convictions that may not be challenged by compelling evidence and research in these areas can be illuminating.

constant activity between these brain regions would then ‘communicate’²⁴⁹ with the ‘dynamic core’ of the brain. The topic of the ‘dynamic core’ in relation with the neural correlate of consciousness, which was elaborated by Edelman is worth explaining, as it is an important part of contemporary neuroscience. Suppose the someone is having a specific conscious experience at time T^1 , what would the brain be doing at T^1 ? Although conscious state T^1 may be very complex such as tasting as looking at a painting or listening to complex and rich musical piece, the brain activity could actually be very simple. “Any given moment of visual awareness, they [neuroscientists] suppose, depends on activity in a network of brain regions: but which brain regions and what kind of activity?” (Zeman, 2004 :279) In the case of vision, which has been extensively studied, and also in the case of language, specific activity in certain areas of the brain appear to show, potentially, how neural correlates of consciousness [NCC] could work – but there are still too many factors to take into account to be able to expect NCC to fully explain the inner workings of the brain. For Edelman, the “...(NCC) is a moving target, a shifting coalition of ‘strongly interacting elements’... refer[ed] [to] as the dynamic core.” (Zeman, 2004: 288) There are more technical issues when talking about the ‘dynamic core’, but for present purposes this ‘core’ uses many areas of the brain simultaneously and assigns no *single part* of the brain as necessary for consciousness. Francis Crick and Christof Koch propose that “neurons within area V1, the primary visual cortex, do not participate directly in the NCC for visual awareness,” All this considering that V1 “suppl[ies] much of the information that is processed...” (Zeman, 2004: 289) Crick and Koch suggest something that now has ample evidence to support it, namely the view that conscious information is only a very small part of the overall workings of the brain. Notice that so far, no evidence has been given *against* the idea that experience is a material phenomenon, these observations have also not been able to conclude whether panpsychism is a phenomenon of the world²⁵⁰ – the ontological status of reality could well be conscious in some quite obscure manner. Nor have these scientists been able to reduce or attempt to reduce neuro-

²⁴⁹ This point is worth repeating: when talking about the brain ‘processing’ information or ‘communicating’ with other areas of the brain, and other such terminology, it should not be taken to be literal. The brain does not literally process information or communicate, this is something people do, though for the purposes of trying to get some level of understanding of the brain, such terminology is probably inevitable, but skepticism ought to be kept in place, lest people confuse a brain with a computer. For more information of the potential consequences of ‘computerizing’ the brain, see Tallis, *On the Edge of Certainty* (1999), chapter 2.

²⁵⁰ In fact, Christof Koch is a proponent of panpsychism. For his specific version of panpsychism see Koch, Christof. *Is Consciousness a Universal?* Scientific American. January 1, 2014. <https://www.scientificamerican.com/article/is-consciousness-universal/>

chemical goings on in the brain with basic physics – these philosophical problems appear to elude scientific explanation, at least for the time being²⁵¹.

Besides the above-mentioned scientists, who else has promising theories concerning neuroscience? A brief glance at the views of Antonio Damasio and Semir Zeki, will give a roughly broad-brush view of neuro-scientific explanations of consciousness. Damasio is willing to introduce the concept of the ‘self’ as the fundamental aspect of consciousness. “He [Damasio] suggests that consciousness arises only when the brain represents the effects of sensory data on the organism, by a process of ‘second order mapping.’” In other words, mere data from the world does not suffice to make a person aware of anything, there needs to be an active brain, one that not only receives but one that transforms sense-data into something that is readily intelligible: “...mere sensation [is] insufficient for awareness... it must be transformed by a process which makes explicit the impact of the knowledge on the knower.” (Zeman, 2004: 291) On such a view, ‘recording’ or remembering or experiencing anything requires a ‘self’, though the exact process in which passive sense-data ‘becomes active knowledge’ is a problem maybe even a mystery, at least for the time being. The one aspect all of these neuroscientists have in common (Zeki aside), despite some technical and methodological differences, is, according to Zeman, that all these views are “... interactive’. They imply that consciousness depends upon ‘communication’ between diverse regions of the brain which are “associated ... [and are] more or less independent psychological functions like perception, emotion, memory and action.” Given the difficulty of the task that is at stake when studying something as confusing and complex as the brain, the leading tendency has been to argue that the brain is a modular system, with certain parts of the brain being responsible for certain actions.²⁵² This should not, however, lead people to think that the brain is like a type of

²⁵¹ Sean Carroll puts this issue in the following manner “The brain is made of particles, which are vibrations of quantum fields, which obey the rules of quantum mechanics. But most neuroscience starts with the assumption that important processes in the brain are well described by the approximation of classical physics. We don’t need wave functions or entanglement... to understand the brain...” Though one should still be open minded about the possibilities of interactions between physics and the brain as “recent discoveries in biology have indicated that living organisms do seem to take advantage of certain quantum effects that go beyond what classical physics could do. Photosynthesis, in particular, involves transfers of energy by particles in quantum superposition... So we can’t discard the possibility that quantum effects are important in the brain simply on the basis of pure thought.” (Carroll: 2017: 368).

²⁵² Though one needs to be careful not to take this comment of modularity too far. Modularity is not a form of phrenology, it is a reliable heuristic that is backed by the available evidence. However, relatively recent research in the brain has also show that the brain is not ‘static’, and that in many respects it is more accurate to say that the brain is ‘plastic’ or ‘elastic’, to *some* extent. See *The Brain that Changes Itself* (2007) and *The Brain’s Way of Healing* (2015) both by Norman Doidge for more information of this specific topic which is known in the literature as ‘neuroplasticity’.

complex machine: that if you remove or damage one ‘piece’ of the machine, it would cease to work – the brain continues to work even after it has been injured or damaged, as can be clearly seen in many cases, from professional boxers, to savants, to people who can’t see certain colours or can’t move a limb as a consequence of a stroke, etc. This is not to say that there are not different approaches to neuroscience: some are quite radical such as *Radical Embodied Cognitive Science* as exemplified by Anthony Chemero, and a more sociological-historical perspective as seen in *Neuro: The New Brain Sciences and The Management of the Mind* by Nikolas Rose and Joelle Abi-Rached.²⁵³

Chemero, Rose and Joelle can be put aside as they belong to different schools of thought, and the views of Semir Zeki can be presented, albeit briefly. Contrary to what Edelman, Damasio and others think, Zeki takes a more localized view of the brain. Zeki “has proposed that each of the functional systems within the visual brain... generates its own ‘microconsciousness.’” The idea behind ‘microconsciousness’ could be tied in with Strawson’s own views regarding the ontological status of ultimates, discussed above, though in a different context from the arguments based on evidence gathered by Zeki. “This idea stems from evidence that we become aware of different aspects of visual stimuli after slightly but significantly different intervals...” The epistemic conclusion that could be extracted from this “seems to suggest that an isolated visual system, or even one of its subsystems, might indeed be conscious.” (Zeman, 2004: 291) The ultimate goal of trying to find a unique locus of consciousness continues to be an elusive goal for science, which is suggestive of Chomsky’s thoughts concerning the nature of human ignorance – though this by no means should be taken to imply that there will never be a theoretical account of consciousness, it could well happen. It may be the case that people are simply on the verge of some exciting new discovery that will revolutionize neuroscience and allow scientists to pry open whatever secrets may lie hidden within the three pounds of organized matter known as the brain. While

²⁵³ Although there is value in virtually all approaches to neuro-science, this work seeks to maintain a relationship with the sciences as well as part of the analytical philosophy tradition. Roughly speaking, Chemero takes a phenomenological direction influenced in part by Heidegger and Merleau-Ponty in *Radical Embodied Cognitive Science*, which seeks to explain the brain within a larger context that takes into account the whole human body and lived experience, whereas Rose and Abi-Rached seek, in *Neuro: The New Brain Sciences and the Management] of the Mind*, to use a historical perspective along the lines of, for example, Michel Foucault, to see how history and power has influenced contemporary study of the mind. The analytic approach exposed here registers these concerns and takes them seriously, but they play a secondary role to what neuroscientists look at when they try to find the origins of consciousness, namely, the brain.

neuroscientists continue to do their own research and struggle to determine the exact nature of the brain, another neuroscientist, namely Stanislas Dehaene has done some suggestive research into the nature of conscious/unconsciousness, and this type of work has some very practical and sometimes shocking results for metaphysics. Accordingly, the next neuroscientists that will be considered at some depth will be Stanislas Dehaene.

2.1 Stanislas Dehaene and Awareness

The French neuroscientist Stanislas Dehaene, in his book, *Consciousness and the Brain: Deciphering How the Brain Codes Our Thoughts*, makes an important - though in retrospect - obvious observation, and that is that if neuroscientists want to understand consciousness they need to start “taking subjective reports seriously.” (Dehaene, 2014: 11) Dehaene is one neuroscientist whose approach could well be called ‘interactive’ in Zeman’s terms or, more specifically Dehaene is, in his own words a proponent of the “global neuronal workspace”. For the sake of avoiding complex terminology or technical jargon, Dehaene takes consciousness to be ‘conscious access’, meaning “the simple fact that usually, whenever we are awake, whatever we decide to focus on may become conscious.” (Dehaene, 2014: 9) The key to this definition is ‘access’, something may flash in front of a person, and even though it is a fact that something flashed in front of a person, if it is not registered by the mind, then it is not conscious. However, if the object moves more slowly, then it can be registered as a conscious phenomenon. Much like Galen Strawson, the topic of experientiality or consciousness must be taken to be the most obvious, striking and immediate fact of all existence, so it should be addressed in some manner when using neuroscience to understand the brain. However, one should be careful when using introspection as evidence, because although introspection can contain useful data, “[a]s a research method, introspection can’t be trusted.”

Furthermore, people cannot simply think about why something happens in the brain, it yields no results – and if it did, somehow, manage to explain the workings of the brain, then people would have known centuries ago how the brain works, because introspection is something that people do very frequently. However, given an appropriate theoretical framework “[t]he correct perspective is to think of subjective reports as raw data.” (Dehaene, 2014: 12) Dehaene’s connection to Strawson, Chomsky and the larger topic of metaphysics lays in the following framework: what Dehaene’s research team was doing for fifteen years was looking for signatures of conscious thought in the brain. If one wishes to look out a window, or stare at a cityscape or even consider examining the woods and ask the question posed by Quine, “what is there?” The answer, though obvious in a single instant, “everything”, needs plenty of qualifications, because, when we look out into the world, we only register a *very small* amount of the overall phenomena that people can see, touch, taste, sense, etc. Although the answer to the ontological question is ‘everything’, when

one considers that most things are not experienced at any single moment in time, one can furthermore add the fact that there are things that exist that people cannot even register or experience. If this is indeed the case, as it appears to be, then ‘everything’ needs not only qualifications, but also clarifications. Using the latest in brain technology such as functional magnetic resonance imaging (henceforth called fMRI) and magnetoencephalography, and even introducing electrodes in the brains of some patients, Dehaene has managed to capture what he calls “signatures of consciousness”, and the results are quite illuminating. “In one experiment after another, the same signatures show up: several markers of brain activity change massively whenever a person becomes aware of a picture, a word, a digit or a sound.” (Dehaene, 2014: 13)

Having laid some of the sophisticated machinery that Dehaene and his team used to try and capture the ‘signature’ of conscious thought, it would be helpful to expand somewhat on his views of consciousness, which will then be shown in an experimental setting. Besides pointing out the topic of ‘conscious access’, more generally, there is a whole world to be explored with the use of the conscious mind: trees, plays, birds and everything people consider valuable are necessarily aspects of consciousness relating to the world. However, in less reflexive or more ordinary activity, the *status* of consciousness can change. “If I make a blunder, I may ... become *self-conscious* – which means that my emotions, strategies, errors and regrets will enter my conscious mind.” (Dehaene, 2014: 20) So not only is there consciousness, being aware that one is looking at a grand oak tree, for example, but then there is *self-consciousness* that is being aware that one is aware that one is looking at a tree. Most of the time, people act consciously: they take the bus, go to work, have some coffee, jog in the park and think no more of it, but on certain occasions one can be *aware* that one is aware of something. One simple example need not go beyond Strawson’s ‘understanding-experience’. The sentence being read right now is being read consciously, but if one uses a bit of will power, one can be aware that one is reading a sentence – one can also be conscious that one is fatigued, or bored or even overwhelmed. Those are two aspects of consciousness that Dehaene points out, but there are still more than need elucidation. “Because of its limited capacity, consciousness must withdraw from one item in order to gain access to another.” The example he uses is simple but highlights the topic quite well: if one is attentive “[s]top reading for a second and notice the position of your legs; perhaps you feel a pressure here or a pain there. This perception is now conscious.” Notice that this awareness of a pain or an itch “...is now conscious. But a second earlier it was *preconscious* – accessible but not accessed, it lay

dormant amid the vast repository of unconscious states.” The crucial thing to keep in mind when talking about precocious is that they are ‘accessible’ – they can be noticed – at any moment, and it differs from self-consciousness – when one notices an itch one does not think that one is thinking about an itch. Also, at any given time more things are available in a preconscious state than during normal conscious awareness, due to the sheer amount of potential experience. So far self-consciousness, precociousness and some general aspects of consciousness have been considered, but before talking about unconscious²⁵⁴ brain processes, there is one further use of the word ‘consciousness’, that should at least be registered, called “intransitive consciousness” ... as we say when “the wounded soldier remained conscious.” Here it refers to a *state* with many gradations.” (Dehaene, 2014: 22) Thus, besides being conscious *of* something, there is also the use of the word meaning something along the lines of “she is alive and aware”, though this awareness in these circumstances is rather vague.

Having talked about many of the uses of ‘consciousness’, the relevant aspect (with consequences for metaphysics) of Dehaene’s work has to do with the threshold of human awareness, or, put in another way, the amount of time something must last in order for it to be captured by the mind. The goal Dehaene has in mind is to try and set up an experiment in such a manner that scientists can be sure when something is invisible to all viewers *all* the time. “Fortunately, such a complete form of invisibility exists. Psychologists call it “masking”; the rest of the world calls it “subliminal images”.” (Dehaene, 2014: 38) If one considers how the brain works in relation to temporal awareness, the naïve ‘common sense’ view regarding consciousness is to think that it is a rather quick process, people see hear and taste things immediately, but this is also relative to the situation at hand: while consciousness works rather well in ordinary life, in extreme circumstances such as about-to-get-hit-by-a-car or a person flashing a gun at an unsuspecting victim, then it is understandable to think that one would wish consciousness to be much faster than what it is. As it currently stands, according to contemporary research: “In many experiments, the boundary

²⁵⁴ Although it may already be obvious to many the unconscious brain processes that are being discussed by Dehaene are not connected to the Freudian unconscious or to psychoanalysis. Psychoanalysis is a different field of enquiry and whatever one may think about the limits of science, or the risk of scientism, psychoanalysis is not considered to be a scientific field, nor is the unconscious drives which Freud speak about particularly useful in terms of gathering data to form explanatory theories. All this stated, this should not be taken to imply that psychoanalysis is useless, far from it, it can be very useful and illustrative, as many other non-scientific fields (history, art, literature, etc.), but it does not fall within the range of research which is the focus here.

between seeing and not seeing is relatively sharp: an image is downright invisible for 40 milliseconds, but is easily seen, on most trials when the duration is increased to 60 milliseconds.” What’s particularly informative is to study the ‘space’ between recognizing something as something and missing the thing “[t]he length of the threshold varies across subjects, but it always falls close to 50 milliseconds. At this duration, one perceives the flashed image about half the time.” (Dehaene, 2014: 38) The goal then, is to try to set up experimental scenarios in which neuroscientists can get insight into the nature of conscious thought using various techniques of which ‘masking’, is the most useful for this type of work.

As hinted above, to ‘mask’ something is to show an image or sound or word to a person in such a manner that even though one person, the experimenter, can be sure that an image is being sent to a subject, this subject is not aware that something is being flashed in front of her. It is worth noting, that there is plenty of brain activity going on even before something masked becomes conscious, and this implies that whatever it is that reaches conscious thought is not necessarily all of the data that is ‘coming in’. So far as epistemology is concerned – this type of results could be taken to indicate a roughly Chomskyan view of the mind, in which whatever it is that people are conscious of is only a small portion of the totality of what exists, and furthermore there are things we simply cannot cognize – which reflects biological limitations to the structure of people’s knowledge. In the case of ontology, one should proceed to say that although there is ‘everything’, the only things we can talk about with any degree of certainty that are worth discussing philosophically, are things that can enter people’s consciousness, because the rest of the data, though present in the world or in the brain in some manner, cannot enter the mind. “In 2000 the Israeli scientist Kalanit Grill-Spector... performed a simple masking experiment. She flashed pictures for a very brief duration, which varied between one-fiftieth and one-eighth of a second and followed them with a scrambled image.” As mentioned above, “...some images remained detectable while others became downright invisible – they fell above or below the threshold for conscious perception.” Again, it is worth repeating that images flashed below the 50-millisecond threshold are very hard to detect, whereas people who saw an image for 50-milliseconds up to an eighth of a second had differing results in so far as detecting the relevant stimulus is concerned, “images presented below 50 milliseconds were very hard to see, while those shown for 100 milliseconds or more were visible”. (Dehaene, 2014: 117) What is not obvious is figuring out what is going on inside the brain, in this case the visual cortex. “The primary visual cortex and surrounding regions were basically activated

by all images, regardless of the amount of masking.” This, however, is not the end of the experiment, as “[i]n the higher visual centers of the cortex, however, within the fusiform gyrus and the lateral occipitotemporal region, a tight correlation emerged between brain activation and conscious reports.”

It is difficult to extrapolate these experimental results in real life, but it seems to suggest that a good deal of what happens at every moment is something that could potentially become conscious given the right circumstances and temporal duration – what is less ambiguous, however, is the fact that there is a correlation between ‘higher visual centers’ and consciousness, which suggests what has always been the expectation, that the brain plays a crucial role in the creation of consciousness.²⁵⁵ Dehaene and Grill-Spector were doing similar experiments and their results were very also similar. Dehaene, being interested at the point in which something passes from unconscious to consciousness did the following experiment “...in my experiments I flashed words for only 43 milliseconds, thereby injecting minimal evidence for the retina. Nevertheless, activation progressed forward and, on conscious trials, ceaselessly amplified itself until it caused major activation in many regions.” (Dehaene, 2014: 117-119) When data reaches consciousness, the activation of several regions of the brain provide evidence for its modularity, and this appears to be the case not only for vision, but also for hearing and motor-action.²⁵⁶ For some time, the problem for neuroscientists was not so much related with seeing brain scans that give suggestions as to how the brain works, but with the question of when, or timing. The research made by Dehaene and his colleagues not only show when data finally reach conscious thought, but it shows remarkable complexity of brain activity from the very beginning of being affected by a stimulus. Using words instead of images, “[c]onscious and unconscious words, like any visual stimulation, evoked an indistinguishable stream of brain waves over the posterior part of the visual cortex.” These brain waves have some curious properties which are, in this case, opposite one another: “These waves are called P1 and the N1, to indicate that the first one is positive and peaks around

²⁵⁵ Though, as will be argued at length below, it will be argued that it is people who are conscious and not brains – it is tempting to get carried away with neuro-research and make too many attributions to a single, albeit important, organism. It is the whole combination of what a human being has, a torso, limbs, eyes, ears and a complex social environment, that contributes and creates people own self-image as well as our ordinary conscious perceptions.

²⁵⁶ See Dehaene, 2014: 120 for the relevant experiments.

100 milliseconds, while the second is negative and reaches its maximum at about 170 milliseconds. Both waves reflected the progression of visual information through a hierarchy of visual areas.”

As expected, “...this initial progression seemed totally unaffected by consciousness.” So far, there are no surprises, words flashed at such a quick interval of time make it extremely difficult for the brain to do much of anything with this data. However, things take a different turn when “[s]uddenly between 200 and 300 milliseconds after the word onset, brain activity faded on unconscious trials, whereas on conscious trials, it suddenly progressed towards the front of the brain.” (Dehaene, 2016: 124) It is quite thought provoking, given how accustomed people are, that such a small difference in duration, can cause such a large change in how the content in the mind is processed. In fact, in less than *one tenth* of a second, specifically the transition from 200 to 300 milliseconds the reaction of the brain “went from no difference at all to a massive all-or-none effect.” (Dehaene, 2014: 124) The onset of consciousness is a rather strange event, given how the timing of consciousness kicking in works in conjunction with brainwaves such that at around 270 milliseconds, and peaking in between 350 to 500 milliseconds, there is much voltage in the brain, “[t]his slow and massive event has been called the P3 wave (because it is the third large positive peak after stimulus appears) or the P300 wave (because it is the third large positive peak after a stimulus appears)” (Dehaene, 2014: 124) There are numerous aspects to this P300 wave, but one which is rather immediate and of concern for broad enquires into the nature of the world is that the brain can only focus on one P300 wave at a time, which restricts attention to other events occurring in the world – and which could, *potentially*, create a distortion in people’s descriptions of the world – if one focuses *too much* on one aspect of reality, while ignoring another aspect the image one is bound to arrive at is not an accurate representation of the world as it is represented to most people. In fact, these experiments provide empirical evidence that consciousness lags²⁵⁷ ‘behind’ the world by .300 seconds and sometimes even more “[t]he duration of this time period may even exceed

²⁵⁷ Although for practical purposes, lived experience is felt immediately, as Thomas Metzinger states it: “The global model of reality constructed by our brains is updated at such great speed and with such reliability that we do not experience it as a model... Its virtuality is hidden... This is so because our brains continuously supply us with a much better reference model of the world than does... [a]... computer controlling [a machine like a] ...flight simulator... The brain is like a total flight simulator, a self-modeling airplane that, rather than being flown by a pilot, generates a complex internal image of itself within its own internal flight simulator. The image is transparent and thus cannot be recognized as an image by the system.” (Metzinger, 2009: 107-108) No matter how the brain actually works, the world as felt and described in experiential terms is seamless, and the fact that occurrences in the world happen fractions of second before it is registered by consciousness, does not change the seamless feel of reality.

half a second when the input is so faint that it calls for a slow accumulation of evidence before crossing the threshold for conscious perception.” (Dehaene, 2014: 126) However, and as mentioned above when mentioning the philosophy of Heidegger, our brains are on ‘auto-pilot’ most of the time and can thus navigate the world without difficulty. One thing at least, is certain, no matter how much a person may wish to look at the world as it is *in itself*, even if one rejects this vocabulary and any Kantian connotations it may have, the very fact that brains cannot register things at the time they occur is already a ‘distorting’ aspect of the mind on the world, so in this respect, temporally, our picture of the world is always selective and is often bound to make mistaken perceptions.

There are many more aspects of Dehaene’s book that could be talked about, but for the sake of exposition, only a few more will be given. It is important to keep in mind that just because the brain is a complex organ that ignites many regions at the same time, this does not imply that the brain is acting in a random manner. As a matter of fact, some groundbreaking research conducted by the neurosurgeon Itzhak Fried and his colleagues, who inserted electrodes to record individual neurons “...discovered that individual human neurons can be extraordinarily selective to a picture, a name, and even a concept. By bombarding a patient with hundreds of pictures of faces, places, objects and words, they usually found that just one or two pictures triggered a given cell.” Quite surprisingly, “One neuron, for instance, discharged to pictures of Bill Clinton and to no other person!” (Dehaene, 2014: 145). It’s not because Bill Clinton is specifically a remarkable person that he is somehow found inside a neuron in the brain, it is likely because there is (or was) constant exposure to him as the President of the United States. Nor is Bill Clinton alone in having a neuron react to his image, the actress Jennifer Aniston, the cartoon character Homer Simpson, and the famous landmark of Sydney’s Opera house all have selective neurons that can pick them out from a bombardment of information, among other famous or distinguished ‘information’ (Dehaene, 2014: 146). These experiments provide further proof against an empiricist conception of the mind as a type of blank slate, as certain key images ignite the brain while other do not, which means, at least, that the brain provides a kind of intelligible structure to the bombardment of information people receive on any given day. Two more examples, one purposefully chosen, and one chosen more or less at random will suffice to end the current exposition of Dehaene’s work, and proceed to the works of Raymond Tallis, to explore his arguments as to why consciousness is likely to

forever remain a mystery to human beings, as neuroscience is not able to explain mentality, or so it will be argued.

The importance of temporal duration as well as the many activities that go on in the brain before conscious thought are two aspects of the brain that cannot be stressed enough. It is now known that conscious ‘information’ is but a *fragment* of the whole of reality, and it is also known that the brain does most of its activity outside of conscious awareness²⁵⁸. In the case of temporal duration, preconscious ‘information’ is crucial. While at any given time preconscious information may be unattended, it runs the risk of “...slowly decay[ing] to oblivion – unless we decide to orient our attention to it. For a brief period, the decaying preconscious information can still be recovered and brought to consciousness, in which case we experience it in retrospect...” Note that preconscious information should be distinguished from subliminal states, as these the latter ones, “[h]owever hard we try to perceive it, a subliminal stimulus will never become conscious.” (Dehaene, 2014: 193) Again, the prospects for full-fledged ontological reports on the nature of reality will inevitably hit numerous blind spots, and the preconscious/subliminal distinction “does not exhaust the stock of unconscious knowledge in our brains.” While this current picture of neuroscience shows what some of the limitations for epistemic metaphysics may be, it at the same time gives empirical support for Chomsky’s theories of language acquisition. Using fMRI on yielded the following results as babies “listen to their maternal language...” and “[t]o our amazement, the activation [of the brain] was huge and definitely not restricted to the primary auditory area Broca’s area, [located] in the left inferior prefrontal cortex, was already stirred up by language.” What is special is that “[t]his region was mature enough to activate in two-month old babies. It was later found to be one of the earliest-maturing and best-connected regions of the baby’s prefrontal cortex.”

²⁵⁸ Though this observation is not new. The Cambridge Neo-Platonist Cudworth, whom Chomsky cites as more relevant to his own philosophy and science than Kant, had plenty to say about conscious awareness. The Cudworth scholar Sarah Hutton points out that “[Cudworth] extrapolat[es] from human examples of unconsciousness: in the ‘Digression’ these are the musician and the geometrician who still retain their specialist knowledge, even when dormant: “It is certain, that our Humane Souls themselves are not always Conscious, of whatever they have in them; for even the Sleeping Geometrician, hath at that time, all his Geometrical Theorems and Knowledges some way in him; as also the Sleeping Musician, all his Musical Skill and Songs: and therefore why may it not be possible for the Soul to have likewise some Actual Energie in it, which it is not Expressly Conscious of? (TIS, 160)” Sarah Hutton (2016): Salving the phenomena of mind: energy, hegemonikon, and sympathy in Cudworth, *British Journal for the History of Philosophy*, DOI: 10.1080/09608788.2016.1185601. Of course, from these observations it follows that a mathematician or a musician can be awake and doing something completely unrelated with either mathematics or music, yet this knowledge which is as real as anything else, is not part of the focus of the mind at the present moment. There are similarities between Cudworth’s observations here, and Strawson’s talk about dispositions, as is the example of Louis in a state of dreamless sleep in *Mental Reality*.

(Dehaene, 2014: 238) So much for a language acquisition module, it is beyond a reasonable doubt that any metaphysics whatever, must take into account how the mind automatically structures the world it inhabits. Whatever else may be true of real materialism, panpsychism and reference, the world people participate in, is a world shaped by the brain and the mind to an extent that is now barely beginning to be understood. However, just because there is much more to discover about the brain does not mean that everything will be discoverable, in fact, there are good reasons to think that the 'problem' of consciousness will never be solved, as Raymond Tallis suggests, it is to his works and thought that will be the topic under consideration, to which one can now turn to.

3.0 Critiques of Neuroscience

Although neuroscience is still a relatively new science, there can be no doubt that much has been learned about the brain in the 20th and 21st century, more than all preceding centuries combined. It is only natural to assume that neuroscience will continue to advance to such a degree that one could hope that in the future a theory of consciousness might emerge. While this view is certainly natural, it is also likely that it will never come to fruition. In this respect the philosophy of Raymond Tallis, himself a retired neuroscientist, will be crucial to see the limitations of neuroscience. Part of Tallis' philosophy aims to show the quite large conceptual confusions involved in ideas purporting to explain the mind via brain activity alone. One will see how much of neuroscience is sheer guesswork, and how large the gap is between studying the brain and getting directly at consciousness itself. Given the current state of science in general, it is unlikely such a theory of mind will ever emerge. Other problems inherent in consciousness itself concerning intentionality, and phenomenal appearances are shown to be topics which lie outside the domain of science, perhaps permanently. This section then leads off to the conclusion of this work, which is how metaphysics should proceed. Given all that has been stated, Wilfrid Sellars' distinction between the manifest image and the scientific image is absolutely fundamental and should be applied to metaphysics specifically. After stating this distinction, it will be shown how experience presupposes some type of intelligibility for its own existence. Despite the awesome advances of the sciences, there is plenty left for philosophy to be occupied with for the foreseeable future.

Several approaches to the study of the brain have been outlined, and the topic of unconscious brain processes and temporal duration have shown, in part, how the brain structures the experience people have in order to make sense of the world. It is tempting to think that with all the modern technological advances that have recently been achieved, the mystery of consciousness will one day be solved - if not soon - then eventually, as modern neuroscience becomes more and more sophisticated. After all, science has managed to unveil some of the mysteries of nature especially in physics, so it is only natural to think that the scientific study consciousness will follow a similar progression. But there are serious reasons that should make people pause and think about what exactly is being said when someone argues that consciousness will one day be 'explained'. Whatever one may think about the explanatory capacities of the sciences, one would do well to

look at the thought of Raymond Tallis on the topic of neuroscience²⁵⁹. Anyone who has read any number of pages in this work will have noticed that Raymond Tallis is a frequent reference for topics related to philosophy of mind and metaphysics. Raymond Tallis is a retired geriatrician and clinical neuroscientist who is not a *professional* philosopher, that is, although Tallis never formally studied philosophy, he has read a good deal of the classical philosophers and has published numerous books on many fields within philosophy. The fact that Tallis has published so many philosophical works, while at the same time not belonging to the world of academia gives him a rather unique perspective on human beings. Tallis is clear that what he is attacking when he is discussing neuroscience²⁶⁰ is not science itself, which he considers to be human beings' greatest intellectual achievement, but *scientism*, which he defines as “the mistaken belief that the natural sciences (physics, chemistry, biology and their derivatives) can or will give a complete description of everything, including human life.” (Tallis, 2011: 15) It is quite appropriate that the ideas that Tallis attacks in his book²⁶¹, *Aping Mankind: Neuromania, Darwinitis and the misrepresentation of humanity*, aims at explaining a great deal of human behavior and knowledge. He does not agree that neuroscience, nor Darwinian natural selection will explain everything: To Darwinian natural selection and neuroscience much more needs to be added: psychology, economics, philosophy, sociology and a whole range of human activities and actions which refuse to be captured by any mathematical equation or theoretical framework. The topic of ‘Darwinitis’ will be put aside as it goes beyond the scope of this project. Instead the focus will be on the limits of intelligible neuroscience. One of the central aims for neuroscience is to try and understand the nature of consciousness – this mental activity that accompanies people all the time, which has not yet been

²⁵⁹ Among numerous other areas of knowledge. Tallis is critical both of postmodern approaches to philosophy and knowledge, as well as to scientific accounts of reality. See *The Raymond Tallis Reader* (2000) edited by Michael Grant, for more information on the broad range of Tallis' critiques.

²⁶⁰ The other topic which is covered in *Aping Mankind* is the idea that Darwinian natural selection can explain everything, from simple acts such as hunting and belonging to a group to all the higher realms of life such as enjoying art and literature. Given the topic of this work, it will not be possible to go over what Tallis calls ‘*Darwinitis*’, and instead will focus on the idea that appealing to the brain explains everything that people do, or ‘*neuromania*’, in Tallis' own words.

²⁶¹ Tallis does not stop his critique of scientism in *Aping Mankind*. He points out, in a similar vein to his previous quote on scientism, that “[i]t is of course, a terrible mistake to think that the *methods* of science, particularly physical science, can be applied to understanding society and how we should order our affairs to promote our collective well-being. That is scientism, not science.” (Tallis, 2014: 35.) It is important to repeat that when Tallis uses the phrase ‘physical science’, one should think of the hard sciences, such as physics, chemistry in biology (see above), though physics is the most advanced of the sciences. Besides *Aping Mankind* (Routledge, 2011), also see *Reflections of a Metaphysical Flâneur* (Acumen, 2013) for more thorough critique of scientism, and specifically chapters 8 and 9 *You Chemical Scum, You and Should We Just Shut Up and Calculate? Does Physics Need Philosophy?*

understood scientifically or to put it differently, there is no theory of consciousness that has been achieved in the so called “decade of the brain²⁶²,” nor afterwards.

It's important to stress a point, lest it be thought that science itself is being attacked, and that is that the trivial point that is that science is extremely useful. Neuroscience is also very useful and quite impressive as has been discussed. These impressive feats include how the brain organizes ‘information’ and how certain regions in the brain are associated with one specific activity over another one, among other topics. This is *not* an attack on science, the views expressed by Tallis here aim to at least hint at where the proper domain of neuroscience ought to remain. This caveat having been stated, it is a mistake to think that neuroscience will go far beyond what they aim to study, namely, how some parts of brain work. Beyond that, what is being dealt with are people, which are much more complex than ‘mere’ brains. Neuroscience is also important in the medical realm, where it can detect abnormalities that can save people’s life – but this last fact, as important as it is, should not confuse scientific utility with *insight in the form of theoretical understanding*. If one want to use the results of neuroscience to help understand or clear up problems in epistemic-metaphysics, it is very important to not be misled into believing that neuroscience will one day explain consciousness: for one thing, it is more likely that it will fail in this last goal, or so it will be argued, and secondly, and perhaps even more importantly, is that one is able to give a sense of delineation between what people can know and what people *can't* know through the critical examination of neuroscience.

²⁶² <http://www.loc.gov/loc/brain/>

3.1 Tallis on Neuromania

It is very difficult to walk into a bookstore, library, or a magazine stand and not see at least one, if not several, articles related with the topic of ‘this is your brain on...’²⁶³, suggesting that it is the brain which causes addictions, beliefs, emotions and all other kinds of human activity. Taking an article by Jonathan Leake, titled “*The Brain’s Center of Wisdom*”, which argues that “the prefrontal cortex figures prominently in several wisdom subcomponents...”, Tallis remarks that these types of articles, that make large claims about the nature of the brain “have two kinds of flaws.” (Tallis, 2011: 75-76) One flaw is technical, whereas the other flaw stems from conceptual errors or confusions. The technical flaw is related to the interpretation of fMRI, which looks at contrasts in brain scans²⁶⁴, and which is subject to misreading. As Tallis points out “[t]he first thing to remember when you encounter [similar headlines] ... is that fMRI scanning doesn’t directly tap into brain activity...[what] fMRI registers... [is] only indirectly by detecting the increases in bloodflow needed to deliver additional oxygen to busy neurons.” Furthermore, Tallis points out that “[g]iven that neuronal activity lasts milliseconds, while detected changes in blood flow lag by 2-10 seconds, it is possible that the blood flow changes may be providing oxygen to more than one set of neuronal discharges.” Not only is measuring or ‘reading’ bloodflow in the brain a tricky process, there are many more factors that should be taken into account when trying to show alleged correlations between brain activity and a given action or problem, and this is not a clear-cut process “...many *millions* of neurons have to be activated for a change of blood flow to be detected. Small groups of neurons whose activity elicits little change in blood flow, or a modest network of neurons acting more efficiently than others, may be of great importance but would be under-represented in

²⁶³ Tallis lists the following articles as examples of neuroscience gone too far: “*The Neural Basis of Unconditional Love*”, “*Neural Correlates of Beauty*”, “*Found: The Brain’s Center of Wisdom*”, “*Neurobiology of Wisdom*” and the “*The Neural Basis of Romantic Love*”, among others. See pp.73-76 footnotes 1-12 for sources and more information on these articles.

²⁶⁴ For those interested in the technicalities behind MRI scans, Tallis explains as follows: “The key to MRI is that bodily tissues – including neural tissue – are mainly water, which, having the chemical composition H₂O, contains two hydrogen nuclei or protons. When tissues are placed in a powerful magnetic field the hydrogen nuclei are aligned along the lines of force in the field. If a radiofrequency electromagnetic field is then switched on or off the protons release energy, which can be detected by the scanner.” The next step in this sophisticated process is that “Protons in different tissues resonate at different frequencies. As a result, brain grey matter such as the cerebral cortex, white matter such as the nerve tracts that connect the cortex with other structures, and the cerebrospinal fluid, appear in distinctive shades.” (Tallis, 2011: p.38) Note that there are various forms of MRI scanning, the one that will be focused on here is fMRI, the ‘f’ meaning ‘functional’. For more general information on various techniques used to see inside the brain, including fMRI and more sophisticated technology, see Baars and Cage, *Fundamentals of Cognitive Neuroscience*, chapter 5.

the scan or not represented at all.” (Tallis, 2011: 76) The point of these technical problems in relation to brain activity serves to highlight the problem between looking at what is in the lived world (a car, a loved one, a dangerous situation, etc.) and what is actually going on in the brain. To argue that, for example, the amygdala is responsible for emotions or that prefrontal cortex is responsible for decision making or higher-level brain activity, while true in so far as these brain regions are related to such activities, is also very simplistic and potentially misleading. A different scenario would be to argue that the amygdala and the prefrontal cortex *play a role* in a complex environment, but so do people’s eyes, ears, heart, legs and other body parts, not to mention social factors, emotional situations, context and all the daily situations that are a given in everyday life. Notice that while a whole host of organs, limbs and cells are involved in any given situation, what is extracted or put aside when studying the brain is *most* of the world: most, if not all, of the experiments done in neuroscience is to place people inside machines of some sort and have them react to very simple stimuli such as pictures or sounds. In the world people face many aspects that influence even the simplest of acts, such as staring at a mountain range in the background. In this last case, a person is not only reacting to a mountain, there is also the setting which includes the sun, the sky, other surrounding mountains as well as personal moods, memories and also potential human company such as friends, family or loved ones who can (and often do) change the way people feel in any given setting. All these are some of the factors that can be named, but given the complexity of any situation, it is likely that some important factors are being looked over or simply missed. Similar to Chomsky’s argument about ‘videotapes’ being a useless guide in understanding physics, neuroscientists too, must attempt to create experiments that serve to highlight an aspect of the brain, but from going to study one aspect of the brain, to making grand claims such as that the brain makes a person fall in love, or feel in touch with God is an over-simplification, at best.

Even granting that most of the world must be extracted away when one is conducting experiments, in neuroscience, there are problems in interpreting the relevant data in an even the simplest of experiments. As Tallis points out “... when it is stated that a particular part of the brain lights up in response to a particular stimulus, this is not the whole story. Much more of the brain is already active or lit up [in fMRI scans]; all that can be observed is the *additional* activity associated with the stimulus.” The consequences of this is that “[m]inor changes are overlooked.” When an experiment is done using techniques such as fMRI, the goal is to find the clearest tendencies a brain goes through when it is presented with data, thus numerous people can be shown a picture

of Bill Clinton, and this input must be presented several times to the same person, to try and find this tendency or association. If one takes this experimental fact into account, one can see why Tallis argues that “[t]he raw data tell a very different story from the cooked.” For example, if “you offer a series of subjects the *same* spatial memory task, you will see enormous differences in the many areas that light up.” Thus, people looking at the exact same picture at the same time will have different kinds of brain activation at the same time, and these results extend to simple acts, such as finger tapping, in which people simply tap their fingers and the results show wildly variable results (Tallis, 2011: 77). If something as simple as finger tapping is not subject to clear understanding using the most modern neuroscientific technology, much more complex acts and emotions, such as willing or loving, do not look like serious candidates for theoretical understanding. There is much more to the world, than electro-chemical reactions in the brain.

It may be objected that people do not yet have enough understanding of the brain, or that some future technology will come, and most, if not all, of the mysteries of the brain, will finally be understood in such a manner that it will be possible to conclude that a theory of consciousness will emerge. Perhaps when scientists manage to map out a comprehensive account of all neural activity, it will be possible to understand, not only finger tapping, but also the workings of consciousness. The problem with this view, as Tallis points out, is that it rests on an assumption that may be wrong: “For this to be the case, one thing at least would be necessary: we would have to be sure that the neural activity we observed was in some strict sense *identical* with consciousness.” (Tallis, 2011: 84) An example that may help illustrate this statement would look something like this: a person looks at a painting of the Mona Lisa and feels a sense of fascination. If this person’s brain is looked at when she is looking at the Mona Lisa, there will be, or should be, a specific neuronal pattern in the brain that is taken to be the specific signature of a person looking at the Mona Lisa. Presumably this knowledge is gained because every time a person has looked at the Mona Lisa, and the brain has been looked at using whichever future technology may be available, the exact same neuronal signature is seen. So, the idea goes, as with the Mona Lisa, so will most, if not all, of human experiences be mapped out and explained by an appeal to the numerous signatures of neurons that could be found in some future hypothetical catalogue that would include entries for ‘awe’, ‘Paris’, ‘red’, ‘Bill Clinton’, and so on. While it is very difficult to imagine that one day it will be possible to have neurons in the brain mapped out in such a manner that one can look up *exact* correlates between things in the world and activity in the brain, one cannot dismiss this idea

out of hand. What is much more troublesome is to say that this activity in the brain is the *same* as the experiential sensation that accompanies all kinds of phenomena, in fact, it is not entirely coherent as to what, exactly, it is that these neurons are identical with. Perhaps it would be better to take a simpler example, such as the experience of looking at a colour, yellow, and attempt to compare neuronal correlates between the experience of the colour and activity inside the brain. Tallis points out that: “The most obvious trouble with the view that neural activity on the one hand, and experiences on the other, are the same thing is that they should appear like one another. But nothing could be further from the truth.” For example, “...the experience of the color yellow, and neural activity in the relevant part of the visual cortex, however it is presented, look not in the slightest bit similar.” He observes that “[t]here is nothing yellow about the nerve impulses and nothing nerve-impulse-like about yellow. If, however, they *were* the same thing, the least one might expect is that they would appear as if they were the same thing. Surely it is not too much to expect that something should look like itself.” This statement goes straight to the crux of the issue: although there is no doubt the brain generally, and perhaps the neurons specifically, are a necessary condition for seeing yellow, they are not sufficient. What is necessary, besides brains to appreciate the color yellow are human eyes, a complex world and more mysteriously still, experientiality or mentality conceived of only in its conscious aspects²⁶⁵.

One objection to this kind of description of neural activity and experience which is noted and debunked by Tallis is that experiences like the color yellow and whatever activity there is in the brain are two aspects of the same phenomenon. This, however, is a fallacy: “... when we ask what is meant by “aspects” or “sides”. We know what it is like for an object, such as a house, to have one aspect when it is looked at from behind and another aspect when it is looked at from the front. But we cannot imagine any kind of entity that has an experiential (or mental) front end and a neural (or material) back end.” The biggest mistake of this double aspect theory is that “...the difference between different aspects of a house- between the front and the back – is nothing like the difference

²⁶⁵ This depends on how one defines whatever the ‘mental’. The surest aspect there is of mentality is experientiality or conscious experience, but this by no means should be taken to be an exhaustive account of what the mental is in its totality, one could include unconscious processes which are tightly connected to mental activity, as Dehaene seems to suggest, though one could say that experience is all there is to mind, and the rest belongs in the brain. These types of semantic decisions are linked with the problem of trying to make a distinct cleavage between mind and brain, which is an obscure area of knowledge, perhaps a permanent mystery even. However, for metaphysics as discussed here, the main concern is mind considered as experiential.

between a material event such as a discharge of nerve impulses and a conscious event such as having the experience of yellow.” Finally, as Tallis points out, “...the notion of two aspects of a house presupposes observers who see the house from different angles. The house does not, in or of itself, have two aspects or indeed any aspects.” (Tallis, 2011: 88) Although there is mention of ‘material’ and ‘mental’ in this quote, what matters is the following: it makes no sense to argue from ‘a dual aspect’ theory because there is much more that is had in experience, that that which can be seen from numerous brain scans. Just because experientiality cannot be seen in brain scans does not mean that it is illusory or fake. In fact, to use Tallis’ observation, experientiality is *presupposed* and necessary to even make sense of brain scans and neural connections. The case would be altogether different if it could be possible to see a house while simultaneously seeing one’s neurons firing at the same time, but it is not possible to introspect and see one’s neurons in action.²⁶⁶

A related, but more sophisticated argument concerning the brain causing consciousness would be to argue that, although experiences are somewhat different from nerve impulses, it is caused by these impulses, and there is *nothing more* than this involved in experiential phenomena. While Tallis grants that this argument can seem persuasive, it too falls quite short from explaining experientiality, which, seems to be a mystery of human life. First, it will be helpful to consider some of the arguments that are given that support the view that all that is involved in consciousness are workings in the brain. Tallis, who used to be a physician as well as a neuroscientist, talks about the experience he had with patients that suffered from epilepsy. Epilepsy “...is a condition in which there are, from time to time, bursts of highly synchronized abnormal electrical activity occurring spontaneously in the brain.” (Tallis, 2011: 90-91) The effects of epilepsy are quite serious, as these

²⁶⁶ The observation of neural activity being distinct from consciousness is distinguished by Tallis in the following thought experiment, which is worth quoting at length: “Imagine there was a device... that enabled us to see our own neural activity online as it occurs. Supposing I were able to look at the part of the brain where the neural activity corresponding to my seeing my neural activity through the [machine] was happening. I would be seeing the neural activity and at the same time having the experience of seeing the neural activity. My experience would be that of someone seeing the activity from the outside and yet the activity would simply be itself, not itself seen from the outside. Or the activity would have to be both the experience and the experience of seeing itself from the outside: it would have to be at once subjective experience and an objective experience of the basis of the subjective experience. This would of course be impossible: it has to be one or the other but not both. What’s more, the activity I can see through the [machine] could be seen by someone else, whereas my experience could be experienced only by me.” (Tallis. 2011: 96-97) The point seems clear enough: it is not possible to create an objective science of subjective experience, these are different aspects of reality, furthermore, as will be discussed below, neurons are necessary for consciousness, but not sufficient.

bursts of electrical activity would "...cut right across the activity associated with normal [brain] function, and their usual effect is to disrupt consciousness (which may be lost or in some other way impaired) or replace voluntary activity with involuntary activity so that the person falls to the ground, sometimes twitching, or engages in automatic behavior." However, other forms of epilepsy have even stronger impacts on the brain, these type of epilepsy affects the "temporal and parietal association areas of the cerebral cortex." The epilepsy in these patients would result in the creation of images and elaborate scenarios that come, apparently, solely by cause of activity in the brain. The illuminating aspect of this otherwise tragic scenario is that, when the relevant part of the brain is removed via surgery, these hallucinations stop (Tallis, 2011:91). On the face of it, this appears to be conclusive evidence that neural activity causes consciousness.

Even more powerful examples can be seen in the work of Wilder Penfield, who also had to deal with patients that suffered from epilepsy, he pioneered "neurosurgical techniques for treating intractable epilepsy by removing foci of irritable tissue... where the seizures originate." Because the brain itself does not experience pain, "the operation was carried in waking patients." Before commencing the surgery, Penfield would map out areas of the brain with the use of electrodes. The surprising news is that "[w]hen he stimulated the temporal lobe and the hippocampus some patients re-experienced fragments of their past." Even more telling are a few of the details that emerge: "[a] patient might feel himself eavesdropping on a familiar scene, for example, the voice of someone calling her child, or the arrival of a travelling circus in town." (Tallis, 2011: 91) Surely experiments such as the one's carried out by Penfield, provide plenty of evidence that brain alone - and perhaps neurons specifically - are responsible for consciousness? It is tempting to believe in such a conclusion, which would in fact take care of most of the more enticing questions in metaphysics (and epistemology too), because, if everything comes from the brain, and can be stimulated via electrodes, then whatever one think about the nature of the world would be either misleading or superfluous as any conditions could be recreated with *greater accuracy* in a laboratory. However, it would also be too hasty to accept it without first considering some more information. First of all, and most trivially, a brain is located inside a head, which is attached to a body. For all the talk of 'brains-in-vats', or the possibility of uploading one's own consciousness to a machine, there has not been a single recorded incident in all of history in which a brain *alone* was considered to be a person, nor has there been cases in which a brain alone can feel all types of emotions, such as sadness or elation. There have been no recorded instances of brain's crying or

laughing and so on. It is perfectly true that a person can lose all of her limbs and still be able to live and experience life, but such persons have hearts, digestive systems, nervous systems, eyes, ears, etc.

Moving a step beyond individual persons, there is the whole of the social world to consider. People live in families, which in turn live in communities, which live in town or cities, which live in states and continents, which live on a planet, and so on. The whole phenomenological world, the world of subjectivity and mentality cannot be properly articulated in laboratory settings, the world is too complex, and it would be impossible to replicate the exact same experiences in different people.²⁶⁷ To be sure, subjective experiences can be useful for psychiatrists or psychologists, attempting to deal with patients that suffers from depression or anxiety (among a myriad of other such psychological problems) and subjective reports can help neuroscientists better understand how brain activity pairs up what a patient may be experiencing, as could be the case when a patient feels extreme emotion of almost any variety, but this information is only a small portion of the totality that makes up the human world, and should not be over-estimated nor over-valued, especially in relation with claims of understanding how complex subjective reports interact with the brain alone. Another crucial aspect, which Tallis has highlighted, is what he calls the “community of minds”, which is the social world given meaning and significance by numerous persons²⁶⁸, which is also taken for granted by human beings, but which is very difficult, if not

²⁶⁷ In this area, Strawson in *Mental Reality* gives a powerful argument against the possibility of creating a list of subjective experiences, though the quote focuses on colour, it can easily be applied to any subjective experience: “It is possible to establish a list of names for distinct types of color experience... One can do it by reference to a particular individual A, a set of times t_1 - t_n , and a set of lighting conditions L. One may take a color-swatch book and rule that color experience of type 1 is color experience of the type that A has when looking at page 1 at t_1 , in L, color experience of type 2 is color experience of the type A has when looking at page 2 at t_2 in L, and so on. Here one can give names to real, objectively distinct types of color experience.

The trouble with setting up this list of names is that it is theoretically useless. One cannot apply it to others; one does not even know what types of color experience are picked out by these terms (only A does).” (Strawson, 2010: 65) Whereas it is possible to give names to specific colour experiences, once any kind of experience becomes more complicated, such as the experiences described by Penfield’s patients, it may not even be possible to create such a list of names, and it would serve no practical purpose, because these experiences, and the sensation that accompany them are of a subjective nature, and it is difficult to create a *complete* objective science out of subjective reports. Which is not to say that subjective sensations can’t be useful for experiments, they clearly can, as has been shown in Dehaene works.

²⁶⁸ There is a connection to Chomsky here in the case of referring and naming, which are part of the totality of significance that people give to the world: “We can think of naming as a kind of “world-making” in something like Goodman’s (1978) sense, but the worlds we make are rich and intricate and substantially shared thanks to a complex shared nature.” (Chomsky, 2000: 181) Nelson Goodman’s philosophy of “world-making” would take too much time to develop, and for the purposes of this work, need not be discussed in detail. Suffice it to point out, that in many aspects of the ‘manifest image’, roughly the lived world as experienced in ordinary life, is subject to considerable

outright impossible, to study via the use of brain scans and other sophisticated technology. As for the ‘memories’ which surfaced in Penfield’s experiments Tallis points out: “...the “memories” reported by Penfield’s patients when they are stimulated (seen, by the way, in only 5 percent of his subjects and not readily replicated by contemporary surgeons): they are essentially second-hand or recycled memories.” Not only are these memories ‘recycled’, not original, nor are they ‘anchored’ by aspects of the external world, they are “...like the pseudo-experiences of epilepsy, [they] are simply *re-activations* of real memories had in the real world: had, by the way, not by an isolated brain, but by a person... As Sven Pfeiffer has pointed out to me, Penfield’s patients are “awake, conscious and living before and while they are being stimulated.” What is missing in accounts claiming that persons are brains is that the “existential and cognitive background is taken for granted but it *undermines the claim* that neural activity in a standalone brain is, or could be, sufficient for consciousness...” (Tallis. p.93) (Emphasis mine) There is also a danger lurking in the background of the belief that people are their brains, and that neurons *alone* cause consciousness as is manifested in the everyday world of complex and fluctuating experiences. It is a simpler picture to think of a person as a brain, than as a complex human being filled with emotions, thoughts, beliefs and all sorts of propositional attitudes that seem to elude scientific study. If a person is just a brain, then fixing the brain is enough to solve all the problems a person goes through in life. A specific event may cause depression in a human being which is in part caused by chemical changes²⁶⁹ in the brain that can be fixed with medication. Likewise, joy and euphoria are taken to be mere acts of the brain alone, and all external factors including people and situations can be put aside as distractions. Needless to say that people living their ordinary lives do not tend to focus on brains, but on situations, circumstances, other people, social relations and so on.

human creation depending on societies and individuals – what is considered polite in some societies, such as tipping in the US, is not considered appropriate in, for example, Japan. What another person may consider to be music, one can consider to be noise, and a person who is taken out of a jungle and placed in a modern city, would not be able to discern the meanings of stoplights, roads, etc. – at least not immediately. In the case of the ‘hard sciences’, this situation is different, as the goal is to be able to give an objective, and in some respects, subject-less view of the nature of reality. Goodman appears to be saying that “world-making” is also true of the sciences. For more information on these topics see *Starmaking: Realism, Anti-Realism and Irrealism* McCormick, P. (ed). MIT Press. 1996.

²⁶⁹ Though this view is being challenged: <https://www.scientificamerican.com/article/is-depression-just-bad-chemistry/>

Having stated all of this, it would undoubtedly be wrong if not downright ignorant to think that the brain plays no role in consciousness, in fact it is absolutely a *necessary* condition for any sort of mentality whatever. As Tallis says “...neural activity is only a necessary and not a sufficient condition of consciousness is consistent with the observation that a person’s behavior becomes more completely explicable in neurological terms the more damaged they are. A seizure sits more comfortably within the neural model of mind than does *living with epilepsy*, which requires something to bring it all together.” (Tallis, 2011: 94) However complex the brain may be, the nature of the world, which encompasses not only the brain, but also how the mind interacts with the world is *far* more complicated than even the most sophisticated of neuroscientific experiments could ever hope to show.²⁷⁰ The problem that neuroscience faces, on one interpretation, is to attempt and delineate what are the areas in which fruitful research can be done, such as studying what consciousness can grasp given time constraints, as seen in Dehaene’s work, as well as continuing research into various areas of brain disease and brain damage, and other exciting areas of research. However, as soon as neuroscience attempts to get at foundational questions such as, what theory will explain why matter organized in a certain way gives rise to thought, or why do people believe in supernatural entities, and all questions related to beliefs and subjectivity, the results will say little to nothing: it is a mystery that eludes theoretical understanding.

Intentionality (discussed in relation to Strawson’s thoughts, above) is a fundamental aspect of experience, any time a thought occurs, the thought is about something. The curious thing about intentionality in relation to neuroscience is that it appears to go *against* the way causality is generally thought of as working in the sciences. What scientists seek to establish when they are studying phenomena in nature, is to see what causes what to what to happen, thus the reason apples fall from trees, instead of floating up in the atmosphere is due to gravity or, the reason why temperatures are increasing at an extraordinary rate is related with human CO² emissions, and so on down the line. Generally speaking, causality has an action → reaction form. The way causality

²⁷⁰ This complexity is described by Chomsky when he says that: “Science talks about very simple things and asks hard questions about them. As soon as things become too complex, science can’t deal with them. The reason why physics can achieve such depth is that it restricts itself to extremely simple things, abstracted from the complexity of the world. As soon as an atom gets too complicated, maybe helium, they hand it over to chemists. When problems become too complicated for chemists, they hand it over to biologists. Biologists often hand it over to the sociologists, and they hand it over to the historians, and so on.” <https://chomsky.info/20060301/>

works, so far as can be discerned²⁷¹ allows scientists to discover laws of nature. When it comes to studying the brain however, intentionality gets in the way of this causal nexus. First, Tallis considers what should be a simple example: “[take] my perception of the red hat next to my computer. The standard [scientific] story is that I see the red hat because the hat interferes with the light in a certain way and some of that light bouncing off the hat enters my eyes.” What then happens is that “[c]hanges in the retina result and these changes trigger impulses in the optic nerve and, eventually, in those parts of the visual cortex that have been identified by neuroscientists as the seat of visual awareness.” Tallis proceeds to give a statement that may be confusing for people accustomed to Strawson’s terminology, when Tallis states that “This chain of events is very similar to causal sequences seen elsewhere in the material [non-experiential] world. Physicists, physical chemists, biophysicists and so on would be entirely at home with the processes I have just described.” Once again, it is difficult to make sense of adding the word ‘material’ to the word ‘world’, unless one is interested in knowing what the material is, and since it is not clear what the limits of the material are, the correct way to understand Tallis, using Strawson’s terminology, would be to understand that scientists who study non-experiential things, are familiar with the process being described. Light interacting with the hat, and then hitting a retina, is ordinary science and is a non-experiential process, until it gets a conscious reaction, then science has a very hard time saying much that is illuminating. Again, this is not a critique of science, but rather a praise²⁷² of the enterprise: in order for science to be possible at all, it is a pre-requisite that there be a conscious observer doing the experiments and trying to find causal relations in a world of separate phenomena, science cannot go beyond or behind itself, as it were, to give itself legitimacy, what gives science its legitimacy are conscious human beings using appropriate theoretical approaches to the phenomena in question. Intentionality specifically, is singled out by Tallis as going the opposite direction which causality usually takes: “My awareness, that is to say, is *of* or

²⁷¹ Strawson points out that, in the case of Hume “he adopts the regularity theory of causation so far as we can know about it or contentfully conceive of it in objects, and not about causation as it is in objects.” (Strawson, 2014: .60) All we can know about causation is regularity, but it does not follow that regularity exhausts causation, there may be more to causation than people can know.

²⁷² The basic idea behind this comment is that without cognitive limitations, science would not be possible. A creature that could know everything would know nothing, because a large part of knowledge is the capacity to discriminate between useful data, and senseless noise. This is not to say that people should be complacent, or that scientists should not continue to be ambitious in the kind of things that are worth studying, but it is worth keeping in mind that understanding and comprehension, not to mention costs, viability of experiments, and so on, have a limit that necessarily focuses enquiry in some areas, and not others.

about an entity which is located *causally upstream* from those events in virtue of which I am aware of the hat. The causal chain points in one direction from the hat to my cerebral cortex, with the light being translated into electrochemical events as the key step”. The radical thing about intentionality is that “...the aboutness of my experience points in another direction, from my cerebral cortex back to my hat.” (Tallis, 2011: 104) Not only is the brain *reacting* to (at least) partially external phenomena, it is also actively involved in (at least) completing the phenomena. It is not good enough to simply take in light bouncing from objects that allow a person to see the color red - the hat which is being attended to through intentionality - must be recognized by the mind to be a hat, and not something else, like a carpet or a tennis ball. The ‘meaning’ of an object cannot be determined by empirical evidence, but by mental acts. Passively receiving information about color or shape is not definitive information about the nature of the object, since the nature of objects in the manifest image is given by people to the world, and not the other way around²⁷³, because, as mentioned before, there are many things that are red and have the size of a hat. Not only does intentionality go against causality of the type ‘A’ then ‘B’ happens, but also $B \rightarrow A$, *B completes A*. There are plenty of examples one could think of that further reinforce the idea that the mind ‘completes’ the object. One could move and take a different position in such a manner that the hat no longer looks ‘red’ anymore, but instead looks something like ‘maroon’, yet people would still call the original object a red hat. Furthermore, the surrounding environment, which is in this case is an office, allows for discriminations that make it easier to establish that what is being seen is a hat, as it is not strange to find hats in offices, whereas finding a red hat in the middle of the forest might well cause confusion. However, for Tallis the key is that causation is inverted: “It points *from* effects (nerve impulses in the higher levels of the visual pathways) backwards to their causes (the interference between the object and the light)” (Tallis, 2011: 105) There are plenty of subtle counter-arguments that can be given in reply, such as the causal theory of perception which

²⁷³ In a similar vein to Tallis’ train of thought, Cudworth points out “...if any one demanded... where these... entities do exist... they do not properly exist in the individual [things] without us, as if they were from imprinted upon the understanding... because no individual material thing is either universal or immutable.” Furthermore, Cudworth adds that “And if these things were only lodged in the individual sensibles, then they would be unavoidably obnoxious to the fluctuating waves... in which all individual things are perpetually whirled. But because they perish not [perceptual entities] together with them, it is a certain fact that they exist independently upon them.” From this it simply follows that “... if the mind looked abroad for its objects wholly without itself, then all knowledge would be nothing but sense and passion. For to know a thing is nothing but to comprehend it by some inward ideas that are domestic to the mind, and actively exerted for it.” (Cudworth, 1997: 125) As with Tallis, it is not enough to simply look at an object like a hat a think that the hat is causing the perception in the brain, the brain too is actively involved in the activity of interpreting the hat, or any other object for that matter.

suggests that all that perception is, is the way the brain reacts to the objects we perceive, though this argument cannot be sustained because there are more to effects than the effects themselves – the mind has a strong reaction given the stimuli (see footnote 249). There is also an immense and complex background pre-understanding that gives meaning and signification to these objects, that would otherwise fail to capture a person’s attention. Stronger arguments along the lines of believing that people are *only* their brains, or that all that reality consists of is merely chemical reactions in the brain seem to be arguing that ‘ordinary life’, or the manifest image, simply does not matter much, it is either misleading, or illusory. It is difficult to make sense of these arguments, as the vast majority of people’s lives are precisely within the manifest image: people’s appreciation of art, literature, personal relationships, work, and so on, according to this view²⁷⁴, are simply confused about what it is that is being experienced. It is of course true that the brain constructs reality in an intelligible manner, people see books after all, and not merely a collection of pages randomly assembled in an arbitrary manner, it’s also true that Picasso’s ‘The Starry Night’ is, at bottom or in elementary form, simply different strokes of colour on a canvas, and finally it is also true that people who are in love have high levels of dopamine in the brain²⁷⁵. It is easy, and obvious to acknowledge that people see books instead of random pages, or that without colour, Picasso’s art would not be art and that dopamine is related to feelings of elation, such as love, joy, etc. But to say that all these things are ‘just’ non-experiential scientific phenomena is to severely downplay the reality and complexity of subjective experience, which is the most immediate knowledge a person can have. As such, it would not be fruitful to continue disagreeing about something as fundamental as the importance of subjectivity – which gives meaning to life.

There can be no doubt that neuroscience has helped scientists gain considerable knowledge of how certain parts of the brain works. Thanks to the advancement of neuroscience, it is now possible to locate brain tumors, or notice when a part of the brain is not working as it normally does. There has also been good work showing how the brain ‘completes’ partial images or fills in environments in such a way that people understand where they are most of the time. All these great achievements, however, need to be tempered with a healthy dose of skepticism. The world-as-revealed by people is an incredibly complex place, and attempting to turn human beings into an organ, or denying the

²⁷⁴ See for example Dennett in relation to ‘lovely qualities’ footnote 27, above.

²⁷⁵ <https://www.scientificamerican.com/article/what-goes-on-in-our-brains-when-we-are-in-love/>

existence of the most obvious fact of lived phenomenon just because it is not possible to form a science of meaning-as-mattering, does very little by way of attempting to better understand the manifest world. Either scientists continue experimenting with people in simple experiments to get a better understanding of how *some* aspects of the brain function, or people run the very serious risk of downgrading the richness of reality to mere non-experiential phenomena, instead of attempting to make better sense of the world, even if these newer methods are not scientific as the word is currently understood. The problem in neuroscience is now attempting to give a rough outline of what type of questions does it make sense to ask about the brain, and which questions fall outside human understanding. So far, this area of knowledge that eludes measurement has been called the manifest image, and it is associated with 'common-sense' and mentality, but this domain of knowledge is ripe for metaphysical dissection, which can help people understand the way people understand certain aspects of the world.

IV Conclusion Recasting Metaphysics

At this point it is worth remembering that Aristotle never used the word ‘metaphysics’ in his *Metaphysics*. Nevertheless, he seemed to have a clear idea of what the field was supposed to cover: “There is a kind of science whose remit is being *qua* [as] being and the things pertaining to that *per se*. This science is not the same as any of the departmental disciplines. For none of these latter engages in this general speculation about that which *qua* is. Rather, they delimit some section of what is and study its accidental features (a prime example is mathematics). We, however, are investigating principles and fundamental causes, and these must evidently pertain *per se* to a kind of nature... This inquiry... comprises the investigation of the primary *causes* of that which is *qua* that which is.” (Aristotle, 1998: 79) Aristotle was concerned about the ground nature of reality, but the topic of ‘metaphysics’ needs elucidation for it to proceed. Much has been said, and much has been argued for, and against, though one should keep in mind the words of Schopenhauer when he says that “If the faculty of reason were designed for metaphysics; if it were a faculty supplying the very substance and accordingly giving information beyond all possible experience, then on the subjects of [metaphysics] ... and thus also of religion, for they are the same thing, there would necessarily be among men just as much agreement as there is on the subject of mathematics” (Schopenhauer, 1997: 175). Things may improve however, if metaphysics is re-interpreted as ‘mind-metaphysics’ or ‘epistemic metaphysics’. However, before proceeding to give any final and definite conclusion, a question should be asked, that was formulated by Heidegger, in relation to another, albeit related, problem. Heidegger asks “Why should anything so self-evident be taken up explicitly in giving a title to a branch of research? In point of fact, the issue here is a kind of ‘self-evidence’ which we should like to bring closer to us, so far as it is important to do so in casting light... [on] our treatise.” (Heidegger, 2008: 50) The ‘question of being’ - in Heidegger’s - sense may be put aside, as it is not the main concern here, but such a formulation is exactly what is needed when one thinks about the question of ‘what there is’. This kind of ‘self-evidence’ needs to be reawakened in order for it to be re-examined, and if one *does* manage to reawaken this familiarity in any kind of deep, consistent and systematic manner, it turns out that this ‘self-evidence’, under scrutiny, becomes increasingly stranger and more bizarre. In this case, what Strawson has argued, and what Chomsky in some respects agrees with is that all there is, so far as is known is *one* kind of thing, namely ‘matter’ or ‘the physical’. Why is something that should be

taken to be obvious to many, be of importance? The answer is simultaneously simple and yet profound, and that is that things – the world, reality - matter to people, and in this case, from a bird’s eye view, the whole of reality, whether it is described by physics, linguistics, psychology or anything else, is simply -physical, material. This may take some time to comprehend, if one is predisposed to being surprised about issues concerning philosophical foundations, but Strawson needs to be quoted once again when he points out that “If one has not felt a kind of vertigo of astonishment, when facing the thought, obligatory for all materialists, that consciousness is a wholly physical phenomenon in every respect, including every experiential respect – a sense of having been precipitated into a completely new confrontation with the utter strangeness of the physical... then one hasn’t begun to be a thoughtful materialist. One hasn’t got to the starting line.” Reality is mysterious, it is stranger than what people can fathom, but the very fact that one can put reality forth to answer some questions is already *something*, it is a step towards coming to grasp with, and attempting to make some sense of the ignorance that is faced when looking at the nature of the physical.

In the case of Chomsky, too, the nature of the world is presented as something deeply puzzling, when, discussing Russell’s opinions, Chomsky states “...we should recognize how little how little we understand the world and should also realize that it doesn’t matter whether we can conceive of how the world works.” (Chomsky, 2016: 90). Further on the same article, Chomsky says something that is crucial to debates concerning ‘materialism’, as he points out “Since the Newtonian revolution, we speak of the “physical” world as we speak of the “real” truth: for emphasis but adding nothing. We can distinguish various aspects of the world – say chemical, electrical, experiential and the rest – and we can then inquire into their underlying principles and their relations with other systems...” (Chomsky, 2016: 105). This suggests that saying that something is ‘material’ adds no value to investigation, but if a definition of ‘materialism’ can be given, as is the case with Strawson in *Real Materialism*, then materialism can be used as an indication, however vague, of what it is that exists in the world – a starting point signaling overwhelming ignorance of almost everything. People find themselves surrounded in a world of ‘material’ things that include tables, trees, cars, pavements and other people, among an infinite number of phenomena. Crucial too, is the fact that the brain is a material configuration that permits experientiality – consciousness – to exist. One could well utter another name to these things other than ‘matter’, as Strawson does when he says “In some moods I am prepared to call myself an

experiential-and-non-experiential ?-ist and think no more about the word ‘monist’...” (Strawson, 2008: 51) The point in using such a label as ‘?-ist’ is illuminating, in that whatever it is, that makes up reality, is profoundly obscure relative to people’s understanding of it. Other alternatives considered above, particularly branches of idealism and neutral monism are even less intelligible than ‘realistic materialism’. There are many varieties of idealism, so they need not all be considered here (see above for more info on different types of idealism) However, if one were to suppose that something like strict idealism were true, then there would be no more to the world (but *nothing* more) than people’s ideas, but this is not the case, one is not able to find out the truths of the world by simply seeking associations between ideas alone, one must be able to do experiments to understand nature to some extent – and this applies to the nature of the brain as well, which does not work within an empiricist framework. There is also the problem that most human activity, so far as bodies and mind are concerned, are non-experiential – ideas play no role in determining how digestion works, how a person spontaneously produces a sentence without any conscious planning, etc. On the other hand concerning neutral monism, claiming that the nature of the world is some unknown substance²⁷⁶ that is neither physical nor mental does not seem to be coherent, because, as Strawson points out “... because we know that experience like ours is part of reality, whatever else is or is not the case, and we know its nature – its ‘ultimate’ nature, if you like – in having it; whatever else is or is not the case.” (Strawson, 2008: 49) As this is the case, in that people have experience, and experience is physical, then at least some portion of the nature of reality is certain, and this is experience thus, neutral monism is not tenable as explained by Strawson.

However, just because idealism and neutral monism are not the best candidates for the metaphysical status of reality, does not mean that panpsychism, as elaborated by Strawson is the best suited candidate for explaining the nature of reality. Strawson is correct in pointing out that the stuff people perceive in the world are at least, ‘experience involving’, in so far as human

²⁷⁶ Here Heidegger’s now classic line is apt for the occasion: “The scandal of philosophy is not that this proof [of an external world] has yet to be given, but that *such proofs are expected and attempted again and again*. Such expectations, aims, and demands arise from an ontologically inadequate way of starting with *something* of such a character that independently *of it* and ‘outside’ *of it* a ‘world’ is to be proved as present-at-hand.” (Heidegger, 2008: 249) There is no sense in doubting that the world exists and is present to human beings, though what metaphysical status this world has, is a topic that is yet to be decided, though that the world exists should not be subject to strong skepticism.

experience can capture some aspect of whatever exists through conscious awareness or conscious ‘connection’, but it does not follow that because of this, experience is at the bottom of everything, in however obscure a manner. Although experience is the most certain fact of existence, this should not tempt one to extrapolate from the case of human beings to all of nature. In fact, and as quoted by Chomsky, if one attempts to be as objective as possible, and look at human beings as belonging to the natural world, then “As Darwin restated the fairly common understanding, there is no need to regard thought, “a secretion of the brain,” as “more wonderful than gravity, a property of matter” – inconceivable to us, but that is a fact not about the external world but about cognitive limitations.” (Chomsky, 2016: 35) In a similar vein, electricity, magnetism or perception, should be considered with equal measure as experience, whether human or animal. Strawson talks about the impossibility of ‘radical emergence’, because, if one accepts it then one is forced to admit that ‘radical emergence’ is “by definition a miracle every time it occurs.” (p.65) If there is *nothing* about which an elementary particle has as an intrinsic property that leads to consciousness, then consciousness would be miraculous. This is true in certain respects, with one very important caveat, if particles are inherently suited to give rise to experience, then so they are suited to give rise to oxygen, bacteria, legs, wood and bodies. In other words, there is a potential for everything in these elementary particles, or at least a potential for everything that falls under the domain of human interpretation. To stress consciousness at the expense of other phenomena in nature, is to distort the whole of reality, though it is true to say that these elementary particles are so suited as to give rise to a plethora of phenomena. Chomsky’s approach to ‘radical emergence’ seems more coherent when he states that in the case of “... Priestley [who] rejects the conclusion that consciousness “cannot be annexed to the whole brain as a system, while the individual particles of which it consists are separately unconscious.” After proceeding to analyze more of Priestley’s comments regarding the configuration of matter in relation to thoughts and dismissing arguments about “commonsense plausibility” in regard to understanding the phenomena of thought in matter, Chomsky remarks “That seems to be a reasonable stance.” (Chomsky, 2016: 117) Likewise, until there is evidence pointing to the contrary, the most cautious approach to take is to think that consciousness arises out of matter only in certain configurations, while dismissing arguments about ‘miracles’ due to cognitive limitations.

As the concept of ‘materialism’ is thus presented, and following Chomsky’s arguments, it follows that however people may want to conceptualize the broad nature of ‘matter’, at least one thing is

undeniable, and this is that people's understanding of the world is *extremely* limited²⁷⁷, even if one concedes that people's cognitive apparatus allows for a rich interpretation of manifest events. Even the most advanced of the sciences, physics, only describes what tiny particles do in abstraction from the extremely complex events that occur in everyday life, and this comment does not even go into some big problems that are faced by current physicist²⁷⁸. It is perfectly true that if one looks at any particular event in lived-life, one may see sidewalks, people, dogs, trees and many other phenomena, and furthermore one must acknowledge that these things are made up by the type of things describes by physics, such as atoms, electrons, protons and the like, this portion of reality as described by physics is a small fraction of the totality of the whole picture. One does not go to sociologists to try and understand how atoms interact, nor are psychologists concerned with how general relativity affects emotions, and these attitudes are correct. History, psychology, sociology, literature, biology and all other domains of organized human knowledge are concerned with different epistemic domains of human existence. This is not to deny any of the impressive predictive behavior of the sciences, but only to point out that the sciences stay within a small domain of the totality of the world. Understanding this, how is it possible to proceed to understand 'real materialism'?

Beside the already mentioned fact that experience is a physical phenomenon, and by necessity so are thoughts, a sensible way to proceed would be to see how language, probably the most crucial aspect for thought, relates to the world. Furthermore, and contrary to what appears to be common-sense intuition, one discovers that words are not 'for' referring. Thus, when one is using words like 'red', 'dog' or 'tree' or any other word, there is no necessity for there to be a tree, a dog or something red in the world, for it is people in certain circumstances that people refer, and not words themselves. This may, on first appearance, seem to signal that all the objects that seem to occupy the world are closed off from discussion, and a certain kind of solipsism creeps in. Although such sensations may first appear to be irrational, the non-reference of words actually

²⁷⁷ Locke's comments are apt in this occasion: "Which we are not at all to wonder at, since we having but few superficial ideas of things, discovered to us only by the senses from without, or by the mind, reflecting on what it experiments in itself within, have no knowledge beyond that, much less of the internal constitution, and true nature of things, being destitute of faculties to attain it." (Locke, 1997: 283)

²⁷⁸ Over 90% of the universe is made of postulated stuff – dark energy and dark matter, which physicists do not understand. Only 5% of the universe is 'normal matter', the kind of stuff scientists study and are somewhat familiar with. For more information on 'dark energy' and 'dark matter', see: <https://science.nasa.gov/astrophysics/focus-areas/what-is-dark-energy>

offers an opportunity for a much richer ontology than a referentialist account would admit. Once one is aware that ‘Sydney’ not only refers to a city in Australia, but could also refer to a person or a pet, or that an ‘airplane’ need not be made from steel and plastic, but also from paper or that a bed need not be made from feathers or cotton, but could be made out of wood or stone, then it is possible to see how wide and plural language use is, indeed there are many more things that one can enumerate and accentuate if one drops referentialist obligations. People are free to use words to attempt to interpret and understand in whatever degree possible²⁷⁹, what ‘real materialism’ is and what it entails.

It follows from what has been previously discussed that the most plausible account of monism is a variation of ‘physical and mental’ monism, or P&M monism for short, and not M&P monism as articulated in Strawson’s *Mental Reality*. The reason for the inversion of words is straightforward, the only metaphysical aspect, pertaining to the world, and not solely to the mind, is physical, though the mental too, is a physical phenomenon but becomes actualized later on in the history of human beings, thus there is a dual aspect monism in which the experiential co-exists with the non-experiential in a non-symmetrical manner, though it would be impossible to quantify what percentage of the world is experiential and what is not experiential, save to say that the non-experiential presumably vastly outnumbers that which is experiential, and came into being much later on in the history of the universe. Closely connected with P&M monism is just how strange this formulation is, relative to people’s common-sense understanding of the world. As Strawson points out, however things in nature are weird for people but “nothing is intrinsically weird” (Strawson, 2008: 26). Things are only weird relative to human beings’ *conception* of the world, and the world has no obligation to be intelligible to people. One of the reasons why physics is so strange for people is that it deals with a portion of the mind-independent world, such that even if people did not exist, the laws of nature would remain the way they are, irrespective of opinions or

²⁷⁹ Although it is crucial to point out, alongside Tallis, that although “Physical features alone are insufficient to determine the linguistic classification of an object... [as they can] be viewed in terms of their uses...” One should also not confuse the previous idea with total linguistic anarchy as “...the variability of the application of words to objects... do[es] not license the assumption that there is total arbitrariness in the relations between words and things.” After all we classify balloons” with... [other] balloon[s]... rather than... with other objects such classified as bricks.” (Tallis, 2000: 119) One could, choose to call a balloon a brick, but this would only confuse the other person and it would not achieve any insight into the nature of reference or the mind. Language use can be quite flexible, but certainly rule-based.

tastes²⁸⁰. Thus, phenomenon such as curved ‘space-time’ or the possibility of alternate universes are unintelligible: the mathematical formulas are internally consistent and explanatory, but the ‘scientific image’ has little to offer in terms of ‘manifest image’ (or lived world) clarification. No matter how much one tries, it is not possible to conceive of a table or a brick to be made up of mostly empty space. However, and as pointed out by Chomsky, problems of intelligibility are not entirely new. People have, built into the way they understand the world an image of the world that can be more-or-less characterized as being ‘mechanical’. That is, people view the world working by assuming certain mechanistic views²⁸¹. A ball moves because a person is kicking it or carrying it, apples fall because they are heavy, prior to the scientific revolution.

As E.A Burttt puts it: “The entire world of nature was held not only to exist for man’s sake, but to be likewise immediately present and fully intelligible to his mind... Man was believed to be active in his acquisition of knowledge – nature passive. When he observed a distant object, something proceeded from his eye to that object rather than from the object to his eye... that which was real about objects was that which could be immediately perceived about them by human senses.” (Burttt, 2003:18). Not only was nature intelligible to human beings, things in the world were ascribed purpose “...an explanation in terms of the relation of things to human purpose was accounted just as real as and often more important than an explanation in terms of efficient causality, which explained their relations to each other.” Burttt uses the following examples “Rain

²⁸⁰ And even in this extreme case of contemplating how the world would look like absent human beings, the situation is far from clear. In fact, science cannot itself validate the existence of an external world. As the philosopher Thomas Ryckman says, in connection with Kant’s influence on Albert Einstein: “As Einstein would observe, it was Kant who first pointed out that the assumption that nature *is* comprehensible is a necessary precondition for the postulation of the real external world that physics attempts to systematically investigate. This means that the idea of the systematic unity of nature *cannot* be an empirical hypothesis but is posed *only* as a problem or task: namely, fundamental physical theory does not find but rather projects systematic interconnection into the world.” Furthermore, one should be aware that “[t]he whether such an order *really exists* is in fact meaningless, for the *only justification* any particular theory of systematic interconnection *can ever possess* is that it organizes the totality of physical observations (“sense experience”) into a comprehensively ordered and empirically adequate arrangement.” (Janssen & Lehner (Ed), 2014:379-380)

²⁸¹ Though the label “mechanistic” is not used, this paper by Reiner (et al) discusses a very similar very called “naive physics” which feature machine-like properties innate in people. They point out that “physics intuition (which is presumably drawn on by physics experts and novices alike) is “concrete” or materialistic in nature.” (p.27) Although they do not directly state it, the use of the term ‘material’ here can be understood in mechanistic, non-experiential terms. See Reiner, Miriam & Slotka, James & T. H. Chi, Michelene & Resnick, Lauren. (2000). Naive Physics Reasoning: A Commitment to Substance-Based Conceptions. *Cognition and Instruction - COGNITION INSTRUCT.* 18. 1-34. 10.1207/S1532690XCI1801_01. For more information on this topic, called ‘substance-based’ conceptions.

fell because it nourished man's crops as truly as because it was expelled from the clouds. Analogies drawn from purposive activity were freely used. Light bodies, such as fire, tended upward to their proper place; heavy bodies, such as water or earth, tended downward to theirs." Finally, even when talking about quantitative aspects of the world, purpose was also ascribed to these "Inasmuch as a heavier body tends downward more strongly than a lighter [body], it will reach the earth more quickly when allowed to fall freely. Water in water was believed to have no weight, inasmuch as it was already in its proper place." (Burt, 2003: 18) This view is no longer tenable as a scientific account of the mind-independent world, as Chomsky points out that what Newton did was that he "demolished" the mechanical philosophy. (Chomsky, 2016: 85). Nevertheless, it remains the case that people continue to experience the world through some 'mechanical scheme' as it's closely related with common-sense understanding of the world. While Chomsky is correct in point out that "...commonsense understanding can often not withstand serious enquiry." (Chomsky, 2016:122) It happens to be the *starting* point for any enquiry whatsoever. An 'experiential-world' metaphysics should take the view that human knowledge is restricted to human being's modes of interpretation, and it also must take common sense understanding as the starting point to answering the question of "what there is". *However, one must be careful in not confusing what belongs to the 'experiential-world' as opposed to what belongs to the external, mind-independent world.* What belongs in the 'external world' is best left to the sciences to determine, as it is science that manages to connect human knowledge with the knowledge of some portion of the external, mind-independent world – but what belongs in the mind-independent world is only a very small portion of what exists in the experiential-world (henceforth called MI-World and EXP-World). But what kind of things make up the world of experience, that is not based on the 'scientific image'? It is not necessarily trivial to tease out what entities make up the EXP-world.

Chomsky mentions that "If I say that one of the things that concerns me is the average man and his foibles, or Joe Sixpack's priorities, or the inner track that Raytheon has on the latest missile contract, does it follow that I believe that the actual world, or some mental model of mine, is constituted of such entities as the average man, foibles, Joe Sixpack, priorities and inner tasks?" In other words, when one looks at the world in all its complexities and difficulties, does one find entities in the world to which it is accurate to say that there is literally a person 'Joe Sixpack' to which it is correct to attribute this name/concept to? The world consists of many things, but 'Joe

Sixpack' is no such *existing* entity²⁸². Furthermore, Chomsky rhetorically asks “when the press reports a comet that a comet is aiming towards Jupiter and that lobster fishermen are overfishing in New England waters, does that mean that the writers and readers think that comets have intentions and lobsters are fish?” It would be difficult to find people who argue in favor of the idea that comets have intentions and that lobsters are fish, though again, it is easy and completely ordinary to use this kind of language in everyday life. “These are questions of fact about the structure of the mind, improperly formulated no doubt, because so little is understood²⁸³.” (Chomsky, 2000: 135) Contrary to what Strawson says concerning the difference between metaphysics and epistemology, that “one must [maintain] a sharp distinction between epistemology and metaphysics.” (Strawson, 2008: 28. Footnote 39.) One should recognize the amount of overlap between these fields on inquiry. This is not to say that there should not be a distinction between metaphysics and epistemology, there clearly should be, otherwise there would be no need for two separate fields of enquiry, but what there is in the world, both in the scientific image and in the manifest world, is dependent on what questions people have, and more importantly on the kinds of limitations human mind/brains have when investigating the world. There is no purely metaphysical content with no recourse to epistemic concerns of justification, evaluation of evidence and belief, and it would be incoherent to try to justify or evaluate any topic if no aspect of the world is being talked about. As Bryan Magee puts the matter “there are no terms in which we have any apprehension of whatever exists other than through the categories made available to us by what we are – the categories of human sense, feeling, thought and so on, and

²⁸² In fact, “Joe Sixpack” could be a quite sophisticated mental construction. As Chomsky points out in detail “The need to resist arguments from “vulgar apprehensions” holds more broadly: for such phrases as “my thoughts,” “my dreams,” “my spirit,” even “my self,” which is different from myself (= me, even though in another sense, I may not be myself these days). When John thinks about himself, he is thinking about John, but not when he is thinking about his self; he can hurt himself but not his self (whatever roles these curious entities play in our mental world).” Chomsky points out that “Inquiry into manifold questions like these, while entirely legitimate and perhaps enlightening, is concerned with the “operations of the mind,” our modes of cognition and thought, and should not be misinterpreted as holding of the “real objects that exist independently of our thought.” The latter is the concern of the natural sciences...” (Chomsky, 2016: 118-199) Clearly the world of experience is extremely rich and complicated but is not the concern of the natural sciences. With epistemic-metaphysics one of the goals is to try and articulate some of the richness of the world of experience.

²⁸³ It is only fair to say that Chomsky does not think that when it comes to higher mental faculties, it makes little sense to speculate. Chomsky states that “[t]here is no place for any a-priori doctrine concerning the complexity of the brain or its uniformity as far as the higher mental faculties are concerned.” What matter for him is to “...proceed to the investigation of the diverse cognitive structures developed... seeking to determine... the principles which govern these cognitive structures.” (Chomsky, 1979: 82) One reply here must be that although the conclusion established here does not attempt to even approximate an a priori theory of the mental, what it seeks to establish is what conceptual schemes are at play when people try to interpret the world of experience.

these are epistemological categories.” Outside of these categories, it is not possible to formulate any thought, and it is inside these epistemic constraints that any metaphysics or ontology is thinkable, “...we cannot help construing our ontological notions in epistemological terms.” (Magee, 1983: 83).

In the case of the examples given by Chomsky of ‘Joe Sixpack’ and ‘comets aiming at Jupiter’ one should be careful to try and separate entities that exist in the mind, like ‘Joe Sixpack’ with entities that have a more direct relation with the world, such as ‘comets’ and ‘Jupiter’, whereas ‘aiming’ is an attribute made by the mind in order to try and understand the world. This is not to say that mental entities such as ‘Joe Sixpack’ have no relation to the EXP-world, they clearly do, and are a component of the mind in trying to interpret the world, through what could be called ‘shortcuts’ or ways to simplify and compress facts about the manifest image, even if there is no entity ‘Joe Sixpack’ that literally exists in the world. As such, the most accurate way of seeing the world is to know that whatever there is the world is of secondary importance to what exists in the mind as experience, in terms of the accuracy of people’s knowledge. For present purposes it is only important to point out Sellar’s distinction between the ‘manifest’ Image (or ‘lived-world’) and the ‘scientific image’, and the apparent fact that there are objects in people’s mind to which there is no entity in the world that corresponds to it, such as “Joe Sixpack” or the “hectic city”, and some objects that pick out²⁸⁴ mind-independent entities such as ‘planets’, ‘atoms’ and ‘dogs’. There is of course, bound to be some gray area in these distinctions, which cannot be sharply maintained – people can speak about canines and planets in an informal sense, or in a technical sense, depending on the situation, but it is a difference that can help clear up what belongs to the world and not predominantly to the mind. It should become evident that what people take to be the ‘world’ is significantly poorer than what is to be found in the EXP-world: the mind generally and experience specifically adds a vast array of rich detail to the most mundane of observations concerning

²⁸⁴ This is not necessarily a trivial issue – determining what exists independent of human beings, however, Susan Haack articulates a coherent argument when she states that: “Before there were human beings and human languages, the English sentence “there are rocks” did not exist; so if sentences are bearers of truth and falsity, it is not the case that “there are rocks” was true before there were people, or that “there are rocks” would have been true even if there had never been people. Nevertheless, there were rocks before there were people and there would have been rocks even if there had never been people...human languages are productive, permitting the production of linguistically meaningful sentences of which we may be unable, and perhaps would be unable however long enquiry continued, to determine its truth value.” (Haack, 2003: 141)

‘buildings’, ‘streets’, ‘trees’, ‘cars’, ‘flowers’, ‘streetlamps’, ‘windows’, ‘houses’, ‘people’ and the like.

The time has come to ask Quine’s question again, and to try to give a more substantial answer than the word and concept ‘everything’. So, what is there? The main concern here has been to articulate Strawson’s ‘real materialism’, while showing, through Chomsky that the referential doctrine does not hold up in the case of human beings. The only way to get some understanding of the world that offers some law-like regularity is naturalism, is through science, whether it be physics or neuroscience. However, both physics and neuroscience have limited explanatory capacity beyond the fields they are applied on – leaving the ‘manifest image’ relatively untouched. When the metaphysical question, pertaining to the world, of ‘what is there?’ is applied in the domain of the ‘manifest image’ or lived-life, it collapses into mostly epistemic considerations, as metaphysics in relation to the scientific image is most carefully addressed by those who have considerable knowledge in the sciences, particularly physics²⁸⁵ and so long as scientists don’t make claims beyond the domain of applicability of each respective science. Once one is made aware that in the MI-world there are no such things as chairs, sidewalks, houses, pets, computers, lights, roads, emotions, morality and a vast array of other things²⁸⁶, it is not easy to make a case for ontological richness outside the mind. As Raymond Tallis points out: “As for the question as to whether objects do or do not really exist, this is truly unaskable. For there is no fact of the matter since objective truths – ontological or otherwise – exist only after objects have been brought into the frame.” (Tallis, 2005: 110)

²⁸⁵ There is good evidence to suggest that, at least for the time being, there will be no new particles or fields discovered that will play an important role in the physics underlying ‘everyday life’. As Carroll points out “The reason why we know there are no new fields or particles that play an important role in the physics underlying our everyday lives is a crucial property of quantum field theory known as *crossing symmetry*. This amazing feature helps us be sure that certain kinds of particles do not exist; otherwise we would have found them already. Crossing symmetry basically says that if one field can interact with another one (for example by scattering off of it), then the second field can create particles of the first one under the right conditions. It can be thought of as the quantum-field-theory analogy of the principle that every action implies a reaction.” Something new could come along that changes or modifies ‘crossing symmetry’, but current evidence suggests it is unlikely. Carroll (. 2017: 180-181)

²⁸⁶ As Cudworth points out, anticipating Kant “...by external sense we do but suffer from corporeal things existing without, and so do not comprehend the nature of the thing as it is absolutely in itself, but only from our passion from it.” Not only are things absolutely as they are in themselves not known, as Cudworth adds “Neither is our sense of passion immediately from the thing itself that is perceived, for then it would not be so uncertain as it is [our sense of passion], but only from local motions in that body which the soul is vitally united to, by the mediation whereof it perceives other things at a distance, *which local motions and passions may be produced when there are no such objects.*” (Cudworth, 1997: 134) The mind, under such a view furnishes the world with objects that do not exist absent the mind.

Only when a particular situation is present - and situations are epistemic concerns related to relative importance, interests, perspectives as well as cultural assumptions - it is possible to ask questions about the reality or status of ontological claims. Objects are not given in such a manner that there are a pre-established definition or modes of being as to what constitutes them as a matter of fact, as has been explained above. Since situations have infinite (but not limitless) variability, it is not possible to designate or determine the kinds of things there outside of context-specific situations. From this it should also follow that the consequence of there being no such ‘objects’ or ‘entities’ in the MI-world leads to the conclusion that there simply is no access to the world as it is in-itself, outside of people’s conception of it, which includes things such as a range of possible sights, smells, tactile sensations but also possible *range* of intelligible thoughts. This last area is necessarily obscure, since what is being talked about are the limits of thought, but there are some examples of intelligibility reaching unintelligibility. One such example would be the idea of a Supreme Being, or God, which has attributes that are not possible to comprehend. In the sciences, and in ordinary life, the concept of ‘infinity’ is only partially cognizable. There are ranges of colours and sounds which cannot be interpreted by human beings and thinking about colours or sounds outside the range people are accustomed to is not possible. Many other such examples point to the limits of intelligible thought, but it suffices only to highlight that whatever thoughts are in relation to the world, have a structural limit, though within the limit that is provided to human beings, *possible intelligible* thoughts can be infinite.²⁸⁷

As soon as the point is grasped that the manifest-world is, in large part, created by the mind the question ceases to be one of what kinds of beings there are, but instead, what is the sense that can be given to the world? A tentative answer would be, that what there is, strictly speaking, is a space of unactualized meaning-potentials, with occasional acts of realization. This space of meaning potentials could be thought of as existing because of a mental background space of intelligibility, of which only certain creatures endowed with consciousness may be granted access – the must be some mental ‘socket like’ aspect to reality which is so suited to being used, or plugged into, by living creatures, and even understood (in some instances) by beings possessing enough intellectual

²⁸⁷ An analogy that can be helpful to understand how human thoughts can be infinite in their own domain, but still be finite is given by Chomsky in relation to language: “The quest for better explanations may well indeed be infinite, but infinite is of course not the same of limitless. English is infinite, but doesn’t include Greek.” (Chomsky, 2016: 55) Likewise thoughts can be infinite, but not limitless, different and potentially more intelligent creatures, could have a different and even richer way of viewing the world.

capacity. Without this background of intelligibility, there is no knowledge possible and hence no world construction may be given²⁸⁸. Whether anything is existent without a space of intelligibility would be irrelevant because it could not be thought of, nor comprehended nor detected, and in this situation no further problem arises besides the recognition that people can only view the world the way they are so constituted to experiencing it. The ultimate answer to the question that can be asked when people look at the world and ask “what is there?” in relation to consciousness and language, is not to reply with “everything” or “things”, for this presupposes that people clearly understand what these words mean. Metaphysics as the study of the nature of the world cannot be sustained without epistemology or an epistemic metaphysics. This theory of world-knowledge or epistemic-metaphysics that attempts to describe the world *must presuppose* its intelligibility, so there must be a space or realm or field of understanding to which people’s knowledge can hope to describe. Within this ‘intelligibility space’, one can think of meaning potentials with occasional acts of realization in the following manner: These realizations can *on occasion* be called ‘facts’, but facts never exhaust any given situation because subjective feels and moods cannot be captured by them, and as Tallis points out “Facts are possibilities that have been realized: “The sum total of all facts is the sum total of all possibilities that could be realized in the history of the world. If certain facts obtain [actuality] at a particular time, other facts cannot. Once realized possibility makes another possibility unrealizable. Given that the space of possibility, the human world, is a collective product, the facts too, will be a collective product.” (Tallis, 2005: 154)

The point is straightforward, in a given situation, say, concerning a car accident and a pedestrian, either the car hit the pedestrian, or did not, if one is true, then the other fact cannot be true for the same situation. In more complex situations where the subject matter is more open, such as, what

²⁸⁸ Or if one attempts to go beyond what is given in experience, virtually no insight is to be found. In fact, Cudworth gives a plausible account of what may exist absent human beings, within a theological framework. Cudworth points out that while “...it is most true that those corporeal qualities, which [are taken] to be such real things existing in bodies without them, are for the most part fantastic and imaginary things, and have no more reality than the colours of the rainbow... and therefore are not absolutely any thing in themselves, but only relative to animals.” One could conclude that “...they do [external objects] in a manner mock us, when we conceive of them as really existing without us, being nothing but our own shadows, and the vital passive energies of our souls.” However, instead of lamenting that it is not possible to have direct, unmediated access to the world in-itself, one should consider the following scenario: “Though it was not the intention of God or nature to abuse us herein, but a most wise contrivance thus to beautify and adorn the visible material world, to add lusture or embellishment to it, that it might have charms relishes, and allurements in it, to gratify our appetites.” As the world absent human beings “...in itself, the whole corporeal world in its naked hue, is nothing but a heap of dust or atoms, of several figures, and magnitudes, variously agitated up and down.” (Cudworth, 1997: 148-149) In these circumstances, the world is incomparably richer because of the human mind, otherwise one is left with a poor and desolate image of reality.

facts pertain to a particular room, it is very difficult, if not outright impossible to answer, though even simple scenarios can be bewilderingly complex. A person could well list all the furniture and note that a room has four walls, whereas another person might include sunlight as pertaining to the room, or even a pet if the room tends to have a pet in it, though Tallis' general point remains. Tallis further points out that "Facts do not boil down to sense experience. When I check a factual assertion that there is a cat in the room by 'having a look', what I see is both more and less than what is in my assertion. I see more than the content of my assertion, inasmuch as I do not see a mere instantiation of the general concepts of a 'cat' and 'being in my room'. I see a cat with many features over and above what has been asserted... Actuality always exceeds what is asserted of it because no finite set of observations could exhaust a piece of reality" (Tallis, 2005:155)

Even the simplest of actualities can have an infinite array of possibilities, though only a select few are considered to be relevant at any given time. Furthermore, if fact A is realized or actualized, it excludes other facts by necessity. If a room has a pet in it, and furthermore this pet is a hamster, then the possibilities that there is no pet in the room, or that there might be a dog or a cat in the room does not get actualized and remains an unrealized possibility. Much of what makes a fact important, at least so far as the fact concerns the manifest world or lived-life world, belongs to the interests of the individual, even if it is admitted that meanings are often things given by groups of people. This does not mean that facts have no primacy over personal preferences or perspectives, only that what is relevant to a given situation²⁸⁹ can not be articulated beforehand, thus objects, events or anything else that must be included for a clear understanding of what happened do not come as a given. Once a situation is brought to conscious consideration is it possible to say that event A is of more relevance than event B, but at all moments, unrealized potentials²⁹⁰ are quickly

²⁸⁹ This *might* be one problem associated with Gettier's famous paper *Is Justified True Belief Knowledge?* It may not be possible to say *before* the occurrence of a particular occasion that one has proper knowledge, because one cannot compare the beliefs one has in one's head to some standard in which it would be correct to say 'this is what I believed all along, thus I always had justified true belief.' Other like Haack and Tallis think Gettier's whole thought experiment is misguided, in part because it attempts to give a definition to knowledge. This is not the place to enter into a full discussion into the problems associated with Gettier, it only suffices to point it out. For more information see Edmund Gettier's *Is Justified True Belief Knowledge?* Gettier, E. (1963). *Is Justified True Belief Knowledge? Analysis*, 23(6), p.121.

²⁹⁰ Though this does not necessitate that every possible situation is considered at all, this epistemic-ontology is not inexhaustible. Whitehead, for example, states that "Everything must be somewhere; and here 'somewhere' means 'some actual entity'. Accordingly, the general potentiality of the universe must be somewhere; since it retains its proximate relevance to actual entities for which it is unrealized." (Whitehead, 1978:46) If the universe is to include entities which are exclusively mental, meaning not atoms or electrons, then it is up to the configuration of the mind to pick out potentials, and not to a mind-independent universe.

discarded. A further point to be made is that it's quite unlikely that when one is walking on the street, one unconsciously considers not only event A, but also event B, C, D, E, F, G and so on, this would create too much noise and would make decision making and intentionality to taxing to work as smoothly as it does. It appears that when confronting similar situations, or even new ones, the mind simplifies complexity to such an extent as to bear only those relevant factors associated with current lived experience. In this case, walking on the sidewalk would warrant paying attention to cars, pedestrians and pigeons and then, further removed in order of importance, to potential robbers, loose tiles on buildings or an aggressive dog.

However, what is almost never considered is the possibility that a meteor might hit one when walking the street, or that a tree might suddenly fall or that the ground below would, without any warning, collapse. This makes sense so far as one is seeking to weave through life when considering 'what there is', and this kind of description likely applies to most scenarios in the manifest world. As there are an infinite potential of unactualized scenarios, for any conceivable event that might occur, there is far more by way of what does not become a concrete fact and remains a possibility only, which often is discarded as it brings forth no relevance to the current situation. It is, as Tallis says that "Knowing humans are connected to the world through possibilities, which do not exist in nature [because] nature is composed entirely of actualities [and not possibilities]." (Tallis, 2005: 207) In terms of lived phenomenology, what seems to come first to mind, if one agrees that the manifest world is the result of how the mind attempts to make sense of experience and sense data, and is not how the world is in itself (a variety of naïve realism), is that there is undecidability which are followed quickly by judgments. The mind cannot help but give meaning to the world²⁹¹. As Schopenhauer poetically puts the matter "The vastness of the world, which previously disturbed our peace of mind, now rests within us; our dependence on it is now annulled by its dependence on us." (Schopenhauer, 1969:205) It would be difficult to get through a single day, much less a lifetime if meaning were not given to the world by the mind.

²⁹¹ Although perhaps with a different emphasis or different theoretical aim in mind, Schopenhauer, following a similar line of thought as Cudworth, is also worth quoting again here when he describes how meaning is practically immediately constructed: "But as with the appearance of the sun the visible world makes its appearance, so at one stroke does the understanding through its one simple function convert the dull meaningless sensation into perception. What the eye, the ear, or the hand experiences is not perception; it is mere data." Furthermore, meaning is created "[o]nly by the passing of the understanding from the effect to the cause does the world stand out as perception extended in space, varying in respect of form, persisting through all time as regards matter... This world as representation exists only through the understanding, and also only for the understanding." (Schopenhauer, 1969: 12)

Beyond giving meaning to the world, so far as the manifest image is concerned, there isn't anything discernable that can be said to the question of 'what there is'. Metaphysics is a fascinating topic in philosophy: it attempts to deal with and give answers to the most important questions of human existence. However, if metaphysics is to proceed in the 21st century, it must be modified to try and capture the fact that what can be said about the manifest world does not pertain to the MI-world, but instead pertains to people's mode of interpreting the world, and this mode of interpretation is intimately related to knowledge, and the most certain type of knowledge there is, has been pointed out by Strawson many times: it is 'experience' in particular. If metaphysics can manage to proceed by giving primacy to human beings' mode of cognition, then it can yet achieve much insight into the nature of thought and hence open up, if only a little, the infinite possibilities of experience that give significance to an otherwise mysterious world. The distinction between epistemology and metaphysics would remain, however the latter must be recast with epistemic lenses, as it were. Whereas traditional epistemology would focus on justification, evaluation, coherence and reliability of knowledge, this 'new' epistemic-metaphysics would deal with the world of experience and how the mind attempts to construct this world, with no concern of what happens in the mind-independent world, for, whatever there is, whether material or even '?-ist' is first and foremost captured in the mind which contemplates it and is primarily given meaning due to the cognitive structure human beings have. If there is no strong and rich structure, there isn't any reality that is intelligible that can even be discussed. In these respects, claims related to human beings concerning statements of the kind 'all there is are atoms' or 'all there is are natural laws' would either be false or extremely misleading for the truth of reality is the other way around. What there is mental life given to people by the structure they have, and through this mental life full of emotions, surprises, literature, art, international relations, war, solidarity, colors and so on, can it be possible to get a glimpse of what may exist absent human beings in science. The consequences of this are enormous and humbling, as it should be when one is contemplating the nature of world.

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