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Panpsychism's Awakened Environment

Exploring the Consciousness-Environment Relationship
Through an Assessment of Consciousness Theories

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Abstract

Taking the view that consciousness is the qualitative, unified, subjective space of 'what-its-likeness', the present study seeks to aid in the process of establishing the most valid theoretical approach to consciousness through an analysis of dualism, physicalism, and panpsychism. On the basis of this analysis, the study explores how consciousness theory does, might, and should, in a bottom-up manner, inform assumptions regarding the nature of the consciousness-environment relationship.

The study is rooted in the analytical tradition of philosophy as it assumes logical analysis as the means of revealing falsity and truth regarding the nature of consciousness. The present analysis forms part of an on-going conceptual analysis within the analytical tradition, which seeks to refine the understanding of consciousness to the point that no counter-arguments speaks against its necessity conditions. The investigation further rests on the transcendental argument that consciousness is the indubitable fact that allows for assumptions regarding the consciousness-environment relationship. It is thus assumed that only a true theory of consciousness can lead to true assumptions regarding the consciousness-environment relationship.

To commence the assessment of the validity of consciousness theories, the study offers an analysis of the main dualist and monist approaches to consciousness. The analysis deems substance dualism invalid, as it is incapable of accounting for the interaction between consciousness and the physical, while reductive physicalism is rejected on the account that it fails to address the essence of consciousness itself. Property dualism and non-reductive physicalism are explored further, and it is argued that since both these approaches assume consciousness as an emergent phenomenon from the purely physical, the two approaches can be summated as *dual-aspect monism*. Dual-aspect monism is found to face two major theoretical challenges: The problem of interaction, and the hard problem of consciousness. An extensive analysis finds no resolve to these two problems, and dual-aspect monism is therefore concluded to be facing a theoretical dead-end.

Through the analysis of dual-aspect monism the investigation ultimately leads to the conclusion that, in order for there to be consciousness in humans, consciousness must exist at a foundational level of that which comprises it – such as suggested in panpsychism. The further analysis of panpsychism argues it to be a theory capable of overcoming the problem of interaction and the hard problem of consciousness. Panpsychism is found to face one grand challenge of its own, namely the combination problem, however, through the presentation of possible solutions to this combination problem, it is argued that its resolve is theoretically possible.

Upon the analysis of the validity of consciousness theories, it is concluded that, while much work is still needed, it seems panpsychism has significant theoretical advantages over the more commonly adhered to dual-aspect monism. When tallied up, the present study therefore deems panpsychism the framework of consciousness, which is most likely to represent its true nature.

Building on the analysis, the exploration then investigates how consciousness theories inform assumptions regarding the nature of the consciousness-environment relationship. With panpsychism offering the most promising theory of consciousness, the exploration focuses on investigating the consciousness-environment relationship inherent to the panpsychist paradigm, and contrasts this with that of the more popular dualist and monist approaches. It is shown that Descartes' substance dualism asserts consciousness as superior to the non-conscious environment. This hierarchical dualism is argued to establish the environment as 'dead' and mechanical, something, which is there to improve the well-being of conscious (human) beings. It is then shown that physicalism is in fact part of the same consciousness-environment paradigm as was established by Descartes, since physicalists too assert consciousness in a hierarchical dualism over and above a not-conscious environment.

The panpsychist consciousness-environment paradigm, which according to the analysis is the paradigm most likely to represent reality, is suggested as a true counter to hierarchical dualism, since it asserts consciousness within and throughout the environment. The investigation therefore moves to explore the panpsychist paradigm further, and consider what a paradigm shift might entail. It is speculated that a

panpsychist paradigm requires ethical reconsiderations, for example in relation to the possibility of experientiality in entities, which under the hierarchical dualist paradigm are deemed without consciousness. It is also suggested that the panpsychist paradigm has the potential to shift our conduct and our perception of 'being' in the world, making us feel more connected and humbled, ultimately leading to greater awareness, compassion, care and well-being. Rather than providing a full and definitive conclusion, the discussion leaves open an exploratory space within which future investigations can continue this important work.

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Introduction

'Environment' can be defined as "the circumstances, objects, or conditions by which one is surrounded" (environment, n.d.). In this view, one's environment is everything which is outside of one's subjectivity and hence 'I' exist to the exclusion of my environment. While environment and subjectivity are conceptualised as existing to the exclusion of one another, there is an obvious and ongoing interaction between the two, in which I constantly influence my environment and my environment constantly influences me. It thus seems that the environment is not merely something which exists outside of me, as a dichotomic 'other', but rather is something with which I am in constant exchange. This has led philosophers to argue that the subject does not "terminate merely at the fleshy boundary of our skin but rather extends out into its environment, such that organism and environment are not independent but rather *interdependent* aspects of the basic flow of (bodily) experience" (Johnson, 2017, p. 53).

Despite the intermingled nature of the subject and her environment, one very clear point of distinction seems to persist between the two, namely, between that which is one's consciousness ('me') and that which is not one's consciousness (the environment). While the environment 'enters into' the space of consciousness as 'content' (images, thoughts, feelings, physical impact, etc.), that does not change the very clear sense that one's consciousness is a unified, subjective space of 'what-its-likeness', that is, a distinctive first-person ontology (Chalmers, 1995; Nagel, 1974; Searle, 2007; Strawson, 2008). There thereby seems to be a clear consciousness-environment distinction, despite their interdependent relationship.

While the above might seem like obvious observations, an exploration of the basic theoretical assumptions underpinning these observation point to at least two major philosophical conundrums: First and foremost, is the problem that, despite consciousness arguably being our most intimately known fact about reality, no consensus regarding an encompassing theory of consciousness exists. This breeds the second question, namely, how the varying theoretical *assumptions* regarding the

nature of consciousness, both explicitly and implicitly, in a bottom-up manner, inform the understanding of the consciousness-environment relationship. These conundrums are clarified further in the following:

The vast majority of contemporary scholars adhere either to a dualist or physicalist theory of consciousness (Bourget & Chalmers, 2014, p. 476). Physicalist theories argue that everything in the world, including consciousness, exists within a singularity, the nature of which is fundamentally physical. Put simply, the major theoretical challenge facing physicalists is that in their attempt to account for consciousness in purely physical third-person terms, they seem to neglect accounting for the very essence of consciousness itself. There thus seems to be a ‘magical leap’ in physicalist theories from not-consciousness (purely physical) to the emergence of consciousness – this *explanatory gap*, has famously been coined the *hard problem of consciousness* (Chalmers, 1995, p. 3). Meanwhile, dualist theories of consciousness posit a (ontological) distinction between the purely physical and consciousness. The dualistic approach to consciousness faces *the problem of interaction*; a seemingly insolvable problem of how it is possible for two ontologically distinct aspects of reality to influence one another.

While the dualist and physicalist approaches are often presented in the consciousness literature as the dominating and opposing frameworks, the quest to overcome ‘the hard problem of consciousness’ and ‘the problem of interaction’ has recently drawn scholars such as Strawson (2008, 2016), Chalmers (2016a), Goff (2016), Blaumauer (2013), Skrbina (2013), and Seager (2016) to panpsychist conclusions regarding the nature of consciousness. Briefly put, panpsychism is the thesis that consciousness exists as a *fundamental* and *ubiquitous* entity of the natural world (Goff, 2009, p. 289). At the basic level, consciousness is thus considered a fundamental building block of what is, alongside other fundamental properties such as mass, charge, and spin (Blamauer, 2013, p. 102). While panpsychism promises a theoretically eloquent way of sidestepping the hard problem of consciousness and the problem of interaction (since the problems simply do not apply to the framework), it is not without problems of its own. Particularly, the problem of *combining* fundamental

micro-conscious entities within macro-scopic entities (e.g. humans) poses a threat to the validity of panpsychism.

As should be clear from the above, no wider consensus exists regarding what framework most reliably represents the true nature of consciousness. The assumed nature of consciousness thus *varies* depending on the theory subscribed to, and since consensus regarding a resolve of the theoretical problems facing consciousness theories remains to be seen, no one theory should be blindly assumed fact. This has major implications, not only for the understanding of what 'my own' unique being is, but for assumptions regarding the nature of reality and my place in it more broadly. For since physicalism, dualism, and panpsychism all suggest different ways of understanding consciousness, they each implicitly influence assumptions regarding the nature of the (relationship with the) environment too. Panpsychists for example, assert consciousness to be everywhere and as a part of everything throughout the universe, while dualists and physicalists assert consciousness to be something unique to humans and probably some animals (e.g. Damasio, 2010), while the rest of the environment is considered 'dead' – non-conscious. This example represents a very complex shift in paradigm, one that would unquestionably alter our phenomenological perspective, our thinking and behaviour, in very intricate and profound ways.

An example, which can add some meat to the skeletal claims offered above, is suggested in an empirical study by Vining, Merrick and Price (2008), who found that the fact that people in the western industrialised world increasingly and implicitly perceive themselves as separate from their environment, has implications for values, attitudes and behaviours, for example the degree to which one behaves in an environmentally sustainable way (p. 1-3). Further to this, Seymour (2016) provides a review of approaches that explore the causal link between changes in human health and changes in human-nature relations, in which he highlights the different moral approaches to making sense of one's surroundings as a catalyst (p. 5). These studies highlight the profound significance of the human-environment relationship for the well-being of the individual human. For this reason, the human-environment relationship is at the basis of most research, including neuroscientific, psychological,

biological, pharmaceutical, social, technological, and cultural studies. By investigating, describing, and prescribing the optimal human-environment conditions, quantitative and qualitative studies thus (seek to) create value in terms of helping to optimise well-being and reduce suffering for individuals.

As outlined in the above, assumptions regarding the nature of consciousness lead to assumptions regarding the consciousness-environment, which – not only in a phenomenological felt sense - but also in a very practical sense – is found to have major implications in the world. With different people, explicitly and implicitly, adhering to *different* understandings of consciousness, a shift in the consciousness-environment paradigm will for some be necessary in extension of establishing a valid theory of consciousness. If, for example, a researcher builds consciousness-environment related studies upon the belief that dualism represents the true nature of consciousness, but dualism turns out to be false, a shift in her understanding of reality, from the bottom-up, is required, whereby her research should become better aligned with the true nature of things. In other words, when it comes to theories of consciousness, only one can represent its true reality, and therefore this one should be the theory upon which assumptions regarding the consciousness-environment relationship are build. Before a valid theory of consciousness has been established, we are thus groping in the blind when attempting to make sense of our own consciousness in relation to, and as distinctive from, the environment. The present study seeks to aid in the process of establishing a valid theory of consciousness, whereby assumptions regarding the consciousness-environment relationship can be informed and aligned with the truest possible nature of reality. In this quest, the study will assess the validity of the main theories of consciousness, in hopes to determine the one most likely to represent the true nature of consciousness. On the basis of the assessment of the validity of consciousness theories, the study will then commence an exploration of how the consciousness-environment relationship is being and should be assumed.

Problem Statement

Attempting to establish the most valid theoretical approach to consciousness through an investigation of dualism, physicalism, and panpsychism, and on this basis assessing how consciousness theory does, might, and should, in a bottom-up manner, inform assumptions regarding the nature of the consciousness-environment relationship.

Method

The aim of the present study is to aid in the process of investigating and developing a sound theory of consciousness, which, in a bottom-up manner, can inform the understanding of the consciousness-environment relationship. Here, the term ‘bottom-up’ refers to the process whereby most basic theoretical assumptions about reality determine less basic theoretical assumptions. Consciousness theories are thus assumed to be at the lowest hierarchical level of the theoretical hierarchy that determines the assumed consciousness-environment relationship. The thesis is that coming closer to understanding the true nature of consciousness, and thereby the consciousness-environment relationship, will allow for conduct more aligned with such truth, which will in turn lead to increased well-being for the individual.

The present study is rooted in the analytical tradition of philosophy as it assumes logical analysis the means of revealing falsity and truth regarding the nature of consciousness. As such, the present analysis will form part of an on-going conceptual analysis within the analytical tradition, which seeks to refine the understanding of consciousness to the point that no counter-arguments speaks against the necessity conditions of such an understanding.

In line with the Kantian use of the term, the present study assumed consciousness to be a *transcendental*, necessary condition of experience – in fact; it is assumed the very space of experience itself. Taylor (1978) suggests that an *argument* is transcendental, if it departs with some feature of our experience, which is found “indubitable and beyond cavil” from which conclusions regarding “the nature of the subject or his position in the world” can be drawn (p. 151). This is done in a regressive

manner, in which the specific nature of the subject or her position in the world can only be so in effect of the indubitable feature of reality. The argument that the understanding of the consciousness-environment relationship is founded on theoretical assumptions regarding the nature of consciousness, can therefore be understood as resting on the transcendental argument that consciousness is the indubitable fact, which allows for consciousness-environment relationships in the first place. One's theoretical understanding of consciousness is thus assumed to determine one's understanding of the consciousness-environment relationship – regardless of whether such theoretical assumptions have been explicitly considered or not.

The study will consist of five main chapters. To offer clarity over the analysis, which will unfold, the following will provide an overview of these five chapters, as well as introduce some of the key literature and theories employed:

Chapter 1: The first chapter of the study seeks to position the analysis by offering a conceptualisation of consciousness as well as a problem clarification. Building on the work of scholars such as Nagel (1974), Searle (2007), Chalmers (1995), and Strawson (2008), consciousness will be argued to be *qualitative, unified, subjective, and intentional*. It will be concluded that consciousness is the subjective, first-person space of 'what-its-likeness' or experientiality. Following from the conceptualisation, and in extension of the introduction, the problem clarification then aims to illustrate that theories of consciousness are at the basis of assumptions regarding the consciousness-environment relationship. It is further posited that since only one theory of consciousness can represent the true nature of consciousness, the assumed consciousness-environment relationship should be grounded in this one true theory. These claims will be supported by four practical examples, which demonstrate varying ways of assuming the border between consciousness and the environment.

Chapter 2: Engaging the work of scholars such as Descartes (1641/1911), Searle (2007), Bourget and Chalmers (2014), Mianji (2015), Skrbina (2013), Kim (2005),

Davidson (2001), Lycan (2013) and Sturm (2012), the second chapter will present the dualist and monist theoretical approaches to consciousness and begin the exploration of the validity of these frameworks. Specifically, this chapter will explore the two main dualist approaches to consciousness; substance dualism and property dualism, followed by the two main monist approaches to consciousness; reductive and non-reductive physicalism. Ultimately substance dualism will be dismissed on the account that it is incapable of accounting for the interaction between consciousness and the physical, and reductive physicalism will be rejected on the account that it fails to address the essence of consciousness itself. This leaves property dualism and non-reductive physicalism for further analysis. It will be posited that since both property dualism and non-reductive physicalism assume consciousness an ontologically distinctive property, which *emerges* from the purely physical, the two theories can be summated under the framework of *dual-aspect monism*.

Chapter 3: The third chapter will provide an in-depth analysis of the validity of the framework of dual-aspect monism, through an investigation of its two main theoretical problems. Firstly, drawing on the work of Searle (2007), Damasio (2010), Kim (1999), Robinson (2010) and others, the problem of how (causal) interaction between consciousness and the physical is possible in dual-aspect monism is discussed through an investigation of downward causality and epiphenomenalism. Secondly, drawing on the work of Chalmers (1995), Dennett (1991, 2018), Searle (1995, 2007), Skrbina (2013) and others, the question of how consciousness can brutally emerge from the purely physical is discussed – a question famously known as *the hard problem of consciousness*. No satisfactory solution to ‘the problem of interaction’ or ‘the hard problem of consciousness’ is established through the analysis, it is therefore concluded that dual-aspect monism is facing a seeming theoretical dead-end. Drawing on the work of Strawson (2008), the investigation then turns to consider the theoretical implications of the hard problem of consciousness in more detail.

By method of elimination this will lead to the logical conclusion that in order for there to be consciousness in humans, which we know that there is, consciousness must exist at a foundational level of that which comprises consciousness – such as suggested in the framework of *panpsychism*.

Chapter 4: Drawing on the work of Goff (2009), Blamauer (2013), Seager (2016), Strawson (2008, 2016) and Chalmers (2016a, 2016b) the fourth chapter will provide an exploration of panpsychism as a valid theory of consciousness. Upon deducting the framework of panpsychism as the logical consequence of the theoretical challenges facing dual-aspect monism, Russelian constitutive panpsychism is asserted as the sub-theory of panpsychism best suited to overcome the problem of interaction as well as the hard problem of consciousness. The biggest theoretical challenge facing (Russelian constitutive) panpsychism, namely, *the combination problem*, is then considered. Possible solutions to the combination problem are offered as evidence that, while much research is still needed, a resolve to this problem is deemed theoretically possible. Specifically, Skrbina's (2013) 'mind space' reply and Nagasawa and Wager's (2016) 'priority cosmopsychism' will be explored. It is concluded that while 'the combination problem' is a legitimate theoretical challenge, it is not a theoretical dead-end to the same extent that 'the problem of interaction' and 'the hard problem of consciousness' is for dual-aspect monism. Based on the analysis conducted in chapters 2-4, a sub-concluded is offered, which suggests that panpsychism has significant theoretical advantages over the more commonly adhered to framework of dual-aspect monism. When tallied up, panpsychism will therefore be concluded the framework of consciousness most likely to represent the true nature of consciousness.

Chapter 5: The fifth and final chapter of the study will commence the exploration of how consciousness theory does, might, and should inform the assumed consciousness-environment relationship. In extension of the analysis

conducted in chapter 2-4, the implicit consciousness-environment relationship in panpsychism is contrasted with that found in dualism and monism. Drawing on the work of Mathews (2003) and Kessler (2019), it will be argued that all dualist and monist frameworks of consciousness are essentially grounded in Descartes' (1641/1911) hierarchical dualist paradigm, which places consciousness as superior to the non-conscious 'dead' environment. The panpsychist consciousness-environment paradigm will be argued to be the true counter to this hierarchical dualist paradigm since it asserts consciousness in all there is. With panpsychism established as the most valid theoretical framework of consciousness, it will be speculated that a shift to the panpsychist paradigm of the consciousness-environment relationship will allow us to conduct thinking, behaviour, theory, and research more aligned with the true nature of reality. Questions concerning the implications of a paradigm shift to panpsychism are unfolded and discussed, for example in relation to the potential ethical consequences and the positive implications for feelings of connectedness and well-being. The discussion provides no definite answers but instead seeks to open up a space within which future work can take place. Finally, a conclusion will be offered.

1

Positioning the Problem

The following chapter will position and clarify the investigation that the present study seeks to undertake. Firstly, a conceptualisation of consciousness is offered, which will assert the *prima facie* view of consciousness as it is assumed for the duration of the study. Following this, a problem clarification seeks to further contextualise the thesis that theories of consciousness are at the basis of assumptions regarding the consciousness-environment relationship, and that a valid and encompassing theory of consciousness should therefore be established.

Conceptualising Consciousness

While consciousness is one of our most intimately known facts about existence, inconsistency regarding its exact definition is found within academic literature. A thorough conceptualisation of the term as it is understood in the present study is therefore needed. Building on the work of scholars such as Nagel (1974), Searle (2007), Chalmers (1995), and Strawson (2008), the present study takes the view that consciousness is the *qualitative, unified, subjective space of 'what-its-likeness'*. In order to clarify and justify this view, four key aspects of consciousness – subjectivity, qualia, unity, and intentionality – will be outlined respectively. The specific framework for conceptualising consciousness loosely follows the work of Searle (2007), however, other philosophers and theories will be engaged throughout to provide the content of each of the four aspects. Note that while each aspect is presented individually, great overlap exists between them and they should therefore not be thought of as distinct

domains but rather as ways of describing properties of the same whole, that is, consciousness.

Consciousness is Subjective

In the seminal paper 'what is it like to be a bat?' Nagel (1974) asks the question of whether "any method will permit us to extrapolate to the inner life of the bat from our own case" (p. 438). In other words, is there any way that we, as human beings, with human minds, can understand what it is like to be a bat. While science has helped us understand the bats high-frequency shrieks and subsequent echoes as means to navigate their environment, is there ever really a way to understand what such a reality would feel like from the *'inside'*? Nagel (1974) convincingly argues that there is not. For even though my human cognition permits me the imagination to place myself within such a 'bat-world', this is still done from *my* unique perspective. I cannot *qualitatively* understand what it is like for the specific bat, to be that bat (Nagel, 1974, p. 439). Nagel's (1974) argument is not one against the search for objective, third-person aspects of reality altogether, rather, it is an argument against the belief that such a search could ever allow us to understand fully the 'what-its-likeness' of another. For, as he asks, "what would be left of what it was like to be a bat if one removed the viewpoint of the bat?" - presumably nothing more than the assumed way experience *appears to the bat*". Nagel (1974) thus highlights that 'what-its-likeness' is uniquely subjective; something, which can only be *known* from a first-person perspective, and something, which is only indirectly available through third-person perspectives (Blanquet, 2011, p. 246).

Using the example of a bat-experientiality, Nagel (1974) elucidates the looming gap between objective third-person measures of experience and the subjective 'inside' of experience. This explanatory gap has since been coined 'the hard problem of consciousness' by Chalmers (1995, p. 3), and arguably remains the biggest challenge facing consciousness scholars. The hard problem of consciousness will be treated in much greater detail later in this paper, for now, the point to take away, is that there is

something uniquely subjective about consciousness, a ‘what-its-likeness’, which cannot in any obvious way be *known* from the ‘outside’.

Consciousness has Qualia

Arguing that consciousness is qualitative follows naturally from the claim that it is subjective. In fact, it seems impossible to talk of one without the other, since consciousness is subjective in effect of experience being qualitative (McLaughlin, 2016, p. 5). The qualitative features of consciousness are commonly referred to as *qualia* (singular; *quale*). Qualia can be defined as “the introspectively accessible phenomenal aspects” of experience, such as “the salty taste and crunchy texture of potato chips, [or] the unmistakable smell of dogs after they have been in the rain” (Koch, 2004, p. R496). Qualia are thus, simply put, the *specific* subjectively experienced qualities that accompany any experience. Dennett (1988) has argued that the term ‘qualia’ is theoretically vague and so “thoroughly confused” that attempting to use it in any meaningful way is pointless (p. 382). Dennett’s critique of the term being vague does, to some extent, ring true for the present use of the term too, since qualia is conceptualised very closely to subjectivity and consciousness itself. Despite this potential critique, it is argued that ‘qualia’ is still relevant to consider in its own right, because it helps us understand a fundamental aspect of consciousness, which is otherwise difficult to articulate. To summarise; the present study does not, at its onset, understand qualia as an ontologically distinctive ‘sub category’ of consciousness, but rather as a descriptive term, which helps put into words and emphasise the certain qualitative phenomenal ‘raw feel’ of consciousness.

A famous thought experiment, the so-called ‘knowledge argument’, first proposed by Jackson (1982), exemplifies the way in which ‘qualia’ can help us articulate specific features of conscious experience. Jackson (1982) asks us to imagine a brilliant scientist by the name of Mary, who is “forced to investigate the world from a black and white room *via* a black and white television monitor” (p. 130). Mary learns everything there is to learn about colour from within the black and white room. The question is now whether Mary, when leaving the black and white room for the first

time, and, for example, seeing a red apple outside the door, learns anything new about the colour red or not. Jackson (1982) argues that Mary does indeed learn something new, something, which the purely physical understanding she had previously does not capture, and something, which can only be accessed through her own direct first-person experience (p. 130). This something is, according to Jackson (1982), *qualia*. Aligned with Jackson (1982) the present study views qualia as the *unique* subjective experiences one has when experiencing. In this view, Mary's experience of the red apple, at that very moment in time, is qualitative in a way only she has access to.

It is important to note that the 'knowledge argument' as formulated by Jackson (1982), was offered as evidence against the physical reduction of consciousness. Jackson (1982) argues that because Mary learns something new when leaving the black and white room "her previous knowledge was incomplete. But she had *all* the physical information. *Ergo* there is more to have than that, and physicalism is false" (p. 130). This conclusive reasoning has been criticised on the account that if Mary *truly* knew *everything* there was to know about the physical nature of the colour red (also taking into account future scientific technologies), she would not learn anything new from seeing the red apple. The dispute over the more specific theoretical consequences of the 'knowledge argument' speaks directly into the larger debate concerning the validity of varying theoretical approaches to consciousness – that is, the focus of the current study. Hence, this dispute will be treated in more detail later in this paper. Meanwhile, the present *conceptualisation* takes a less conclusive stance than Jackson (1982) and (for now at least) regards the question of the specific theoretical consequences of the 'knowledge argument' unanswered. That being said, it should still be clear that qualia, as it is used in the present conceptualisation, further illuminates the seemingly obvious gap between first- and third-person experiences. A comprehensive theory of consciousness should therefore, in one way or another, be able to account for qualia as a first-person phenomenon.

Consciousness is Unified

When assessing the fundamental nature of consciousness, we find that it is experienced as one unified space of experience. When Mary sees the red apple for the first time outside the black and white room, her subjective qualia of the red apple are (part of) one conscious state; her whole conscious field in that particular moment. Searle (2007) illustrates the significance of conscious experience as unified, by asking us to imagine splitting our conscious experience into 15 distinctive parts. In doing so, we find that we do not end up with 15 parts in a single consciousness, but rather 15 different conscious fields altogether (p. 170). If we imagine that the 15 parts were not 15 distinct consciousnesses, but rather 15 parts of one whole experience, there would only be 1 consciousness. This is so because consciousness, by definition, is one unified point of experientiality.

While Searle's reasoning seems easy to accept, it should be briefly mentioned that the level and degree of unity in consciousness is debated across the literature. This is particularly evident in the philosophical discussion of the seeming disturbances of unified consciousness found in conditions such as anosognosia, schizophrenia, dissociative identity disorder, and split-brain patients, where the ways and degrees in which consciousness is unified are questioned (for an extensive overview see Bayne, 2010). Despite such disputes however, there seems to be a general consensus that there is, at minimum, a phenomenological sense in which consciousness is unified (e.g. Bayne, 2010, p. 10-11). In line with this, the present study assumes unity a fact of subjective (phenomenological) experience, a fact, which must be accounted for by any comprehensive theory of consciousness.

At first glance, the experienced unity of consciousness may seem like a trivial challenge for consciousness theories. This however, is far from the case. The existence of *one* whole consciousness from an assumed multitude of smaller 'building blocks' remains one of the greatest theoretical challenges facing several contemporary theories of consciousness. This so-called 'combination problem' of consciousness will be introduced and treated in much greater detail later in this paper, particularly in relation to the prospective theory of panpsychism.

Consciousness is Intentional

Searle (2007) argues that “[i]f I see or think about an object, then my conscious experience is directed at or about the object; it has that object as its intentional object” (p. 170). In line with Searle (2007) the present claim that consciousness is intentional refers to the fact that consciousness is *directed at something* or *about something*. (The intended meaning of intentionality should therefore *not* be confused with the more common use of the word as a means to describe something ‘being done on purpose’) (Cavanna & Nani, 2014, p. 17). Searle (2007) has argued that not all states of consciousness are intentional (offering ‘undirected anxiety’ as an example) (p. 170), but because such differentiation is less relevant to the research topic at hand, this line of inquiry will not be pursued further in the present study. For present purposes, a broader and more loosely defined use of intentional consciousness will therefore suffice. As such, the intentional nature of consciousness is simply taken at face value, as a way to describe the fact that consciousness is (generally) about *something*. Of course, it is in effect of this ‘*aboutness*’ that qualia exist (at least if we disqualify the idea that qualia can be about actual nothing) and that we have a subject-environment relationship at all.

Bringing it Together: Consciousness as the Space of Existence

As has been argued in the above, the present study understands consciousness as the subjective, qualitative, unified space of experience, the ‘place’ of ‘what-its-likeness’ at any given moment. In a sense, it could be argued that this is a narrow view of consciousness as it leaves out related mind phenomena such as memory, feelings, attention, and thought. That is not to say that these mind phenomena do not exist or present in consciousness, but rather *that they do just that*, they ‘*enter*’ into the space of consciousness but they are not part of consciousness itself. To clarify, other mind phenomena, take for example ‘thinking’, plays an important role in *what* ‘enters into’ the space of consciousness; likewise, consciousness makes thinking *thinking* in effect of thoughts becoming salient. Nevertheless, the ‘pure’ consciousness investigated in the present study is, *prima facie*, assumed to be stripped of these phenomena. In sum,

consciousness is what makes *all* experience possible; it is, in the Kantian sense of the term, transcendental. And in this view, consciousness is arguably not narrow at all. Note that in addition to the term 'consciousness', the terms 'experience', 'experientiality', 'subjectivity', and 'what-its-likeness' will occasionally be used throughout this paper to encompass the present conceptualisation.

Problem Clarification

Upon the above conceptualisation it should be clear that consciousness is the space of *experientiality itself*. Imagining a universe without the existence of such experientiality, would thus mean imagining a universe, in which everything that happens is left in the dark – unexperienced by 'anyone' – so to speak. As evidenced by an ever-growing body of literature in consciousness studies, there is at present no agreed upon theory which explains the nature of consciousness. In other words, the questions of why and how there exists conscious, unified, subjective spaces of experience, and how such spaces relate to their surrounding world, remain unanswered. This leaves the nature of consciousness as one of the biggest conundrums within the philosophy of mind. In the quest to aid in the determination of the theory of consciousness most likely to represent the *true* nature of consciousness, an extensive analysis of the *validity* of the dualist, physicalist, and panpsychist theoretical approaches to consciousness is offered in chapters 2-4 of this study. For now, it suffices to say that a *consensus* regarding one theoretical approach seems far out of reach, and the assumed nature of consciousness therefore *varies* depending on the theoretical framework alluded to.

The fact that there is no agreed upon theory of consciousness is highly relevant because assumptions regarding the nature of consciousness must prescribe varying ways of making sense of the consciousness-environment relationship. This is the case, for example, in relation to the way in which we draw the border between the subject and her surroundings, the way in which we perceive the moral and ethical status of the environment, and the way in which we assert the human subject in the cosmos. In a *bottom-up* manner, one's assumptions regarding consciousness thus dictate and limit one's practical level of conduct, for example in terms of the thinking and language that

one is implicitly permitted. Adhering to an invalid framework of consciousness will thus (in some way and to some extent) misalign one's conduct and worldview with the true nature of reality.

A demonstration of some assumed borders between subjectivity and the environment offers support for the above thesis, by demonstrating variability in place and degree of distinction between consciousness and its surroundings. This is an obvious point for practical demonstration, since drawing the distinctiveness between consciousness and the environment varies in accordance with the assumed nature of consciousness. Note that the following demonstration does *not* serve to specify what the differences are between theoretical approaches to consciousness, nor will it attach specific theories of consciousness to any of the examples offered. The rather humble aim is instead to inspire thinking and illustrate *that* a difference in approaches to consciousness and its relation to the environment exist at all. To clarify, four examples of the assumed borders of subjectivity are offered:

1. The first example is found in a cultural study coined 'Skin: On the Cultural Border between Self and the World'. In this work, Benthien (2004) investigates the significance of skin as the *symbolic* border between subjectivity and the 'outside environment' in literature, philosophy, art, and science. Ultimately, the work concludes that skin:

... serves both as a representation of the whole and as that which conceals it. On the one hand, skin ... is a stand-in for 'person', 'spirit', 'body', or 'life;' that is to say, it is a synecdoche for the human being. Yet at the same time ... skin functions as the other of the self, by representing its cover, its prison or mask, its medium of communication with the world. (Benthien, 2004, p. 23)

Benthien (2004) thus concludes skin to be a representation of that which encompasses the subjectivity, while also being a representation of, and

meeting with, the surrounding environment. In a cultural sense then, the skin seems to be the meeting point of the objective; the physical, outside environment, and the subjective; the inside conscious 'experiencer'.

2. A second example of the border between consciousness and the environment is found in the varying nature of the language we use to think and talk about our subjective conscious experience in relation to the 'outside world'. One of the differences between the Japanese and the English language exemplifies this: Upon placing my hand under a tap of running water, the English language permits me to make an empirical observation about the water alone, such as for example 'the water is cold'. The Japanese language however, does *not* allow for such empirical observations *independent* of my own conscious experience of the water feeling cold on my hand. To clarify: When making an observation about the temperature of the water in Japanese, one *simultaneously* makes an observation about the temperature of one's own hand. The Japanese 'mizu ga tsumetai' thus both means that the water is cold and that I experience my hand as cold – in other words, no hard border between the water and the hand which 'feels the cold' is assumed. For an outsider of the Japanese language, this difference is difficult to comprehend, and even articulate, nevertheless, it should be clear that this example illustrates a significant difference in the implicitly assumed border between the conscious experiencer and the external world, drawn by the language employed.
3. The third example which will be offered, is given in a study by Bayne and Carter (2018) titled 'dimensions of consciousness and the psychedelic state'. In their paper, Bayne and Carter (2018) gather and review studies which investigate the reported experiences of 'self' under the influence of the psychedelic substances of psilocybin and LSD. It is concluded that during psychedelic experiences "subjects often experience a breakdown in the perceived boundary between themselves and their environment, a phenomenon that is often

termed ‘ego-dissolution’” (Bayne and Carter, 2018, p. 17). For many, the experience of ego-dissolution is found to have lasting effects on the perceived boundaries between consciousness and the environment, leading some to conclude “that the experience of ego-dissolution isn’t an illusory experience, but instead involves a new and important insight into reality” (Bayne and Carter, 2018, p. 18). As such, personal experiences might alter the way we perceive the nature of the consciousness-environment relationship.

4. The fourth and final example is picked out of a heap of studies and theories from within the physical sciences, which investigate brain structures and processes as that which is, or gives rise to, consciousness. In a study coined ‘Consciousness as a Physical Process Caused by the Organization of Energy in the Brain’, Pepperell (2018) argues that “[c]onsciousness occurs because there is something it is like, intrinsically, to undergo a certain organization of actualized differences in the brain” (p. 1). In this view, consciousness *emerges* from the physical brain, hence, no brain, no consciousness.

As stated previously, the above examples serve only to support the thesis that there are different ways of assuming the nature of consciousness, hence countless other and more complicated, examples and analyses could have been provided. The examples demonstrate that once we take a closer look at the underlying assumptions regarding the nature of consciousness, we find that these dictate different ways of thinking about the subject in relation the ‘outside world’. These assumptions of consciousness thereby dictate the very conduct one is allowed. If, for example, a researcher has had a personal experience of ego-dissolution, she may be more inclined to ask questions in her research concerning a cosmic common consciousness, and she will likely be less inclined to assume consciousness confined solely to the physical processes of the brain. To provide another example, we can imagine that a native Japanese researcher, who conducts a psychological study on the effects of architecture on subjective well-being, may be more inclined to think of the subject and the architecture as inextricably

connected, simply in effect of his native language. An important point to note here is that while some individuals, for example certain academics, or Buddhist monks, have awareness of the framework of consciousness that they adhere to, most will *blindly* adhere to assumptions which are *implicit*, not only in the person herself but also within the society, culture, language, and historical period that she pervades (Vining, Merrick & Price, 2008, p. 1-3). Those who have never considered consciousness theory before, are thus at least as influenced by implicit beliefs concerning the nature of consciousness as anyone else is. In sum, we find that the four studies offered above, which in different ways explore the subject-environment relationship, are not grounded in one agreed upon truth concerning the nature of consciousness. Instead, they are founded on varying, often *implicit*, frameworks, which cannot all be aligned with the *actual* reality of consciousness.

The fact that the varying (implicit) assumptions regarding the nature of consciousness must be further from, or closer to, the true nature of consciousness, is problematic because they thereby lead to assumptions about reality, which are more or less aligned with *actual* reality. This is problematic not only because it is surely the goal of knowledge and conduct to be *grounded in* as true an image of reality as possible, but also because we must assume that conduct aligned with the true nature of events will lead to increased well-being and reduced suffering in the world. If this claim is not immediately true to the reader, one need only take a quick glance at any abstract, of any study, which in some way investigates the subject-environment relationship, to see that the aim of such a study will be to investigate and/or articulate a truth which can lead to some improvement in the well-being of individuals. If conduct is fundamentally in line with the most basic truth about the consciousness-environment relationship, it is difficult to imagine how this would not be vastly more beneficial to the human race, both now and in the future, compared with conduct which takes us down a path which is out of touch with such a fundamental truth. This illustrates the need to investigate and ultimately steadfast the most valid theory of consciousness.

While analysing and understanding the specific ‘consciousness paradigms’ underlying specific branches of research is an important endeavour, the goal of the present study is wider: First and foremost, chapter 2-4 of this study seeks to further consciousness studies and bring the field closer to understanding the true nature of consciousness. The hope is that by offering insight into the validity of consciousness theories, the assumed subject-environment relationship may, in a *bottom-up* manner, be altered to become more aligned with the true nature of consciousness. In other words, by better understanding the true nature of consciousness, contemporary paradigms of the consciousness-environment relationship may shift. The second aim of this study is therefore to begin the exploration of what such a paradigm shift might entail, such an exploration is given in chapter 5.

2

Dualism & Monism

To commence the exploration of the validity of consciousness theories, an overview of the dualist and monist theoretical approaches to consciousness is needed. Exploring monism and dualism as counters, will inevitably highlight their main theoretical shortcomings, whereby it should become clear why the dualism vs. monism debate prevails in consciousness literature today. While dualism and monism are initially assumed distinct and opposing theoretical frameworks, it will become clear from the analysis that the specific sub-theories of consciousness rarely offer a perfect fit within just one framework. In other words, the antinomic ‘either or’ thinking inherent to the monism vs. dualism debate, often crumbles once the specific approaches to consciousness are placed under scrutiny. In addition to this, it will be argued in chapter 5 of this study that dualism and monism, rather than being true countering paradigms, are in fact based on the same implicit assumptions regarding the consciousness-environment relationship.

Dualist Theories of Consciousness

Dualist theories of consciousness argue for an ultimate distinction between the mental (consciousness) and the physical. Dualism thus posits that reality is comprised of two aspects, neither of which is reducible to the other. The degree and point of distinctness between the two aspects in dualist theories, varies depending on the sub theory engaged. Substance dualism and property dualism are often considered the main two dualist approaches to consciousness and these are therefore the theories

considered in the following. Note that other variations of dualism, such as interactionism and parallelism, will not be unfolded further in the present.

Substance Dualism

Substance dualism, often dubbed 'Cartesian dualism', can be traced back to the work of 17th century philosopher Rene Descartes (1596-1650). In his work 'Meditations on a First Philosophy', Descartes (1641/1911) sets out to discover what can be known with epistemic certainty. By method of radical doubt, Descartes (1641/1911) refuses to accept anything as ultimate truth, unless it is found to be clearly and distinctly true. Through an introspective investigation of a piece of wax sitting before him, Descartes (1641/1911) concludes that what is clearly and distinctly true about his experience of the piece of wax, is the fact that there is a conscious 'me' that is experiencing:

For if I judge that the wax is or exists from the fact that I see it, it certainly follows much more clearly that I am or that I exist myself from the fact that I see it. For it may be that what I see is not really wax, it may also be that I do not possess eyes with which I see anything; but it cannot be that when I see, ... when I think I see, that I myself who think am naught. (p. 13)

In other words, Descartes (1641/1911) concludes that since there is something it is like to subjectively experience, irrespective of the truth of that which is experienced, what can be clearly and distinctly known about reality is the existence of his own subjective mind (consciousness).

Meanwhile, Descartes (1641/1911) argues that the physical (and hence bodily) world, given to – or forced upon – the immaterial conscious mind by way of perceptions; senses and feelings, is subject to illusion and therefore cannot be clearly and distinctly known as true (see for example p. 27-28). Further to the fallacies of perception discovered through his investigation of illusions, Descartes (1641/1911) argues that "there is a great difference between mind and body, inasmuch as body is by nature always divisible, and the mind is entirely indivisible ... I cannot distinguish in

myself any parts, but apprehend myself to be clearly one and entire” (p. 26). The deceptive nature of the physical world is thus not the only thing, which separates it from the distinctively knowable nature of consciousness; there is also a major difference in the very nature of the two elements, with the physical being of a fundamentally divisible nature, while the mind is of a fundamentally unified indivisible nature. Based on these findings, Descartes (1641/1911) concludes that reality consists of two *distinct substances*: The extended physical matter (*res extensa*) on one side, and the subjective thinking matter of mind (consciousness) (*res cogito*) on the other, and hereby, substance dualism as we know it, was Born.

Descartes’ (1641/1911) view of experience as being fundamental and unified, is in line with the conceptualisation of consciousness offered previously in this paper. Through his work, Descartes (1641/1911) thus rightfully, and importantly, pointed out the mystery of first-person experience. However, the theoretical conclusions that Descartes (1641/1911) draws concerning the nature of consciousness from this insight, face such grand theoretical challenges that they have largely been discarded by contemporary philosophers. One of these challenges is the problem of interaction, which will be discussed in the following.

The Problem of Interaction

The absolute separation of consciousness and the physical, leaves substance dualism facing a big theoretical problem, namely that of *interaction*. For if there exist two distinct substances in the world, such two substances cannot (in any obvious way, at least) have a point of interaction. In other words, they must, by definition, be *completely* separated from one another, and hence the physical cannot affect consciousness, and vice versa.

Descartes (1641/1911) himself grappled with the question of the causal connection between body and mind. On the one hand, he stated that “I am not only lodged in my body as a pilot in a vessel ... I am very closely united to it, and so to speak so intermingled with it that I seem to compose with it one whole” (Descartes, 1641/1911, p. 29), while on the other arguing that mind “is entirely and absolutely

distinct from my body, and can exist without it” (Descartes, 1641/1911, p. 28). Descartes (1641/1911) thus maintains consciousness to be distinct from the physical, while also pointing to the intermingled oneness of consciousness and the physical. This presents a paradox in which complete separation is required alongside a place of commonality for interaction.

The complete separation of consciousness and the physical is also highly problematic from a scientific and phenomenological point of view, where there appears to be a clear causal relationship between consciousness and the brain, body and environment (just think of coma, drugs, and death, to name a few of the more obvious examples). Searle (2007) argues that the interaction of consciousness and the physical is a trivial fact; stating, for example, that if “I decide to raise my arm, I form a conscious intention-in-action to raise my arm, and then the arm goes up. There isn’t any doubt that my conscious intention causes my arm to go up” (p. 175). Searle’s (2007) claim concerning conscious intention-in-action will be considered further in chapter 3 of this paper. For now, Searle’s point serves to give voice to the popular view that consciousness and the physical must necessarily share some commonality for interaction to be possible, whereby the two must, in some sense, belong to the same overall whole, that is, *one* substance. For Searle (2007), and many others, this is clear evidence for the falsity of (substance) dualism.

Despite efforts to solve the theoretical riddle of interaction in substance dualism (see for example Lokhorst, 2018, on Descartes and the pineal gland) a satisfactory solution remains to be seen. This theoretical dead-end has left substance dualism at the very fringes of contemporary consciousness literature and an adherence to classic Cartesian dualism is extremely rare to come by. Despite this, Descartes legacy cannot be undermined, and, for better or worse, substance dualism lives on as the foundation for more popular contemporary theories of consciousness, such as *property dualism*, which will be the focus of the following section.

Property Dualism

As mentioned previously, dualist theories of consciousness differ in degree and level of distinction between consciousness and the physical. As discussed, contemporary dualist theories positing that reality is comprised of two fundamentally distinct *substances*, are exceedingly rare, in large due to the grand theoretical challenge of interaction. A great deal of philosophers however, maintain that an *ontological* dualism between consciousness and the physical exists – this type of dualism is commonly referred to as *property* dualism (also *dual-aspect* theory). Specifically, a 2014 study found that around 27% of Anglo-Saxon philosophers deem some form of property dualism to be the most promising framework for explaining consciousness (Bourget & Chalmers, 2014, p. 476).

Property dualism holds that while consciousness and the physical are *ontologically distinct properties* and thereby exist in a dualism, they both *emerge* from one fundamental physical substance. Consciousness and physical matter are, in other words, *dual attributes of one single substance* (Mianji, 2015, p. 58). Consciousness thus *supervenes* on the same physical building blocks as everything else in the universe, while at the same time being *ontologically irreducible* to the purely physical. It is at this stage that the intermingled nature of contemporary monist and dualist theories of consciousness really begins to show. For if two phenomena fundamentally spring from the same *one* source, such as property dualism posits, does this not in fact warrant a monist rather than a dualist theory of consciousness? On the other hand, if two properties are completely distinct at the ontological level, without being reducible to one another, is it not in fact the case that they must be considered a dualism? These questions are of a largely semantic nature, with the answer depending on the importance one places on ontological distinctiveness (Skrbina, 2013, p. 117-118). It is not the aim of the present study to attempt to solve this largely semantic Gordian knot, and determine whether ontological dualism warrants ‘true’ dualism. Rather, the point is to highlight that the theoretical content that hides behind ‘property dualism’, is not as clearly a dualist theory as the name initially suggest, and, as will be discussed

later, largely resembles the content of contemporary *monist* theories of consciousness.

Another important point to note, is that even though property dualism seems able to offer an account of the origin of consciousness on the basis of the physical foundation believed to undermine all that exists (this is in itself not an unproblematic assumption, as we shall see later); the problem of causal interaction persists. If one asserts that two properties are fundamentally dualistic, the problem of how such two properties could have a place of interaction creates the same paradox, as was the case for substance dualism. One might argue that because consciousness springs from the physical, the point of interaction is clearly to be found at the physical level. However, this would, again, seem to result in property dualism deflating into a monist theory of consciousness. In sum, the problem of interaction seems to persist *whenever* a theory of consciousness is argued to be a dualism. For if one remains adamant that consciousness and the physical are separate entities, they must not have commonalities, and hence not be able to interact and influence one another at the level of their ontological distinctiveness – even if they spring from the same one source. The problem of interaction thus remains the biggest challenge that any dualist theory of consciousness must account for.

As should be evident from the above discussion, property dualism faces great theoretical challenges. While often marketed in the literature as the ‘new and improved’ dualism, above and beyond the dogmas haunting substance dualism, the case for property dualism is not so clear-cut. Lycan (2013) goes so far as to argue that substance dualism is “no less plausible than property dualism and even has two advantages over it” (p. 533). The first of these advantages relates to the problem of the assumed *strong emergence* of consciousness from purely physical matter. Here, property dualism, and not substance dualism, needs to explain how something non-physical can emerge from something wholly physical (Lycan, 2013, p. 539). As will be discussed in much more detail later, this is the same challenge that faces several monist approaches to consciousness. The second advantage relates to the question of how property dualism can account for the fact that that which is assumed non-physical

properties of the purely physical, can be obtained ('seen' and 'thought of') by the purely physical (Lycan, 2013, p. 540). Note that Lycan's (2013) arguments are not given as support for substance dualism (he goes on to highlight many of the major challenges facing substance dualism) but rather as evidence to debunk property dualism along with it. In the end, Lycan's (2013) conclusion on the matter is clear: "Property dualism is perhaps a little better off than substance dualism. But not so much better off that property dualists should go on boasting that they are not so crazy as to be Cartesians" (p. 540).

As we have seen, the problem of interaction and the other theoretical problems highlighted by Lycan (2013) remain unresolved by property dualists. Meanwhile substance dualism arguably remains in an even worse theoretical shape than property dualism. Perhaps this is the reason why the majority of philosophers today have pled their allegiance to monist theories of consciousness (Mianji, 2015, p. 57), as will be discussed however, these monist approaches are not themselves without fault.

Monist Theories of Consciousness

Monist theories assert oneness of 'what is in the world'. Contrary to dualism, monism thus views the mental and the physical to exist within a singularity. It is possible to imagine at least two broad categories of monism: One in which everything that exists is assumed to be mental, and another in which everything is assumed to be physical. Mental monism is commonly referred to as *idealism* and claims that everything that exists is fundamentally immaterial. In idealism, the immaterial nature of 'what is' can, broadly speaking, be understood in two ways: The first argues that the *knowledge* we can have of reality is immaterial (epistemic idealism), and the second that *reality itself* is immaterial (ontological idealism) (Guyer & Horstmann, 2015). While some aspects of particularly epistemic idealism offer an interesting challenge to the more commonly accepted frameworks of consciousness, it is fair to say that idealism has by and large been trumped by its counter; physical monism – famously known as *physicalism*

(Mianji, 2015, p. 57; Guyer & Horstmann, 2015). For this reason, physicalism will be the main overall monist framework engaged throughout the remainder of this paper.

Physicalism

Physicalism (also known as materialism) is the thesis that everything that exists is of a fundamentally physical nature, and that the cause, of any event, is of a physical nature (also known as causal closure) (Kim, 2005). Thus, everything 'that there is', all that we observe and experience, including experience and mind itself (consciousness, feelings, thoughts etc.), is assumed to have an underlying physical basis (Mianji, 2015, p. 56; Skrbina, 2013, p. 117; Stoljar, 2015). As will be discussed, this does not mean that all physicalists completely deny the existence of more abstract phenomena, such as social, moral, or mental phenomena, but rather that these, in one way or another, *supervene* of the physical (Stoljar, 2010). In contemporary research, physicalism seems by far the most popular approach to studying consciousness, and Mianji (2015) argues that the framework has dominated consciousness research for the past approximately 50 years (p. 57). In support of these observations, a study by Bourget and Chalmers (2014) revealed that in a sample of Anglo-Saxon philosophers, 57% thought physicalism to be the most plausible framework for explaining consciousness (p. 476). Meanwhile, it seems unquestionable that this percentile would be much higher, if all scholars that presently research consciousness were included in the statistic, since this would encompass several fields that have physicalism as their default starting point, such as neuroscience, biology, physics, and biochemistry.

With physicalism being the obvious majority view within consciousness studies, it could seem that the race is nearly won, and that agreement concerning the nature of consciousness is within reach. This however, is far from the case, and variations of physicalist theories aiming to offer the most consistent account are shooting up left, right and centre. These specific theoretical attempts can overall be seen to fit within one of two broad camps, namely, reductive physicalism and non-reductive physicalism (Mianji, 2015, p. 56-57). Ultimately, most contemporary approaches are of a non-

reductive physicalist nature, in order to understand why, let us turn first to explore the thesis of reductive physicalism.

Reductive Physicalism

Reductive physicalism is the thesis that everything can be explained in purely physical terms. The most fundamental physical building blocks, laws, and mechanisms of reality, are thus argued to fully account for 'higher-order' phenomena, including, of course, consciousness (e.g. Churchland, 1994; Kim, 2005). To clarify the consequences of this view, we can return to consider our brilliant scientist, Mary, who upon leaving the black and white room sees a red apple for the first time. A reductive physicalist would argue that Mary's qualitative experience when seeing the apple, her qualia, are nothing above and beyond the underlying physical processes. In fact, qualia as a phenomenon is rejected since qualia implies something, which is additional to the third-person physical observations. The knowledge argument by Jackson (1982), which was outlined in chapter 1 of this paper, presents a problem for such a reductive explanation: Recall here, how Mary in the black and white room learnt everything there was to know about the colour red. Meanwhile seeing the red apple for the first time still seemed to add something to her understanding of red. It seems that a purely reductive *explanation* of experience is lacking something essential about what experience is – there is an *explanatory gap* between Mary's experience and its physical underpinnings. In other words, purely physical explanations lack in their ability to explain why and how physical states 'feel a certain way'.

Sturm (2012) has argued that the knowledge argument does not convincingly debunk reductive physicalism since "sometimes, new knowledge is about the same objects and facts that you already knew in a different way" (p. 58). However, Sturm (2012) neglects to offer an account of what such new knowledge in fact is, and how and whether it is possible to explain it in purely physical terms. Perhaps the reason for this is that oftentimes the reductive physicalist is simply not interested in exploring such assumed 'new knowledge', instead, she simply wants to contribute to a purely objective, physical explanatory framework of subjectivity. As Sturm (2012) argues:

“Explanatory knowledge should provide the conditions under which a phenomenon occurs ... Such knowledge need not also provide those who possess it with an awareness or understanding of how things feel from the point of view of a different sentient creature” (p. 61). While this approach to exploring consciousness may be of value in for example brain studies, it is in direct conflict with the purpose of the present study, since it neglects the very subjective, qualitative first-person experience. Purely reductive explanations of consciousness appear to leave out the very experientiality that is the essence of consciousness. As such, a reductive approach to consciousness seems to explain around the concept of consciousness without addressing its essence in any real and direct way. This critique of reductive physicalism will be taken up again, and explored in further detail, once the analysis turns to exploring the ‘hard problem of consciousness’ in chapter 3. Before this, let us turn the investigation to non-reductive physicalism – a framework, which claims to take seriously the first-person nature of consciousness.

Non-reductive Physicalism

Contrary to reductive physicalists, non-reductive physicalists argue that consciousness is in fact a phenomenon, which cannot be solely explained in physical terms (e.g. Davidson, 2001; Searle, 2007). Broadly speaking, non-reductive physicalism thus views consciousness as *caused* by the physical, but at the same time irreducible to the physical. Consciousness is thereby viewed as being of a fundamentally physical nature, while still being something, which exists and can be investigated in its own right. Mary’s qualitative experience of the red apple is, accordingly, something, which can only be fully understood at the level of her very first-person experience.

Within philosophy at least, non-reductivism seems to be the most popular approach to exploring consciousness within contemporary physicalism (Mianji, 2015, p. 57). This is perhaps not surprising when taking into consideration the previous discussion of reductive physicalism, which argued that it fails to address consciousness *itself*. Meanwhile, accepting the importance of first-person experience, the essence of consciousness, while simultaneously arguing for the fundamentally physical nature of

all things, is not an easy task. For how is it that something, which supervenes on the physical cannot be explained in terms of the physical? Does this not suggest that consciousness is something in addition to the physical, and if so where does this 'something' come from? It seems that if consciousness is believed to exist as a phenomenon that needs describing at a different level than the physical, then it cannot simply *be* physical and hence some form of (ontological) dualism arguably exist. As was the case with property dualism, non-reductive physicalism thus blurs the line between strict monism and strict dualism, since it assumes the emergence of two properties from one basis. In the quest to explore the very first-person nature of consciousness, non-reductive physicalism is thus in danger of becoming a dualism, whereby the problem of interaction, which monism claims to overcome in the first place, reappears (that is if one assumes consciousness to have any causal bearings - more on this in chapter 3). The greatest task for contemporary scholars working within the non-reductive framework is thus, arguably, to provide a cohesive explanation for how consciousness *emerges* from, and interacts with, its physical basis.

Summing at Emergence

So, where has the above discussion of monist and dualist theories of consciousness left us? On the one hand, we saw how the major theoretical problems facing substance dualism, particularly the problem of interaction, left property dualism the most plausible theoretical approach within the dualistic framework. In turn, the major theoretical challenges facing property dualism itself, has left a majority of contemporary scholars to consider physicalism the most plausible framework for explaining consciousness. On the other hand, however, physicalism itself was found to have major theoretical disadvantages, with reductive physicalism failing to account for experientiality itself, and non-reductive physicalism, under scrutiny, collapsing into a form of dualism.

In conclusion, the present analysis found that the seeming impossibility of interaction in substance dualism and the neglect of consciousness itself in reductive physicalisms, leaves property dualism and non-reductive physicalism as the two

theoretical frameworks deserving of further exploration. Meanwhile, property dualism and non-reductive physicalism share the same basic premises: Firstly, both frameworks assert that consciousness and the physical fundamentally exist within one whole (that whole being the physical). And secondly, both maintain consciousness to be something more than the purely physical. The only point where the two frameworks seem to differ, relates to the degree of ontological distinctiveness assumed of consciousness; with property dualism arguing for its complete *separate ontological status*, while non-reductive physicalism does not. Regardless of these (largely semantic) differences, it is concluded that both property dualism and non-reductive physicalism are, in effect, *dual-aspect monism's*, in which two aspects are assumed to *emerge* from one underlying singularity. Going forward, 'dual-aspect monism' and 'emergentism' will therefore be used as encompassing terms to refer to both property dualism and non-reductive physicalism. The following chapter will assess the theoretical validity of dual-aspect monism in further detail, through an exploration of its main theoretical challenges; the problem of interaction and the hard problem of consciousness.

3

Investigating Dual-Aspect Monism

Arriving at Panpsychism

It can be concluded upon the analysis conducted in the previous chapter that dual-aspect monists are left facing two major theoretical challenges: Firstly, is the question of how consciousness and the physical can have (causal) interaction, and secondly, is the question of how non-physical consciousness *emerges* from a purely physical basis. Both of these grand challenges will be explored respectively in this chapter, ultimately demonstrating the incompleteness, at best, of dual-aspect monism. By method of exclusion, the search for the theory of consciousness most likely to be aligned with the true nature of consciousness, will at the end of this chapter guide the investigation away from dual-aspect monism and towards the theory of panpsychism.

The Problem of Interaction

The present section explores the question of interaction in emergentist frameworks of consciousness. In order to do so, the question of whether the emergence of consciousness is at all plausible in the first place, is left to the side for now, and will be explored extensively in subsequent sections. The following discussion thus departs from the hypothetical premise that consciousness (in one way or another) *has* emerged from a physical basis, a basis which it cannot be ontologically reduced to.

As was stated previously, the philosopher Searle (2007) has no doubt that when deciding to raise his arm, he forms a conscious intention-in-action, which is the cause of his arm going up (p. 175). Searle (2007) thus clearly assumes consciousness to

have causal bearings over its physical foundation, an argument which he largely bases on the phenomenological intuition that 'I' can direct my behaviour through conscious intention. Damasio's (2010) neuroscientific theory of consciousness offers empirical support for Searle's (2007) phenomenological intuition. In his work 'Self Comes to Mind', Damasio (2010) offers an evolutionary account of the emergence of consciousness, which asserts it a necessary biological development for the blooming of civilisations and cultures (p. 13). In this view consciousness is thus absolutely fundamental to the fact that humans, as we know them, evolved at all. In short, Damasio (2010) argues that consciousness emerged in the natural world as a way to uphold and aid in proper life regulation, a dynamic process known as *homeostasis* (p. 25). While basic biological homeostasis (for example adjusting pH balance, temperature, blood oxygen, and so on) is guided by unconscious processes, it is the more complex sociocultural homeostasis that co-evolved our consciousness. Basic homeostasis thus preceded consciousness (and humans) by billions of years of evolution, but along with the ability for more complex cognitive processes, a subjectivity capable of directing these increasingly complex behaviour, co-emerged (Damasio, 2010, p. 27). Through the conscious 'felt-ness' of for example pleasure and pain, Damasio (2010) argues that we are able to assess our homeostatic (in)balance, and upon this assessment willingly optimise our behaviour (e.g. p. 55 and p. 288). In sum, Damasio (2010) posits that consciousness is *one* of the ways evolution helps us navigate towards the most optimal conditions for life, both in terms of survival and in terms of optimised *quality* of life, that is, increased well-being (p. 48).

Like Searle (2007), Damasio's (2010) theory obviously entails the assumption that consciousness can causally influence the physical basis from which it springs. The fact that consciousness is assumed to emerge as a 'higher order' phenomena from 'lower order' physical building blocks and processes, suggests that the causation from consciousness upon the physical happens in a top-down manner. This top-down causation is commonly referred to as '*downward causation*'. To the authors knowledge, Damasio (2010) and Searle (2007) do not provide any further explanation of the processes through which consciousness is assumed to causally influence the

physical. This is perhaps not surprising when we begin to explore the theoretical conundrum of such downward causation in a little more detail. For how is it possible for the emergent and distinctive property of consciousness to have causal bearings over that which determines its existence in the first place? Kim (1999) clarifies this intuitive paradox, by asking whether it is really coherent to suppose that “the presence of X [the physical] is entirely responsible for the occurrence of Y [consciousness] (so Y’s very existence is totally dependent on X) and yet Y somehow manages to exercise a causal influence on X?” (p. 25). One attempt at resolving this paradox, is to argue that it is the irreducible ‘wholeness’ of consciousness, which enables downward causation. In this view, X (the physical) is still entirely responsible for the existence of Y (consciousness) but in the emergence of Y, Y becomes a whole, we can call it W, which is above and beyond X, and which can influence X in effect of it being W. To illustrate this point Kim (1999) offers the example of a 1 kg vase falling from a second-floor window: In its fall, the 1 kg vase will cause disturbance among the surrounding air molecules, in a way that no single molecule within the vase could cause by itself (p. 25-26). The *wholeness* of the vase does thus, in virtue of its combined mass, seem to have a causal impact in the world. The question is now whether something similar could be the case for the unity of consciousness.

Since very few would consider the mass of a vase an emergent phenomenon, the example above must be applied to the question of *emergent* consciousness with caution. Furthermore, the vase example illustrates the ‘wholes’ ability to influence “lower-level entities that are not among its constituents” but not its basic constituents themselves (Kim, 1999, p. 27). In other words, the vase’s ability to influence its surroundings is not the same as saying that the wholeness of the vase can influence the molecules, which make up such wholeness in the first place. The vase example does thus not seem to offer any clear support for the type of downward causation that is assumed of consciousness, and which is suggested by the likes of Searle (2007) and Damasio (2010). What if instead then, we were to imagine the vase hitting the ground and, given its combined mass, its constituent molecules scatter in all sorts of directions. Is there, in such an example, a ‘whole’ which, over and above its

constituent parts, can influences its constituent parts? It is difficult to see how this would be possible given the fact that without the existence of foundational parts (thereby also their relation to one another) there would be constructed no whole. In the best-case scenario, there would, in such a case, have to be at least an *upward determination* alongside the downward causation (Kim, 1999, p. 27-28). Arguing for upward determination alongside downward causation seems to result in an absurd circular ‘chicken or the egg situation’, in which it seems incoherent to suppose the causal direction of an event.

From the above discussion the grand problems of assuming causal interaction from consciousness upon its physical basis should be clear. Particularly the type of downward causation assumed by emergentist scholars such as Damasio (2010) has great theoretical gaps. That is not to say that Damasio’s (2010) account of the evolutionary development of consciousness in relation to homeostasis is completely wrong – further analysis would be needed in order to draw any conclusions on that matter. Rather, the evidence merely points out that the basic theoretical assumptions of consciousness as an emergent phenomenon, which can act through downward causation, is problematic. In conclusion, the evidence presented seems to suggest that the assumption of downward causation in emergentist theories is incoherent. This poses a great challenge for the many dual-aspect monists who posit consciousness to have causal powers.

Meanwhile, one attempt at overcoming the challenges facing downward causation is simply to deny that consciousness has any causal powers in the first place. Hereby, consciousness becomes an *epiphenomenon*, which emerges from the physical, but which, in itself, cannot cause anything to happen. While the term epiphenomenalism is vastly employed throughout consciousness literature, disparity over its meaning and the degree of its theoretical implications exists (Dennett, 2004, p. 401-402). A brief conceptual overview is therefore needed: Viewed through a broad lens, epiphenomenalism is the thesis that consciousness is: 1.) determined by the physical, 2.) irreducible to the physical, and, 3.) that it has no causal bearings (Robinson, 2010, p. 539). It seems, that epiphenomenalism fits within the framework

of dual-aspect monism, since it assumes consciousness to be rooted in the physical while being irreducible to it (premise 1 and 2 above). Unlike most emergentists however, epiphenomenalist scholars argue that there is no causal interaction from consciousness upon its assumed physical basis, in effect, consciousness *is* merely a non-functional property, or *by-product*, of what the physical does (as reported by for example Dennett, 2004, p. 402). Hence, all that causes anything to happen is assumed to take place at the basic physical level. Robinson (2010) agrees with such a definition but notes that while “consciousness itself has no function there may ... be many functions that cannot be served in earthly organisms without neural events that are nomologically connected to consciousness” (p. 539). In other words, the physical underpinnings of consciousness may be important in maintain biological life, nevertheless, consciousness *in itself* has nothing to do with such a potentially vital process.

In opposition to Damasio (2010), who offered empirical support for the existence of the causal powers of consciousness, a number of studies support the notion that consciousness could merely be an epiphenomenon. Specifically, these studies illustrate that intuitions about the effects that our consciousness has on our behaviour is flawed. One example is offered in a famous experiment on brain-based readiness potentials by Libet, Gleason, Wright, and Pearl (1983). In this study, Libet et al., (1983) demonstrated that the conscious intention to move a finger occurred about 350 milliseconds *after* the activity of the brain suggested the decision had been made. Many studies have since replicated these findings, suggesting that when I decide to flex my finger, an unconscious process in my brain was initiated before my decision seemed to become conscious to me - hence it seems that consciousness could not be the instigator of the behaviour. This is off course problematic for Searle (2007), who argues that when decides to raise his arm he does so through conscious-intention in action, that is, he believes that it is his consciousness which initiates the event of the arm lifting. Studies such as the one by Libet et al. (1983) has been criticised extensively and should *not* here be interpreted as conclusive evidence against the existence of free will in general. The problem of free will is a huge philosophical

conundrum and a highly complex question in itself, conclusions regarding its existence or not are therefore not drawn here. The study by Libet et al. (1983) does, however, clearly demonstrate that our phenomenological *intuitions* about the causal powers of consciousness are not always accurate, and they should therefore not be accepted blindly.

While an epiphenomenalist does not face the problem of accounting for downward causation, the theoretical approach is certainly not without fault of its own. First and foremost, is the question of why consciousness exists if it is a mere epiphenomenon. This is a particularly important question for the dual-aspect monists, who argue for the *emergence* of consciousness. For if, such as for example Damasio (2010) suggests, consciousness emerged as an evolutionary phenomenon, why would it have done so if it serves no purpose? How could consciousness have been selected for without any impact of consciousness upon behaviour (Robinson, 2010, p. 541-542)? It is for this reason, Kim (1999) argues, that emergentists “often contrast their position with epiphenomenalism, dismissing the latter with open scorn” (p. 6). Epiphenomenalists may reply that not all evolved traits in humans necessarily contribute to survival, still, it seems there is something to be answered for if one is to believe in the emergence of consciousness as an epiphenomenon. Epiphenomenalism does thus not seem to offer a solution for emergentists but rather begs for the exploration of different foundational understanding of consciousness altogether. Such an exploration is offered later in this study, when investigating the validity of the panpsychist approach to consciousness. For now, it is argued that epiphenomenal dual-aspect monism appears to be as incoherent as the downward causation assumed in dual-aspect monism.

In sum, it has been argued that the notion of downward causation in emergentist frameworks of consciousness is incoherent and even contradictory. While epiphenomenalism avoids the problem of explaining downward causation, the notion of epiphenomenal consciousness is not (in any obvious way) consistent with the supposition of consciousness as an emergent property. While counterarguments from within both epiphenomenalism and proponents of downward causation exist and

should be taken seriously, the main theoretical gaps arguably persist when the approaches are applied to the framework of dual-aspect monism. To be clear, the present does not make any claims as to whether consciousness is in fact an epiphenomenon or causal entity, for this purpose further analysis is necessary, instead, it is the assumption of downward causality in dual-aspect monism and epiphenomenal dual-aspect monism which is brought to question. Based on the discussion it thus seems that neither downward causation nor epiphenomenalism can help solve the problem of interaction for contemporary emergentist theories of consciousness. This of course challenges the validity of the most popular theoretical approaches to consciousness, namely, property dualism and non-reductive physicalism (Bourget & Chalmers, 2014, p. 476).

The Hard Problem of Consciousness

While the previous discussion on downward causation and epiphenomenalism challenges the validity of dual-aspect monism, the problem of accounting for the emergence of consciousness from physical matter, poses an even greater challenge. The main task for dual-aspect monism in asserting its own validity, is therefore to explain *how* the emergence of consciousness is possible (Skrbina, 2013). For how and why is it that physical matter comes together in such a way that consciousness emerges from it? Why is there something, and not nothing, 'it-is-like'? In 1995, Chalmers famously coined these conundrums *the hard problem of consciousness* (p. 3). The hard problem of consciousness thus refers to the explanatory gap between the subjective first-person nature of consciousness, and the supposed third-person physical foundation from which it is argued to emerge.

The hard problem of consciousness is, according to Chalmers (1995), hard because it seems to resist "standard methods of cognitive science, whereby a phenomenon is explained in terms of computational or neural mechanisms" (p. 2). The 'easy problems' of consciousness are thus those problems that *are* susceptible to such methods, whereby the cognitive and functional aspects of consciousness are explored (Chalmers, 1995, p. 4). While answering the easy problems of consciousness helps us

understand its functional level, it will not tell us *why* these functional performances are accompanied by experience. The hard problem of consciousness is thus “beyond problems about performance of functions” (Chalmers, 1995, p. 5). In sum; it seems, that if we imagine one day knowing everything that there is to know about the physical nature of consciousness, in third-person terms (the easy problems of consciousness), we have yet to explain experientiality *itself* (Searle, 2007, p.170). Before the hard problem is faced head-on, an encompassing and indeed satisfactory resolve to the conundrum of consciousness appears to be unlikely.

Before turning to explore the hard problem of consciousness in further detail, it is relevant to consider the complete sidestepping of the problem claimed by some reductionist scholars. In chapter 2 of this paper, it was argued that the reductionist physicalist explanations of consciousness explore its functional properties, but tell us nothing about experientiality itself. Reductive physicalists thus address what Chalmers (1995) deems the easy problems of consciousness, explaining ‘around’ consciousness, without actually addressing it head on. Importantly, the rejection of reductive physicalism on the account that it fails to address consciousness itself, is not the position assumed by all scholars, with a significant number of scholars arguing that the easy problems are simply *all there is* to consciousness. One such scholar is Dennett (e.g. 1991), a noted physicalist philosopher, who claims to deal with the hard problem of consciousness by rejecting the existence of a hard problem in the first place. For decades, Dennett (2018) has argued that the hard problem of consciousness misfocuses our attention, by exaggerating consciousness as something which is ‘*special*’ in virtue of its qualitative first-person nature (p. 3). Specifically, Dennett (1988) argues that “qualia, - or ‘raw feels’ or ‘phenomenal properties’ or ‘subjective and intrinsic properties’ or ‘the qualitative character’ of experience” are *illusions* - nothing more than what the brain does – albeit in a very complex way (p. 382, 409).

Consciousness, as it is conceptualised in the present study, as a subjective unified qualitative space of experience, is thus, in Dennett’s (1991) view, based on misunderstood intuitions. This is important because Dennett (1991), while continuously using the term ‘consciousness’, clearly means something quite different

by it, something, which asserts consciousness as fully explainable in third-person terms (Searle, 1995, December 21). According to Dennett (1991), consciousness is simply a combination of multiple drafts “composed by processes of content fixation playing various semi-independent roles in the brain’s larger economy of controlling a human’s body through life” (p. 431). In other words, Dennett (1991) asks us to think of the brain as a computer of sorts, an information-processing system, which does not have any ‘special seat’ (or, as he likes to call it, a ‘Cartesian theatre’) in which experience takes place (p. 434-435). The interesting and hard *question* for Dennett (2018) is therefore not to explain how and why first-person experience is possible in a theoretical manner, but rather, how the billions of neurons in the brain collaborate to create experiences of, for example, “comprehension, appreciation, delight, revulsion, recognition, amusement, etc.” (p. 7). As such, the only questions that need answering are, according to Dennett’s (2018), of a cognitive, scientific, third-person nature, and once these questions are answered, we will know all there is to know about consciousness.

In great opposing to the claims put forward by Dennett (1991), who denies the existence of consciousness as a unique subjective, unified, qualitative phenomenon above basic physical processes, Strawson (2008) exclaims:

[T]his particular denial is the strangest thing that has ever happened in the whole history of human thought ... next to this denial, every known religious belief is only a little less sensible than the belief that grass is green. (p. 55)

In line with Strawson’s (2008) critique, Chalmers (1995) argues that:

[E]xperience is the most central and manifest aspect of our mental lives ... experience cannot be discarded ... it is the central fact that any theory of consciousness must explain. A theory that denies the phenomenon ‘solves’ the problem by ducking the question. (p. 9)

What Strawson (2008), Chalmers (1995) and many others find so bizarre, even outrageous, about Dennett's theoretical approach to consciousness, is that it leaves out the very essence of what we subjectively know consciousness to be. Searle (1995, December 21), another critic of Dennett, asks readers to simply observe their own conscious experience to realise the falsity of Dennett's claim. It seems, that when we assess our own consciousness it *is* in fact like something to experience; in other words, my experience *is* a subjective, qualitative, unified field of experience, moment by moment. And regardless of how such experientiality 'comes into existence' the very fact of its existence 'in me', at this moment, cannot be denied. Skrbina (2013) states it clearly, when arguing that:

[T]here is no more basic fact of existence than that of subjective experience ... Mentality, experientiality, qualia, qualitative experience - I take these as synonymous of this most-basic truth of reality. Each person knows this truth more deeply and more intimately than anything else. (p. 117)

Denying subjective experientiality takes away the very essence of consciousness, which deems it interesting in the first place, namely the question of how subjective existence itself is possible. While Dennett contributes to the exploration of the 'easy problems' of consciousness (the value of which should not be underestimated!), his attempt at dealing with the hard problem of consciousness seems to fail. In line with Strawson (2008), Chalmers (1995), Searle (2007) and Skrbina (2013), the present thus argues experientiality to exist as a real, concrete, intrinsic phenomena, which a comprehensive theory of consciousness *must* address head-on.

From the above discussion it should be clear that the present analysis resumes from the premise that subjective experientiality is the essence of consciousness, explaining away this premise, such as for example Dennett (1991) does, will therefore not suffice in a valid theory of consciousness. We are thus back at the point where the present investigation took its departure, namely faced with the hard problem of consciousness. As we have seen, dual-aspect monists claim that purely non-conscious

physical matter 'acts' in a way, so that subjectivity emerges from it. In other words, it is argued that from not being in existence, suddenly, subjectivity somehow comes into existence. Since consciousness is argued to be something uniquely subjective, which is not reducible to the purely physical, it is very difficult, if not impossible, to imagine how such brute emergence is possible, without the assumption of some kind of magical leap being involved.

Skrbina (2013) clarifies the difficulty facing emergentists, by highlighting three points at which they (sooner or later) must be able to pinpoint the emergence of consciousness (p. 119-120): *Firstly*, emergentists must address the *historical* question of when, in the history of the universe, consciousness emerged. In other words, they must account for the specific point at which physical matter 'acted' in a way so that consciousness came into existence. *Secondly*, emergentist theories must consider what Skrbina (2013) terms the *phylogenic* question, of where the line between consciousness and non-consciousness should be drawn between organisms. For while it seems clear that a dog or a crow has consciousness, the matter appears less obvious when assessing whether micro-organisms, plants, and so on have experience. *Thirdly*, and lastly, Skrbina (2013) highlights the *ontogenic* question, of when consciousness emerges in the developing human. Here emergentists must account for the point in the process of the developing human, at for example cellular or foetal level, at which consciousness appears (p. 119-120).

Determining the historical, phylogenic and ontogenic line of emergent consciousness remains to be seen, but as Skrbina (2013) states "the *faith* remains that the line is there" (p. 119). The problem is, that such faith rests on theoretical assumptions which are, at best, inconsistent. For how can something, which was not previously there, suddenly be there, without the assumption of some kind of 'magical interference'? If experientiality is ontologically distinct from non-experientiality a blurry line, or a slow evolutionary transitional process, will not suffice as an answer to these questions. In other words, as consciousness is assumed not there, until it *is* there, the line must be specific and sharp in order for dual-aspect monism to make any theoretical sense. In reply to this challenge, emergentist scholars have often used the

example of liquidity emerging from H₂O molecules to illustrate the possibility of emergent consciousness. Meanwhile, it will be argued in the following, that an analysis of this example in fact points us *away* from emergentism as a plausible framework, and towards a wholly different theoretical framework of consciousness altogether, namely, the theory of *panpsychism*.

Consciousness is Fundamental

In order to understand how an exploration of emergence can lead to panpsychist conclusions regarding the nature of consciousness, the example of liquidity emerging from H₂O is explored in a little more detail. Emergentist scholars have argued that while liquidity is not a property of any single H₂O molecule, it emerges from H₂O molecules when several molecules are combined in a certain way. In other words, liquidity seems to wholly arise from properties, which themselves are not liquid, or, as Strawson (2008) puts it, liquidity appears to be something which “is not there at the bottom of things, and then it is there” (p. 61). It seems that liquidity is an emergent phenomenon from H₂O, in the same way that consciousness is argued to be an emergent phenomenon from the physical. Dennett (1991) thinks so, and argues that since “solids and liquids can be explained in terms of things that aren’t themselves solids or liquids or gasses. Surely life can be explained in terms of things that aren’t themselves alive” (p. 455). In other words, Dennett (1991) argues that since liquidity can be explained in terms of a non-liquid physical basis, consciousness can be explained in terms of a physical basis which is not-consciousness.

At the surface, the liquidity-H₂O analogy seems to offer support for the possibility of emergent consciousness, however, as we dig a little deeper, we begin to see the faults of this intuitive assumption. Firstly, it can be questioned whether the emergence of liquidity from H₂O offers a valid and transferable example to the case of experientiality from non-experientiality. Scholars such as Strawson (2008) and Blaumauer (2013), convincingly argues that it does not. Strawson (2008) demonstrates that while liquidity appears to be an emergent property, in fact, it is a property which ‘existed’ in the individual H₂O molecule all along (p. 61-62). As such, it is possible to

fully reduce the fact of liquidity to any H₂O molecules' "shape-size-mass-charge-number-position-motion-involving physics with no puzzlement" (Strawson, 2008, p. 61). The H₂O molecule in itself thus 'holds' liquidity as a phenomenon, as part of its fundamental nature – we might say that the single H₂O molecule is *proto*-liquid. Liquidity is thus not an *additional* property to H₂O, but rather a property that existed in a foundational sense all along. In a *conceptual* sense, liquidity did 'emerge' from H₂O but it is obvious how this occurred based on the physical nature of H₂O molecules. Hence, the phenomenon of liquidity can be reduced, *without remainder*, to the nature of H₂O molecules (Strawson, 2008, p. 69).

It seems that the emergence of liquidity from H₂O molecules is no more difficult to grasp as an emergent phenomenon, than the 'emergence' of a choir from the combined voices of 20 individual people. We thus have to distinguish between the type of logically obvious 'soft' emergence, which is illustrated by the liquidity-H₂O example, and the *brute* emergence of consciousness from non-consciousness, which is assumed by emergentist scholars. The conclusion we can draw from this is simple but vital: We have to take care as to how we use the term emergence, and not assume all 'emergent phenomena' as equal.

On the basis of the critique that the liquidity-H₂O example is an analogy that "is not of the right size and kind" (Strawson, 2008, p. 69), Strawson (2008) suggests a different analogy, which he argues to be much more transferable to the case of experientiality from non-experientiality, namely, the (brute) emergence of spatiality from non-spatiality (p. 57-60). Here, Strawson (2008) asks readers to imagine "real, concrete, intrinsically, irreducibly and wholly *non-spatial* phenomena" from which "real, concrete, intrinsically, irreducibly and wholly spatial phenomena" emerge (p. 58). Reasoning such emergence is highly counter-intuitive, and arguably requires that we apply some kind of illogical or magical leap, in much the same way that it has been argued in the present study that the emergence of experientiality from non-experientiality does. It is for this reason that the spatiality from non-spatiality thought-experiment serves as a more suitable analogy. In the same way that the emergence of consciousness is faced with a looming explanatory gap (that is, the hard problem of

consciousness), so too, it seems, is the notion of emerging spatiality from truly non-spatiality. The spatiality-non-spatiality analogy thus further supports the notion that, based on everything we know, there seems no logical way to bridge the hard problem of consciousness for emergentists.

So where does all this leave us? The arguments that have been put forward in the above discussion revolve around the central premise that consciousness is subjective, qualitative and unified, and that it cannot simply be reduced to physical processes (unlike liquidity, which can be reduced to the physical nature of a H₂O molecules). Meanwhile, it has been shown that both accepting and dismissing this premise leaves theorists facing grand theoretical problems: *On the one hand*, we see that dual-aspect monists, who, as we know, accept the premise of subjective experientiality, are left facing the hard problem of consciousness. As the above analogy of spatiality from non-spatiality helps in clarifying, the hard problem of consciousness constitutes a seeming unbridgeable gap, in which experientiality cannot (historically, phylogenically, and ontogenically) emerge from non-experience, without the assumption of a magical leap. *On the other hand*, it was shown that rejecting the premise of subjective experientiality as the essence of consciousness, such as Dennett (1991, 2018) and other reductivist scholars do, does not offer a solution to the hard problem, but rather deals with the 'easy problems' concerning the functional level of consciousness. It seems that no matter what turn we take from within the frameworks of physicalism or dual-aspect monism, we are faced with an enormous theoretical challenge. In order to recap on the present discussion and investigate how we can move on from this seeming dead-end, the findings thus far are summarised in the following points.

- (a) Consciousness is the subjective, unified, qualitative space of experience – this premise is found to be a fundamental truth.
- (b) The liquidity from H₂O example cannot be applied as a suitable analogy to the *emergence* of experientiality from truly non-experientiality, since H₂O holds liquidity within its basic physical nature.

- (c) As supported by the analogy of spatiality from non-spatiality and the conclusions drawn in point *b*, the *emergence* of experience from non-experience seems to be impossible without some kind of magical leap.
- (d) From points *a*, *b*, and *c*, it is found that emergentist theories of consciousness (dual-aspect monism) are facing the hard problem of consciousness with no resolution in sight.
- (e) Because point *a* is taken as fundamental truth, the reductivist physicalist rejection of experientiality cannot be accepted as a solution to the hard problem of consciousness.

Prima facie, the remainder of this paper will assume that the above premises hold true. From points *d* and *e*, it can be concluded that dual-aspect monism and reductive physicalism are, at best, highly problematic as theoretical frameworks of consciousness. The recollection that these are the main frameworks adhered to within contemporary consciousness studies, only makes the matter worse (Bourget & Chalmers, 2014, p. 476).

Meanwhile, an analysis of the above points seems to offer important insight as to how the theoretical problems outlined in points *d* and *e* can potentially be sidestepped. The argument can be presented as follows: As per point *c*, experientiality cannot arise from non-experientiality. As per point *a*, experientiality is a fundamental fact, which, as per point *e*, cannot be neglected in consciousness theory. As per point *b*, conceptual phenomena, as we understand them, arise out of basic building blocks, which hold within their fundamental nature that very phenomenon. From this it seems that the *fact* of experientiality cannot arise from non-experientiality, and therefore *must exist as a fundamental aspect of that which constitutes it* (such as liquidity does in the H₂O molecule). This suggestion is *not* to be understood in the sense of reductive physicalism, in which experientiality is seen as nothing more than the purely physical, whereby it is explained away (as in point *e*), but rather as the existence of experientiality at a fundamental level. It is not sufficient to argue that there must be fundamental proto-conscious properties, *if*, semantically speaking, proto-

consciousness is understood as something, which is non-experiential, since such an understanding would do nothing but slightly move the location of the problem of brute emergence. However, if proto-consciousness is understood as intrinsically experiential (to some degree), 'soft' emergence is, like liquidity from H₂O, *logically* possible (Strawson, 2008, p. 69-70). At the face of it, it seems that if we assume consciousness to exist at the foundational level of what consciousness is, we overcome the hard problem by not having to account for brute emergence – *without* explaining away the very essence of consciousness. This theoretical approach to consciousness is broadly referred to as *panpsychism* and will be explored in the following chapter.

4

Panpsychism

It was found in the previous chapter that the exploration of the hard problem of consciousness strongly points to conclusions, which suggests consciousness to be a fundamental building block of that which constitutes consciousness, as we know it in ourselves. In this view, *basic* entities of the natural world must thus have/be consciousness - a view that is, broadly speaking, known as panpsychism. The place, role, and degree of fundamental consciousness, varies depending on the sub-approach of panpsychism engaged, but before turning to explore these specific panpsychist sub-theories in a little more detail, the framework at large is described and explored. Note that the term '*micro-consciousness*' will be used to describe fundamental non-reducible entities of consciousness, while the term '*macro-consciousness*' will be employed to encompass consciousness in *macroscopic* entities (such as humans, bats, and other non-fundamental entities).

Panpsychism is the thesis that consciousness is *fundamental* and *ubiquitous* in the natural world (Goff, 2009, p. 289; Goff, Seager, & Allen-Hermanson, 2017, 2.1). Here, '*fundamental*' should be understood to mean something which cannot be reduced to anything else; it must simply be accepted as a basic 'building block' in itself, and hence it is not constituted by any 'lower level' processes, functions, or properties. As such, micro-consciousness is understood to be something which exists, and is what it is, in virtue of itself and nothing else. Proto-consciousness is thereby assumed to be at the foundation of all there is, alongside other physical fundamentals of the natural world, such as mass, charge, and spin (Blamauer, 2013, p. 102). Micro-consciousness is *ubiquitous* in the sense that it is assumed to exist throughout the universe. This point is sometimes misunderstood as taken to mean that a stone, or a square meter of wind,

has unified conscious experiences in the *macro*-conscious sense – this is not the case. A panpsychist need not hold that everything has consciousness, or is conscious (although some panpsychists do), rather, it is taken as a fact that everything has (at the least) *parts*, which are *micro*-conscious (e.g. Goff, Seager, & Allen-Hermanson, 2017, 2.1).

While the idea of panpsychism is by no means new to the history of thought, it is only recently that the theory has been embraced by some as a serious contender to the more established monist and dualist frameworks of consciousness. While the present study acknowledges the important historical roots of panpsychism, both within eastern and western philosophy, it is not within the scope of this study to explore these further (for a brief historical overview of panpsychism see Goff, Seager, & Allen-Hermanson, 2017, and for a review of panpsychism in western philosophy see Skrbina, 2003). It is thus the contemporary and largely analytical discussion of panpsychism that forms the starting point from which the present analysis takes its departure.

The framework of panpsychism is radically different from the classical physicalist and dualist approaches to consciousness explored in chapters 2 and 3. Rather than dividing the world into two, such as dualism and to some extent dual-aspect monism requires, panpsychism views consciousness as a fundamental entity of one whole. In this respect, panpsychism is a monist theory of consciousness, albeit in a very different way than the reductive physicalist theories, which argue that non-conscious physical matter is all there is (Blamauer, 2013, p. 101). According to Goff (2009), there are various ways to interpret what encompasses the fundamental physical ultimates supposed within physicalism (p. 293). Since panpsychism is a monist theory, which assumes consciousness a fundamental feature of the natural world, is it not the case that panpsychism is in fact a physicalist theory? Taking the view that “every concrete phenomenon in the universe is . . . physical”, Strawson (2008, p. 54) argues that it is. For, as he argues, if one is to be a *true* physicalist, you cannot “deny the existence of the phenomenon whose existence is more certain than the existence of anything else; experience” (Strawson, 2008, p. 54). As a consequence, Strawson

(2016) argues that “there is certainly no more reason to think of matter as kind of stuff than there is to think of experientiality as a kind of stuff” (p. 80). In sum, if physicalism refers to all actual phenomena of the natural world, with consciousness obviously being one of them, then panpsychism *is* a physicalist theory. When the vast majority of contemporary scholars do not have this understanding of physicalism (for example Dennett, 1991), it is, according to Strawson (2008), because they are caught up in the view “that the nature or essence of all concrete reality can in principle be fully captured in the terms of *physics*” (p. 54). The problem with such physicalism, or *physic-s-alism* such as Strawson (2008) coins it, is that while it can tell us about the dispositional and structural nature of the world, it can tell us nothing about its *intrinsic* nature. An intrinsic nature which is, according to many panpsychists, consciousness (Chalmers, 2016a, p. 27; Strawson, 2016, p. 95). In other words, not only are physic-s-alists silent or in denial about the intrinsic nature of reality, it is also limited by its approach and thereby *incapable* of describing such aspects of reality (Strawson, 2016, p. 86, 95).

To conclude: While physic-s-alists pay no regard to the intrinsic nature of reality, panpsychists argue it to be consciousness. Therefore, if we assume physicalism to be the monist theory of all there is in the natural world, such as Strawson (2008) argues we should, panpsychism is certainly a true physicalist theory of consciousness. Assuming consciousness a real, subjectively *known*, phenomenon, the present study agrees with Strawson’s (2008, 2016) analysis. That being said, the common contemporary understanding of physicalism does *not* include experientiality in its thesis, at least not in the sense argued above, and therefore any adherence of panpsychism to physicalism should be approached with caution. Until there has been a semantic shift, a reformulation, of the understanding of physicalism, which will loosen the grip of the current dogmas attached to it, the placing of panpsychism within physicalism is argued to be premature. Furthermore, it is useful to keep a sharp conceptual distinction between panpsychism and physicalism, for the purpose of the later investigation of the assumed consciousness-environment relationship inherent to consciousness theories.

Panpsychist Sub-theories

Having explored panpsychism through a broad theoretical lens, let us turn now to explore some of the specific panpsychist approaches to consciousness. Drawing on the work of Chalmers (2016a), the exploration commences by considering ‘non-constitutive panpsychism’, followed by ‘constitutive panpsychism’. Note that ‘holistic panpsychism’, which is a wholly different panpsychist approach, suggested by for example Nagasawa and Wager (2016) and Mathews (2016), will not be considered further in the present section, as this sub-approach will be discussed in relation to the exploration of the combination problem in the subsequent section.

Non-constitutive panpsychism is most commonly used to refer to the thesis that, while micro- and macro-consciousness are assumed to exist, macro-consciousness cannot be *ontologically* reduced to micro-consciousness. Recall here that the term ‘micro-consciousness’ describes fundamental entities of consciousness, while ‘macro-consciousness’ is used to describe the consciousness of *macroscopic* non-fundamental entities. Non-constitutive panpsychists thus assume macro-consciousness to be grounded in some form of ontologically distinctive lower level consciousness, which it cannot, without remainder, be reduced to. This approach thereby assumes the brute emergence of macro-consciousness and therefore faces the hard problem of consciousness, in the same way that it has been shown that dual-aspect monism does. For this reason, non-constitutive panpsychism is also referred to as *emergent panpsychism* (Chalmers, 2016a, p. 25). In the previous discussion of the hard problem of consciousness, it was argued that emergentist theories of consciousness are facing a seemingly unbridgeable explanatory gap. This *prima facie* evidence against emergentist frameworks deems non-constitutive panpsychism no more plausible than dual-aspect monism, and the approach is therefore not considered further in the present analysis.

Unlike non-constitutive panpsychism, constitutive panpsychism argues that macro-consciousness is realised by micro-consciousness. In other words, constitutive panpsychists hold that “microexperiences somehow add up to yield macroexperience” - this potentially in collaboration with other structural or functional processes

(Chalmers, 2016a, p. 26). The question of how micro-consciousness ‘somehow’ yield macro-consciousness is known as the *combination problem*, and will be explored in more detail later. For now, the point to note is that constitutive panpsychism does not face the hard problem of consciousness, since macro-consciousness is deemed ontologically reducible, without remainder, to micro-consciousness. In line with the broad definition of panpsychism offered in a previous section, the most common form of constitutive panpsychism, sometimes referred to as Russelian constitutive panpsychism, views micro-experientiality as that which comprises (at least some part of) the intrinsic nature of reality (Chalmers, 2016a, p. 27; Goff, Seager, & Allen-Hermanson, 2017, 3.2). As such, micro-consciousness is the “fundamental categorical properties that play the fundamental roles specified in physics” or the “categorical bases of the microphysical dispositions characterized in physics” (Chalmers, 2016a, p. 27). In this view, there is no dualistic distinction (and thereby no problem of interaction) between consciousness and the physical, since macro-consciousness is grounded in micro-consciousness, which in turn plays a causal role in fundamental physics (Chalmers, 2016b, p 182). In sum, we find that constitutive panpsychism is, in a theoretically eloquent way, able to overcome both the hard problem of consciousness and the problem of causal interaction. With (Russelian) constituent panpsychism appearing to be the most plausible and therefore most interesting panpsychist approach, ‘panpsychism’ will be used throughout the remainder of this paper to encompass this view.

While the above formulation highlights panpsychism as a theory capable of sidestepping both the hard problem of consciousness and the problem of interaction - arguably the two most problematic challenges facing contemporary consciousness scholars - panpsychism is not without fault of its own. Most notably, is the question of how a *multitude* of micro-consciousnesses come together to yield a *unified* macro-consciousness. This problem is known as the ‘combination problem’ and will be explored in the following section.

The Combination Problem

Generally, it is concurred that the combination problem is the biggest theoretical challenge facing panpsychism (e.g. Goff, Seager, & Allen-Hermanson, 2017, 4.2; Skrbina, 2013, p. 120). In short, the combination problem is the problem of how micro-experientiality can combine to give rise to one point of experientiality at the macro-level (Blamauer, 2013, p. 104). In the previous section it was shown that in order to avoid the hard problem of consciousness, macro-consciousness must, ontologically speaking, be reducible to micro-consciousness. Micro-consciousness must therefore have the same ontological qualities as macro-consciousness, that is, be a unified, subjective, qualitative space of experience. If each micro-consciousness is one subjective space however, how can many such subjectivities become one macro-subjectivity? The combination problem was coined by Seager in 1995, however, a structurally similar question was first pondered by James in 1890, who in a famous passage argues that:

Take a hundred of them, shuffle them and pack them as close together as you can (whatever that may mean); still each remains the same feeling it always was, shut in its own skin, windowless, ignorant of what the other feelings are and mean ... The private minds do not agglomerate into a higher compound mind. (James, 1890/1981, p. 160)

It has been suggested that a closer reading of James (1880/1981) in fact demonstrates his denial of the combination of *anything* above the conceptual level (Goff, 2017, p. 172-173). On this account, James (1880/1981) argues against the total independence of 'one human mind' (a combined entity) from anything else, leading many to conclude that he was in fact a panpsychist (e.g. Ford, 1981). Nevertheless, what the above passage by James (1890/1981) helps in illustrating is that, at the face of it at least, it seems illogical to imagine a way in which several micro-experiences yield one macro-experience, no matter how closely connected they may be, (micro-)physically speaking or otherwise. This particularly difficult aspect of the combination problem is

sometimes also referred to as the *subject-summing* problem (e.g. Goff, Seager, & Allen-Hermanson, 2017, 4.3). While it is relatively simple to take a mental logical step from a single H₂O molecule to the existence of liquidity, the same does not go for micro-consciousness to macro-consciousness. There seems to be something uniquely difficult in conceiving of the combination of many subjects into one (Goff, 2016, p. 287; Goff, Seager, & Allen-Hermanson, 2017, 4.2). Another way to illustrate the problem is to imagine the combination of *my* subjective experience with *your* subjective experience into one. It seems that both my experience and your experience exist in virtue of the *exclusion of all other points of experiences*, and therefore the combination of the two is contradictory (Goff, Seager, & Allen-Hermanson, 2017, 4.3).

While the subject-summing problem is arguably the core problem of combining micro-experiences into macro-experience, Chalmers (2016b) formulates two other key problems; the quality combination problem and the structural combination problem. Broadly speaking, the quality combination problem refers to the question of how micro-qualia combines into the rich palette of macro-qualia which defines macro-consciousness (Chalmers, 2016b, p. 184). The structural combination problem roughly refers to the question of how the structure of micro-consciousness, which is probably structured in accordance with microphysical structures (at least in the Russelian constitutive panpsychism treated here), combine into one, seemingly different, type of structure in macro-consciousness (Chalmers, 2016b, p. 184).

Through a thorough investigation of possible solutions, Chalmers (2016b) offers an extensive analysis of each of the three aspects of the combination problem (the subject summing problem, the quality combination problem, and the structural combination problem). Ultimately, Chalmers (2016b) concludes that further analysis is needed in order to draw any conclusions as to whether the combination problem, as a whole, can be solved, and he therefore remains undecided in regards to the validity of panpsychism as a framework generally (p. 212). In a different comprehensive analysis of the combination problem, Goff (2016) offers a more optimistic conclusion, when stating that even though there is presently no agreed upon solution to the combination problem, “some form of panpsychism is highly likely to be the true theory

of the universe. It's high time we started working out the details" (p. 301). In line with this, Blaumauer (2013, p. 114) Skrbina (2013, p. 122) and Seager (2016, p. 247), all conclude the combination problem to express a call for further analysis and details, rather than it being a definitive argument against panpsychism. Generally, it is thus conceded that eventhough there is presently no comprehensive solution to the combination problem, a solution will probably be found sooner or later.

It is not within the scope of the present paper to speculate over each of the possible solutions to the combination problem(s) offered by Chalmers (2016b) in his analysis, nor is it possible to provide an overview of the many disperse solutions which are presently featured and analysed in the literature. In order to demonstrate some of the ways that the combination problem *can* be approached however, two very different, but very interesting, potential solutions will be briefly explored in the following. Note that as the theoretical replies to the combination problem are all in their infancy, much more work still needed, and it is therefore in a sense random to select any two potential solutions to highlight at this point. As such, other potential solutions could just as well have been chosen for exploration. (For other replies to the combination problem see for example Chalmers [2016b], Goff [2016], Blaumauer [2013], Seager [2016], Montero [2016], and Lewtas [2017]).

Mind Space Theory

The first reply to the combination problem, which will be outlined here, is the 'mind space' solution offered by Skrbina (2013), which draws heavily on knowledge from within the physical sciences. Skrbina (2013) suggests that what we know about the composition of physical mass can help us make sense of the unification of macro-consciousness from micro-consciousness. Skrbina (2013) reminds us that the vast complexity of the physical world, such as for example the human brain, derives "from a small number of very simple particles: quarks, leptons (i.e. electrons), and a handful of force particles (photons, gluons, and other bosons), together with the laws of physics" (p. 124). The combination of these basic building blocks can obviously occur in different ways, resulting in different objects (just think of a stone vs. a human being). It

seems that, in physical science, two factors are crucial to the “realm of possible states of the whole”, namely the number of particles involved (the size) and the hierarchical level of complexity (the structure) (Skrbina, 2013, p. 124). In a conceptual sense, we can say that a larger number of particles involved provides an object *width*, while a richer hierarchical complexity gives an object *depth*, in combination the width and depth of an object determines its *space of possible states*. Skrbina (2013) argues that in much the same way as other physical fundamentals combine into wholes of varying size and complexity, “so too may we conjecture that a large number of experiential ultimates, combined in a complex mental hierarchy of experiential structures-within structures, can yield a complex mental space”, or *mind space* (p. 125). In this view, it is the tight collaboration of physical particles and structures, with their intrinsic micro-experientiality, that gives rise to something which is experienced as one constant whole macro-consciousness. Hence, the combined sense and degree of macro-consciousness is dependent on the existence and stability of the physical object. Since we know that objects are dynamic in the sense that particles are constantly leaving and joining them, this deems our macro-consciousness a much less stable entity than we might conceptually assume. On the basis of this, Skrbina (2013) concludes that macro-consciousness has “‘fuzzy edges’ that tail off into the unconscious, the subconscious, and other esoteric states” and that macro-consciousness is therefore “perhaps best understood as a quasi-persistent pattern in time assuming only rough self-similarity combined with long-term stability” (p. 127). In other words, macro-consciousness is argued to be much more dynamic than it may conceptually and phenomenologically appear, as it is a space ‘held open’ by particles which are in constant flux.

The above merely provides an outline of Skrbina’s (2013) mind space theory, and much more work is needed, both within the physical sciences and philosophy, in order to develop the theory and assess its applicability. Importantly, the theory opens up an area for collaboration between physicists and philosophers, to continue the work of investigating the link between micro-consciousness and micro-physical structures. One thing that Skrbina (2013) clearly neglects to address, is what his theory

may imply for the possibility of a consciousness inhabiting a 'greater' mind space than that found in humans – for example a 'mind space' of the whole universe. A theory which does consider such *holistic consciousness*, is Nagasawa and Wager's (2016) theory of 'priority cosmopsychism', which is explored in the following.

Priority Cosmopsychism

The second reply to the combination problem, which will be explored in the present analysis, takes a much more speculative and theoretical approach than the solution offered by Skrbina (2013). This approach is coined 'priority cosmopsychism' and is offered by Nagasawa and Wager (2016). Priority cosmopsychism takes its offset in holistic panpsychism, which has been offered as a potential contender to the more common sub-approaches within panpsychism. Unlike the typical panpsychist thesis, that macro-experience is grounded in micro-experience, holistic panpsychism takes the view that "phenomenology is prevalent because the whole cosmos instantiates phenomenal or proto-phenomenal properties" and that "the consciousness of the cosmos is prior to the consciousness of ordinary individuals" (Nagasawa & Wager, 2016, p. 114). Reporting on the work of Schaffer (2008), Nagasawa and Wager (2016) argue that while we often perceive of a whole as constituted by smaller entities, this is not always the case, with some wholes, such as the physical universe, being a genuine whole (this view is also known as *priority monism*). In much the same way, Nagasawa and Wager (2016) ponder whether there could be a genuine whole cosmic consciousness (p. 117).

The reason that Nagasawa and Wager (2016) ponder whether there could be a whole cosmic consciousness, is that such a holistic panpsychist theory could potentially overcome the combination problem. Since priority cosmopsychism does not assume macro-consciousness to be realised by micro-consciousness there simply is no *combination* problem. *However*, if priority cosmopsychism is the view that each subjectivity is somehow a distinctive 'part' of the universal consciousness, have we not in fact simply altered the problem of combination for the equally difficult problem of *derivation*? Chalmers (2016b, p. 195) argues that we have, and dismisses holistic

panpsychism on this account. Unlike Chalmers (2016b) however, Nagasawa and Wager (2016) do not consider the question of derivation as problematic as the combination problem, and they argue that a potential way to reply to the derivation problem is to explore the possibilities of derivating human consciousness into parts (p. 122). One example of the derivation of human consciousness, they argue, is found in visual experience, where many qualia can be said to exist at once, in one whole consciousness (without these parts constituting the whole since the whole is assumed prior to the parts). Perhaps cosmic consciousness unifies the consciousness of individual entities in a similar way (Nagasawa and Wager, 2016, p. 122).

While priority cosmopsychism is a relatively new and highly speculative panpsychist theory, with no real explanation of what cosmic consciousness is, there seems to be prima facie evidence that it could be a valid contestant within the battle of the sub-theories of panpsychism. Further analysis is needed in order to draw any conclusions regarding its theoretical advantages and disadvantages in comparison with the Russelian constitutive panpsychism treated thus far in the present paper. For now, the suggestion of cosmic consciousness is left to the side as a theory deserving of further attention, particularly in relation to the combination problem.

While the above exploration offers only glimpses at two of the approaches seeking to overcome the combination problem, it should be clear that while much work is being conducted, much more work is still needed before an encompassing solution is found. Despite the combination problem being a legitimate theoretical problem, which may, if unresolved, challenge the validity of panpsychism, the present study does not deem the combination problem a theoretical dead-end. In conclusion, the present study sides with scholars such as Goff (2016, p. 301), Blaumauer (2013, p. 114), Skrbina (2013, p. 122) and Seager (2016, p. 247) and argues that a satisfactory solution to the combination problem is possible, and, with time, likely.

Sub-conclusion

In order to proceed onto the exploration of how consciousness theory does and should inform the consciousness-environment relationship, it is useful to first conclude on the investigation of the validity of theoretical frameworks of consciousness that this study has undertaken. The present section will thus briefly summarise and provide a sub-conclusion for chapters 2-4.

To explore the theoretical approaches to consciousness and investigate their theoretical validity, the analysis began by first outlining the two main dualist approaches to consciousness; substance dualism and property dualism, followed by the two main monist approaches to consciousness; reductive and non-reductive physicalism. While *substance dualism* was dismissed on the account that it is incapable of accounting for the interaction between consciousness and the physical, *reductive physicalism* was rejected on the account that it fails to address the essence of subjective experientiality. This left *property dualism* and *non-reductive physicalism* for further exploration. It was found that both these approaches assume consciousness and the physical to exist in a *dual-aspect monism*, in which consciousness is assumed to *emerge* from the purely physical. The distinction between *property dualism* and *non-reductive physicalism* was therefore argued to be largely semantic, and the theories were from this point forward considered in unison as *dual-aspect monism*. The analysis showed that *dual-aspect monism* is left facing two major theoretical challenges: Firstly, the problem of how (*causal*) *interaction* between consciousness and the physical is possible, and secondly, the question of how consciousness can brutally emerge from the purely physical, also known as *the hard problem of consciousness*.

The investigation of *downward causality* and *epiphenomenalism* found no solution to the problem of interaction in dual-aspect monism. A thorough analysis of *the hard problem of consciousness* illustrated the seeming theoretical *impossibility* of consciousness *emerging* from a non-conscious physical basis. In sum, dual-aspect monism was found to be held in a theoretical deadlock, with the two major theoretical problems seeming so logically insolvable that a resolve appears unlikely (at least if the

present conceptualisation of consciousness as taken as truth, which it has been argued extensively that it should be). Drawing on the work of scholars such as Strawson (2008), the investigation of the hard problem of consciousness ultimately led to the logical conclusion that in order for there to be consciousness in humans, which we know that there is, consciousness must exist at a foundational level of that which comprises consciousness – such as suggested in the framework of *panpsychism*. An exploration of the validity of panpsychism as an encompassing framework for consciousness was therefore commenced.

Upon arguing (Russelian constitutive) panpsychism to be a theory capable of overcoming the problem of interaction as well as the hard problem of consciousness, the problem of combining micro-consciousness into one in macro-consciousness was considered. Possible solutions to this *combination problem* were offered as evidence that, while much research is still needed, a resolve to this problem is deemed theoretically possible. Thus, while the combination problem is a legitimate theoretical problem, which could, if unresolved, challenge the validity of panpsychism, it was not deemed insolvable to the same extent that the problem of interaction and the hard problem of consciousness are for dual-aspect monism.

While more work is needed before a valid and encompassing theory of consciousness can be determined, it seems, in light of the present analysis, that panpsychism has significant theoretical advantages over the more commonly adhered to framework of dual-aspect monism. When tallied up, the present study therefore deems panpsychism the framework of consciousness which is *most likely* to represent the *true* nature of consciousness.

With panpsychism established as the most valid theoretical framework of consciousness, an important question to consider now is how this might and should inform our assumed understanding of the consciousness-environment relationship. If panpsychism is in fact the framework most aligned with the true nature of consciousness, it seems that adhering to its implicit understandings of the consciousness-environment relationship will allow us to conduct thinking, behaviour, theory, and research more aligned with the true nature of reality. We thus need to

explore how the panpsychist notion of the consciousness-environment relationship differs from that found in the much more established frameworks of dual-aspect monism and reductive physicalism, and assess the implications and meaning of such differences. In essence, it should be investigated how a paradigm shift to the pansychist understanding of the consciousness-environment relationship might and should change our perspective. This is a huge question, which can and should be assessed from many angles and from within many fields of study. The remainder of this paper seeks to aid in this process by bringing attention to the matter and opening up a space for discussion and exploration, within which other scholars can continue this important work.

5

The (Assumed) Consciousness-Environment Relationship

The final chapter of this study will embark the exploration of how theories of consciousness do, might, and should, in a bottom-up manner, inform the understanding of the consciousness-environment relationship. Building on the outcome of the analysis conducted thus far in this study, the key aim of the exploration will be to consider the assumed nature of the consciousness-environment relationship in panpsychism. In order to investigate how a panpsychist paradigm may inform and shift the assumed consciousness-environment relationship, an analysis of the assumed consciousness-environment relationship inherent to the more established dualist and monist frameworks of consciousness should first be conducted.

As should be clear from the review conducted in the preceding chapters, there is no doubt that dualism and physicalism are by far the main overall theoretical approaches to consciousness. This is also evidenced by the fact that 84% of Anglo-Saxon philosophers adhere to either some form of dualism or some form of physicalism (27% and 57% respectively) (Bourget and Chalmers, 2014, p. 476). Drawing on the work of scholars such as Kessler (2019) and Matthews (2003, 2011) the analysis will illustrate that while dualism and monism are generally presented in the literature as standing in opposition to one another, they are in fact part of the *same* overall consciousness-environment paradigm, which offers a *post hoc* conceptualisation of (human) consciousness as *distinctive from* and *superior to* the environment. Following from this, it will be argued that panpsychism assumes a consciousness-environment paradigm which is radically different from that of any contemporary dualist or monist theories, since it does not assert (human) consciousness as standing in opposition to

the environment. Finally, the implications and meaning of this shift in perspective will be considered through the exploration of four questions, which explore the panpsychist consciousness-environment paradigm in more detail.

The Hierarchical Dualism of Substance Dualism

To begin the investigation, it is necessary to return to the roots of the monism vs dualism debate in contemporary consciousness literature, namely Descartes' (1641/1911) substance dualism, which posits the existence of two distinctive substances; consciousness on the one hand and the physical on the other. Importantly, Descartes (1641/1911) seemed to consider consciousness a substance uniquely found in human beings, separate from everything physical (including the human body) (p. 13, p. 30). In a recent work titled 'Ontology and Closeness in Human-Nature Relationships', Kessler (2019) argues that Descartes (1641/1911), by hardening the divide between consciousness and the physical, placed consciousness not only as *uniquely human* but also as something *superior* to the 'outside' non-human world. As such, Kessler (2019) argues that Descartes pinned (human) consciousness as something 'more-than-physical' while the physical became something 'less-than-consciousness' (p. 46). In other words, Descartes (1641/1911) did not simply split the world into two equal parts, but rather asserted a hierarchical relationship between the two, with human consciousness at the top, as the means to obtaining truth, and the uncertain 'outside world', the environment, at the bottom. A reading of Descartes (1641/1911) offers support for Kessler's (2019) analysis, for example the following quote, which highlights Descartes (1641/1911) mistrust in that which is perceived of the 'outside world':

... many experiences little by little destroyed all the faith which I had rested in my senses; for I from time to time observed that those towers which from afar appeared to me to be round, more closely observed seemed square ... and so in an infinitude of other cases I found error in judgments founded on the external senses. (p. 27)

Another quote illustrates how Descartes (1641/1911) assumes that which *is* true of the outside world something purely mechanical and mathematical:

[Corporeal things] are perhaps not exactly what we perceive by the senses, since this comprehension by the sense is in many instances very obscure and confused; but we must at least admit that all things which I conceive in them clearly and distinctly, that is to say, all things which, speaking generally, are comprehended in the object of pure mathematics, are truly to be recognized as external objects. (p. 29)

That which is outside of consciousness was thus with the work of Descartes (1641/1911) conceptualised into something either uncertain and deceptive, or mathematical and mechanical – lacking of any inner life. Altamirano (2016) argues that Descartes (1641/1911) “facilitates a picture of the human in confrontation with nature, rather than an ecological relationship”, and that by deeming the outside world something mathematical and mechanical, the superior human consciousness “can view its concrete environment as purely a means, an object there for technical utilisation” (p. 32). In line with this, Kessler (2019) argues that by creating the hierarchical divide between consciousness and the environment, Descartes (1641/1911) “stripped [the non-human world] of the very qualities and capabilities that had previously given it moral, and even ontological, standing and relevance” (p. 46).

In sum, Descartes (1641/1911) view of the consciousness-environment relationship is not only one that considers the two as distinctive substances, but also one that places human consciousness as more valuable than anything which is outside of such consciousness. For clarity's sake, the *relational* dualism between consciousness and the environment, which was established by Descartes (1641/1911), will in the remainder of this paper be referred to as '*hierarchical* dualism'. Inspired by the work of critical ecofeminist theorists, hierarchical dualism is thus used in the analysis as a term to describe the finding that consciousness, which may or may not be

ontologically distinct from the environment, is *post hoc* conceptualised in such a way that the environment is positioned as inferior to it (Kessler, 2019, p. 9). ‘Hierarchical dualism’ should thus not be confused with the way ‘dualism’ has been used previously in this study, as it refers specifically to the conceptual move of asserting consciousness and the environment (ontologically distinct or not) in opposition to one another. This terminology will be of relevance in the further analysis conducted in this chapter.

In line with almost all contemporary consciousness scholars, Cartesian substance dualism was in chapter 2 criticised and ultimately dismissed on the account that upon its splitting of the world into two distinctive substances, interaction between the two substances became fundamentally impossible. So why, the reader may wonder, is this debunked theory even relevant to consider here? While substance dualism is often presented as little more than a footnote in consciousness literature, it will be demonstrated that its assumptions regarding the nature of the consciousness-environment relationship, the hierarchical dualism, implicitly lives on in contemporary theories of consciousness. In essence, the following analysis will thus illustrate that Descartes’ (1641/1911) definitive hierarchical divide between consciousness and the physical can be understood as the foundation for the understanding of the consciousness-environment relationship, not only in dualist theories of consciousness, but in monist theories too.

The Hierarchical Dualism of Physicalism

With 57% of Anglo-Saxon philosophers adhering to a physicalist understanding of consciousness (recall that this excludes other disciplines where this percentage is likely much higher, e.g. neuroscience), and with an ever-growing number of studies within the natural sciences seeking to investigate the physical foundations of consciousness, it is easy to accept the claim that the framework of physicalism is by far the dominating framework in consciousness studies (Bourget and Chalmers, 2014, p. 476; Mianji, 2015, p. 57). Based on this, it should come as no surprise that physicalism is fundamental to much of contemporary science and that it is the framework upon

which the majority of research builds theories and studies (Kessler, 2019, p. 30, p. 86). The assumptions regarding the consciousness-environment relationship inherent in physicalism are thus arguably the most influential in contemporary science, and they are therefore highly important to investigate and clarify.

In the literature, physicalism is often presented as a theoretically superior counter to dualist theories of consciousness, however, as has been illustrated in chapter 2, the distinction between popular monist and dualist theories is much less clear than what is often supposed. Specifically, the analysis illustrated that non-reductive physicalism and property dualism are only semantically distinguishable, and the two theories were therefore summated into dual-aspect monism, an approach which is essentially both monist and dualist. The grand theoretical challenges that face dual-aspect monism have already been extensively explored in chapter 3, here it suffices to say that by asserting that consciousness is more than, but reducible to, the purely physical, dual-aspect monists are, in the words of Kessler (2019), attempting to have their “ontological cake and eat it too” (p. 297). The fact of dual-aspect monism highlights that considering dualism and monism as truly distinctive counters is more problematic than often assumed. In response to this, *reductive* physicalists may object, and argue that a true reductive physicalism is a true and distinctive counter to dualism. While this objection may seem valid at the surface level, it will be argued in the following that even reductive physicalism in fact exists within the paradigmatic assumptions regarding the consciousness-environment relationship, which were established with Cartesian substance dualism. It will thus be argued that *all* dualist and monist theories of consciousness in fact have the same basic hierarchical dualist understanding of the consciousness-environment relationship.

Mathews (2003) argues that hierarchical dualist assumptions of the consciousness-environment relationship were “built into the foundations of classical, mechanistic, science”, whereby a worldview which assumes physicality to be without an inner life came to dominate – particularly in the Western world (p. 26). According to Mathews (2003), this is a strange blind spot for the many physicalists who reject (and sometimes even ridicule) dualism, and fail to see that their physicalist understanding

of the world in fact builds on the hierarchical dualistic worldview, which was asserted in Descartes (1641/1911) substance dualism (p. 26). Support for Mathew's (2003) claim is given by Kessler (2019), who reports on evidence, which illustrates that in the human-environment relationship, that which is non-human is understood as passive material objects of instrumental value only (p. 24). While physicalists assume everything to be founded in the purely physical, whereby they adhere to a *monist* understanding of what is at the foundational level of the world, a post hoc *conceptual* hierarchical dualism still seems to exist between consciousness and the non-conscious environment. To clarify: The physicalist understanding of consciousness as something which exists in effect of *specific* physical properties and processes within the human, places consciousness as something that only exists when these *specific physical properties and processes are in place*. As such, everything which is *not* 'these specific physical properties and processes' is not experientiality but exists outside of such experientiality in the non-experiencing 'dead' realm. While this may seem obvious, this consciousness vs. not-consciousness divide is exactly what creates the hierarchical dualism, which is also at the heart of dualist theories of consciousness.

In contemporary thinking and research, the 'specific physical properties and processes', which are assumed necessary in order for there to be consciousness, are generally conceded to expand, by some extent, beyond humans and into the animal kingdom. Damasio (2010) for example, argues that "brains begin building conscious minds not at the level of the cerebral cortex but rather at the level of the brain stem" (p. 25). For this reason, it is clear to Damasio (2010) that many other animals than just humans have the necessary properties and processes required for consciousness (p. 30). It is generally an uncontested view that other animals, particularly other mammals, with brain structures and processes similar to those of humans, have consciousness. Consciousness is therefore no longer thought to be uniquely human, such as it was asserted by Descartes (1641/1911). Instead, consciousness is thought to exist in whatever animal that possess the physical brain-based properties and functions that are deemed sufficient and necessary for the existence of consciousness (whatever they may be). While much more could be said regarding the specific animal

species that are assumed to have consciousness, this is not the purpose of this presentation. The purpose is instead to highlight that while the general consensus of animal consciousness is a significant shift, which places humans and some animals closer together in terms of their assumed ontological status, it does not change the fact that physicalism assumes a worldview in which some things have consciousness and others do not. Therefore, the hierarchical duality persists – despite the acceptance of consciousness in some animals.

Kessler (2019) argues that by lodging consciousness within specific physical properties and processes, typically the (human) brain, the environment outside is denied value and meaning (p. 27), whereby it becomes near impossible “to argue for ethical consideration of more-than-human beings as ends in themselves” (Kessler, 2019, p. 29). The non-conscious environment is thus only of value in so far as it optimises the well-being and reduces the suffering of conscious entities. In line with the conceptualisation offered in chapter 1 of this study, Damasio (2010) states that “in the absence of consciousness, the personal view is suspended; we do not know of our existence; and we do not know that anything else exists” (p. 5). Hence, consciousness is the reason that well-being and suffering has any relevance in the world – the sole factor that makes anything of value. Because of this, and because consciousness is assumed limited in physicalism and dualism to humans and a relatively small number of animals, the utilisation of the non-conscious ‘outside world’ makes perfect sense within these theoretical frameworks. This understanding of the consciousness-environment relationship is so engrained in contemporary thinking, that even realising it to be a paradigm rather than a fundamental truth can be difficult. Meanwhile, it is important that we become aware of these implicit assumptions when considering the analysis conducted in chapters 3-4 of this study – which questions the validity of dualism and physicalism as valid and encompassing theoretical approaches to consciousness, and instead highlights panpsychism as the framework most likely to be aligned with the true nature of consciousness. With that said, the investigation will now turn to begin the exploration of the assumed consciousness-environment relationship in panpsychism.

The Panpsychist Consciousness-Environment Paradigm

So far, this chapter has explored the assumptions regarding the consciousness-environment relationship, which builds on monist and dualist theories of consciousness. It has been argued that while physicalism is often presented as the counter to dualism in the literature, the two are in fact part of one larger hierarchical dualist paradigm, which asserts consciousness as superior to the non-conscious environment. The analysis conducted in chapters 3-4 found panpsychism a theoretically advantageous framework of consciousness over the dualist and monist theories. It was therefore concluded that panpsychism is more likely to represent the true nature of consciousness. The question that needs to be explored now, is therefore how the panpsychist assumptions of the consciousness-environment relationship might differ from those of dualism and monism, and how this might in turn inform thinking, behaviour, research, theory and conduct more broadly.

Mathews (2003) has argued that the true converse of dualism, rather than being physicalism, is “a position that posits some form of nonduality or mind-matter unity, implicating mentality in the definition of matter and materiality in the definition of mind” (p. 27). In other words, the true opposition to the hierarchical duality between consciousness and the environment, which is assumed by physicalists and dualists alike, is a theory which asserts consciousness to be in everything. In positing that consciousness exists as a fundamental in the natural world, alongside other fundamentals such as mass, charge and spin (e.g. Goff, Seager, & Allen-Hermanson, 2017, 3.2), panpsychism offers such a thesis. In this broad view, panpsychism assumes no duality between consciousness and the environment, since consciousness must be everywhere and as a part of everything. The implicit assumptions regarding the consciousness-environment relationship in panpsychism are thus a true converse to those of dualism and physicalism (Mathews, 2003, p. 27-28). This has led Mathews (2011) to argue that “panpsychism functions not merely as a *rival* theory but as a *rival paradigm*” to dualism and physicalism (p. 141). The question is now what this means – how it shifts – or ought to shift – our thinking and understanding about the reality of the universe and our place in it.

The following sections seek to commence the exploration of what a paradigm shift to the panpsychist assumptions regarding the consciousness-environment relationship might look like, and how it might influence thinking and conduct. The exploration will be based around some anticipated questions that are relevant to address and consider in such a paradigm shift. The questions that are posed should not be understood as representing an exhaustive list of topics to be accounted for, but rather hopes to form the starting point for a continued dialogue on the matter. The unfolding and replies to the questions will be of an investigative and sometimes highly speculative nature, which, more often than not, will open up and leave further questions that need to be considered. The purpose of the following is thus not to conduct a finite analysis of the consequences of a paradigm shift to panpsychism, but rather to inspire thinking and open up a space within which future exploration can take place.

Question 1:

In chapter 4 a distinction between macro-consciousness and micro-consciousness was introduced within the exploration of panpsychism. Does this distinction not assert a dualism between a superior macro-consciousness and an inferior micro-consciousness, which is not so unlike the hierarchical dualism asserted by physicalists and dualists between consciousness and the environment?

The distinction, which was made in chapter 4 between micro-consciousness and macro-consciousness, presents the former as a term to describe fundamental basic consciousness, while the latter describes consciousness in *macroscopic* entities (such as humans and other ‘non-fundamental’ entities). This conceptual distinction between micro- and macro-consciousness was useful in the analysis, for example in the investigation of the combination problem (chapter 4). The question is now, whether the distinction, directly or indirectly, establishes macro-consciousness as a ‘superior

type of consciousness', above and beyond, micro-consciousness, whereby a hierarchical dualism is established.

The short reply to the posed question is that while the distinction might ascertain macro-consciousness as a 'more complex' form of consciousness, whereby it could arguably be seen as superior in some ways, this should not be understood as a superior type of *consciousness*, since the *essence* of consciousness must exist in micro-consciousness too. To clarify, recall here the arguments presented in chapter 3 against the brute emergence of consciousness, which essentially deemed the brute emergence of experientiality impossible without some kind of 'magical leap'. This suggests that even if one draws some kind of distinction between macro- and micro-consciousness, that distinction *cannot* be one that denies micro-consciousness as subjective, unified, qualitative experientiality, that is, it cannot deny the essential aspects of consciousness in micro-consciousness. As such, both macro-consciousness and micro-consciousness must have *the same* essential first-person aspects of consciousness, and macro-consciousness is therefore not a superior type of *consciousness*. Recall here the argument presented previously; that it is consciousness which makes all that happens valuable and relevant, and it should be clear that a *macro-consciousness-micro-consciousness* distinction, is not the same as the hierarchical dualism offered by physicalism and dualism, which asserts consciousness on the one side and *not-consciousness*, the environment, on the other. A 'panpsychist' who asserts micro-consciousness to be 'not-really-consciousness' is, in my opinion, not a panpsychist at all, and I therefore leave those scholars to fend for themselves.

The ways in which macro-consciousness potentially differs in any way from micro-consciousness remains unknown at this point, and will likely not be answered before a resolve to the combination problem has been given and we understand how micro-consciousness combine into one in macro-consciousness. All we seem to be able to conclude, and this is a very important conclusion indeed, is that any potential difference between macro- and micro-consciousness *cannot* have to do with the essence of consciousness itself. For panpsychism to offer a real and valid counter to physicalism and dualism, and overcome the hard problem of consciousness, micro-

consciousness cannot be some 'watered-down' version of consciousness but must be just as much consciousness as macro-consciousness is. Similarly, we cannot know whether significant differences exist between the macro-consciousnesses of different macroscopic entities, for example between human consciousness and the consciousness of a mosquito. Again, we can only know that this difference cannot be one which eliminates the essence of consciousness itself. This leads us to question 2.

Question 2:

If, in the panpsychist paradigm, we must assume actual consciousness to exist throughout the universe, does this mean that my human consciousness is no more important and valuable than any other consciousness?

As was demonstrated in previous sections of this chapter, the hierarchical dualism, which is a consequence of the physicalist and dualist theories of consciousness, asserts that that which is conscious (human beings and perhaps a few animals) is superior to that which is not conscious (everything else). Hereby, the non-conscious 'dead' environment is considered a means to be taken advantage of for the continued prosperity of conscious beings. With a shift to a panpsychist paradigm, such a rationale is no longer sensible. From the discussion on question 1 above, it follows that consciousness must exist all throughout the universe as a fundamental aspect of all there is. As such, nothing can be given precedence over something else *on the account that it has consciousness*. Since *everything* has consciousness, consciousness can no longer be the factor which deems one entity as superior over another. The fact that I *have* consciousness makes me no more, and no less, important or special than anything else. Claiming otherwise would be the equivalent of claiming that in a completely yellow universe I am exceptional because I am yellow.

The fact that, in the panpsychist paradigm, having consciousness does not make any entity exceptional, is not to say that all conscious *experiences* should be deemed equal. There is an important distinction to be made here between *having* the space of consciousness and the *specific conscious experiences*, which are given by the

'content' that '*enters into*' the *space of consciousness*. While everything *has* consciousness in the panpsychist thesis, that is not to say that the experiences that occur 'within' consciousness are not *extremely* different between entities. It is clear that the experiences I can have as a human are connected to my senses, my body, my brain and my surroundings in a very complex way. The consciousness of a brown bear, who can smell fish up to 30 kilometres away, is likewise bound by its senses, body, brain and surroundings – albeit in a very different way. But what about a stone? Are there any conscious *experiences* in a stone? We know that according to the panpsychist thesis the stone, or at the least its micro-constituents, must *have* consciousness, but what such consciousness could potentially experience is very hard, if not impossible, to imagine. Perhaps it experiences a dull sense of unity and bordering to its surroundings? Perhaps it simply consists of a multitude of micro-consciousnesses which have no real sense of one collective experience? It is crucial that we do not attempt to project any of our own conscious experiences of pain, sorrow, happiness, hunger, thinking, communicating etc. into the stone – we have to keep sight of the fact that consciousness is simply the *space* within which experiences become salient, nothing more, nothing less. As was argued by Nagel (1974) we, as humans, are bound by our own experiential realm and will never be able to extrapolate, from our own case, to the inner life of, for example, a bat (p. 438-439). As such, it is the possible experiences that an entity can have in consciousness, which sets it apart from all else.

This leaves many unanswered and speculative questions, for example, the question of what is required for a macro-consciousness to combine from micro-consciousness (does, for example, a cell, a stone, a kidney, or a planet have a macro-consciousness?)? Another important and interesting question is whether the space of consciousness *in itself* can be understood as an experiential state. Additionally, is the question of whether the universality of consciousness, but variation in possible experiences, in any way changes our ethical responsibilities towards the world around us? This last question will be unfolded further in the following.

Question 3:

What are the ethical implications of everything having/being consciousness, while not having the same possible experiences?

It is not within the scope of the present study to conduct a full ethical analysis of a panpsychist paradigm. To open up the discussion however, the following will assume that the ultimate goal of ethics is to prescribe conduct, which will reduce suffering and increase well-being in the world - whatever that may mean. While it has been shown that, in a panpsychist paradigm, the fact of consciousness itself makes nothing special or more important than anything else, the varying possible experiences *in* consciousness might. The moral measuring stick in panpsychism thus seems to be the possible experiences of well-being and suffering that an entity can have. Since a stone does not, based on everything we know, experience pain, the pain of a stone should not be of concern to us. Again, we must keep sight of the fact that ethics is grounded in human experience and be careful not to project our own experiences onto other entities. The fact that everything has consciousness however, means that we must widen the scope of current ethical studies to take into consideration the possibility of some form of well-being and suffering in entities, which were under the hierarchical dualist paradigm considered 'dead', and therefore deemed irrelevant for ethical consideration as ends in themselves.

Damasio (2010) argues that "it turns out that living creatures without any brain at all, down to single cells, exhibit seemingly intelligent and purposeful behaviour" (p. 32). While Damasio (2010) himself argues these behaviours to exist *unconsciously*, these observations might under the light of panpsychism gain new life, quite literally, as this could suggest that even a single cell *experiences* goal-directed purposeful behaviour. Since the cell seeks to obtain a goal, it is likely that if unsuccessful this will result in some kind of 'feeling' of 'unpleasantness'. Here, 'feeling' and 'unpleasantness' means something very different from the human experience of unpleasantness, again,

we must be very careful not to use our own human experiences as analogous to the possible experiences of other entities.

Through an extensive discussion of plant consciousness, which I will not reiterate here, Kessler (2019) concludes that plants “are trying to share thoughts and feelings with us, but that modern humans aren’t listening like we should” (p. 333). This is so, Kessler (2019) argues, because the hierarchical dualist paradigm has numbed, deafened, and blinded us to the possible experientiality of the environment p. 311-313, 333). In no way do I think that the observations made by Damasio (2010) or Kessler (2019) means that we have the same ethical responsibility towards a single cell, or a tomato plant, as we do towards another human being or a cow – who clearly experiences suffering in a very specific way that is connected to the central nervous system. I do however think that it means we need to accept a much more open attitude to the possible experiences of entities in the world around us and consider what this means for our understanding of ethics more generally. I also think this should leave us humbled and have us reconsider the implicitly assumed human exceptionalism that has dominated under the hierarchical dualist paradigm. This leads us to the last question which will be explored here, namely the question of how a panpsychist paradigm might shift the understanding of our place in the world and our relationship with the environment.

Question 4:

How might panpsychism change the way humans understand their place in, and their relationship with, the world?

Out of the questions that have been posed, this is perhaps the most important question. I believe so because I think that even a small shift in the understanding of our place in the world, can have an enormous impact, not just on the way we behave in the world, but also on our phenomenological felt sense of the world. I will speculate that the ‘felt’ shift in the human-environment relationship, which can occur under a panpsychist paradigm, could ultimately lead to reduced suffering and increased well-

being for the individual human being, through an increased appreciation of the environment and a feeling of connectedness and sensitivity with all that exists. This intuition is also backed by the studies presented at the onset of this paper, which showed that connectedness to the environment had a direct impact on conduct and well-being (Seymour, 2016; Vining, Merrick and Price, 2008)

In the exploration of the panpsychist assumptions of the consciousness-environment relationship, it has thus far been asserted that: a) consciousness is everywhere and therefore having consciousness cannot assert any entity as superior to another in its environment, b) that it is the possible experiences that an entity can have, which makes it distinguishable from other entities, and c) that as the experiences of other entities cannot be known by humans; ethics must remain open to the possibility of forms of endured suffering and well-being, which humans can never access. Awakening to the fact that under a panpsychist paradigm, suffering may, in varying forms, be everywhere, can at first seem like a stressful realisation to have. According to Mathews (2003) this stressful realisation can in fact make one retreat to a hierarchical dualism, and the assertion that the environment is 'dead', non-conscious, and empty (p. 89-90). In other words, the realisation that suffering could be everywhere in our meeting with the environment, can lead one to "retreat from life ... back into the anaesthesia of repression" (Mathews, 2003, p. 160). Meanwhile, a retreat to the hierarchical dualist paradigm *isolates* the human "in the small if charmed circle of its own subjectivity" and leads us to close ourselves off to the reality of the experientiality of the world (Mathews, 2003, p. 44). According to Mathews (2003) it is thus only under the panpsychist paradigm that we can truly connect with reality, but in order to not retreat from such reality, one must take care not to succumb too fully to the anguish and suffering that can be found in the environment (p. 44, 160).

While I tend to agree with Mathews' (2003) bittersweet analysis, I think that she overlooks the impact of the realization that the human experience is not the gold standard upon which all other experience must be made sensible. If we truly realise, in a phenomenological 'felt' sense, that all consciousnesses are limited by possible experiences, then the potential experiences, including potential suffering, of entities

around us, may be approached with openness, curiosity and compassion rather than distress, repression and retreat. I think that the openness to the experientiality of the world can in turn, in a very real way make us realise that by no truly objective measure (above and beyond any human measures) are humans superior to anything else. I believe this to be a liberating and humbling realisation, which has the potential to reconnect us to the world around us and make us feel less isolated.

Under the panpsychist paradigm everything seems to 'come alive', and the world is no longer a dead space for humans to plough through on account of their own superiority over all else. With the knowledge that entities, including humans, are dynamic in the sense that particles are constantly leaving and joining them, and the understanding that all is/has consciousness, it becomes clear that we are, in a very practical way, connected to and part of everything. Similar findings lead Mathews (2003) to conclude that "when one awakens to the living essence of the world and all its contents, then fear of one's own death loses its grip, and one is free to open oneself to engagement with others" (p. 160). Based on reasoning, intuition, and glimpses from my own phenomenological experience, I agree with Mathews (2003) conclusion, and in addition would add increased care and compassion towards everything around us to the list of potentially positive outcomes of a panpsychist consciousness-environment paradigm. That being said, much work is yet to be conducted, both philosophically and empirically, before any final conclusions can be drawn, and many unanswered questions remain, such as the following: Are there any present or historical persons or cultures which adhere to a panpsychist paradigm? Are there any adverse effects which might accompany a shift to the panpsychist paradigm? How can the panpsychist paradigm help us make sense of disorders of consciousness and vice versa? Why does consciousness exist in the universe? What are the (ethical) implications of a panpsychist paradigm in the development of artificial consciousness? and many more.

Conclusion

To assess the validity of consciousness theories, and aid in the process of establishing the framework of consciousness most likely to represent its true nature, this study began by exploring the main dualist and monist approaches to consciousness. The analysis deemed *substance dualism* invalid on the account that it is incapable of accounting for the interaction between consciousness and the physical, while *reductive physicalism* was rejected on the account that it fails to address the essence of consciousness (as it is conceptualised in the present). This left *property dualism* and *non-reductive physicalism* for further exploration. It was argued that since both these approaches assume consciousness to *emerge* as a distinctive ontological phenomenon from the purely physical, the two approaches can be summated as *dual-aspect monism*. Dual-aspect monism was in turn found to face two major theoretical challenges: The problem of *(causal) interaction* between consciousness and the physical, and *the hard problem of consciousness*. The analysis found no resolve to these two problems, and dual-aspect monism was therefore found to be facing a theoretical dead-end.

Through the analysis of the hard problem of consciousness the investigation ultimately led to the logical conclusion that in order for there to be consciousness in humans, which we know that there is, consciousness must exist at a foundational level of that which comprises consciousness, such as suggested in the framework of *panpsychism*. The exploration of panpsychism deemed Russelian constitutive panpsychism to be the sub-theory capable of overcoming the problem of interaction and the hard problem of consciousness. Panpsychism was found to face a grand challenge of its own, namely the *combination problem*, however, through the presentation of possible solutions to this combination problem it was argued that a resolve to this problem is deemed theoretically possible. It was therefore concluded that, while much work is still needed before a valid and encompassing theory of consciousness can be determined, it seems, in light of the present analysis, that panpsychism has significant theoretical advantages over the more commonly adhered

to framework of dual-aspect monism. When tallied up, the present study deemed panpsychism the framework of consciousness, which is *most likely* to represent the *true* nature of consciousness, however, further studies are needed in order to draw any final conclusions.

On the basis of the analysis of the validity of consciousness theories, the exploration moved on to investigate how consciousness theory does, might, and should, in a bottom-up manner, inform assumptions regarding the nature of the consciousness-environment relationship. With panpsychism offering the most promising theory of consciousness, the exploration focused on investigating the consciousness-environment relationship inherent to the panpsychist paradigm, and contrasted this with that of the more popular dualist and monist approaches. It was shown that Descartes' substance dualism asserted consciousness as superior to the non-conscious environment. This *hierarchical dualism* established the environment as 'dead' and mechanical, something, which is there to improve the well-being of conscious (human) beings. It was argued that while physicalism is often presented as a counter to dualism, physicalism is in fact part of the same consciousness-environment paradigm as was established by Descartes, since physicalists too assert consciousness in a hierarchical dualism over and above a not-conscious environment.

Panpsychism was found to be a true counter to the hierarchical dualism inherent to dualist and monist theories, since it asserts consciousness within and throughout the environment. The panpsychist paradigm was thus found to offer a truly new way of assuming the consciousness-environment relationship. This is highly relevant because the analysis deemed panpsychism more valid than contemporary monist and dualist approaches to consciousness, and the panpsychist consciousness-environment paradigm therefore likely represents reality to a greater extent than hierarchical dualism does. In order to investigate the panpsychist paradigm further, and consider what a paradigm shift from hierarchical dualism might entail, a series of questions were explored. It was speculated that a panpsychist consciousness-environment paradigm requires ethical reconsiderations, for example in relation to the possibility of experientiality in entities, which under the hierarchical dualist paradigm

were deemed without experientiality. It was also suggested that the panpsychist paradigm can shift our conduct and our phenomenological perception of *being* in the world, making us feel more connected and humbled, and that it can ultimately lead to greater awareness, compassion, care and well-being. Rather than providing a full and definitive answer to each question, the discussion sought to open up an exploratory space within which future investigations can continue this important work. Future studies should thus continue the exploration of what a shift to the panpsychist consciousness-environment paradigm could entail.

References

- Altamirano, M. (2016). *Time, Technology and Environment: An Essay on the Philosophy of Nature*. Edinburgh, UK: Edinburgh University Press
- Bayne, T. (2010). *The Unity of Consciousness*. New York, NY: Oxford University Press.
- Bayne, T. & Carter, O. (2018). Dimensions of consciousness and the psychedelic state. *Neuroscience of Consciousness*, 2018(1), doi: 10.1093/nc/niy008
- Benthien, C. (2004). *Skin: On the Cultural Border between Self and the World*. New York, NY: Columbia University Press.
- Blamauer, M. (2013). Introduction: The Mental as Fundamental. In: Micheal Blamauer (Ed.) *Mental as Fundamental: New Perspectives on Panpsychism* (p. 7-14). Hausenstamm, Germany: De Gruyter, Inc.
- Bourget, D. & Chalmers, D. J. (2014). What do philosophers believe? *Philosophical Studies*, 170, 465-500.
- Bruni, C. M. & Schultz, P. W. (2010). Implicit beliefs about self and nature: Evidence from an IAT game. *Journal of Environmental Psychology*, 30, 95-102.
- Cavanna, A. E. & Nani, A. (2014). *Consciousness: Theories in Neuroscience and Philosophy of Mind*. Berlin, Germany: Springer
- Chalmers, D. (1995). Facing Up to the Problem of Consciousness. *Journal of Consciousness Studies*, 2(3), 1-27.
- Chalmers, D. (2016a). Panpsychism and Panprotopsychism. In: G. Brünstrup & L. Jaskolla (Eds.), *Panpsychism: Contemporary Perspectives* (pp. 19-47). New York, NY: Oxford University Press.
- Chalmers, D. (2016b). The Combination Problem for Panpsychism. In: G. Brünstrup & L. Jaskolla (Eds.), *Panpsychism: Contemporary Perspectives* (pp. 179-214). New York, NY: Oxford University Press.
- Churchland, P. S. (1994). Can Neurobiology Teach Us Anything about Consciousness? *Proceedings and Adresses of the American Philosophical Association*, 67(4), 23-40.

- Damasio, A. (2010). *Self Comes to Mind: Constructing the Conscious Brain*. New York, NY: Pantheon Books.
- Davidson, D. (2001). *Essays on Actions and Events* (2nd ed.). New York, NY: Oxford University Press.
- Dennett, D. (1988). Quining Qualia. In A. Marcel & E. Bisiach (Eds.), *Consciousness in Contemporary Science* (pp. 381-414), New York, NY: Oxford University Press
- Dennett, D. (1991). *Consciousness Explained*. Boston, MA: Little, Brown.
- Dennett, D. (2004). 'Epiphenomenal' Qualia?. In: P. Ludlow, Y. Nagasawa & D. Stoljar (Eds.), *There's Something About Mary: Essays on Phenomenal Consciousness and Frank Jackson's Knowledge Argument*. Cambridge, MA: MIT Press.
- Dennett, D. (2018). Facing up to the hard question of consciousness. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 373(1755), doi:10.1098/rstb.2017.0342
- Descartes, R. (1641/1911). *Meditations on First Philosophy* (E. S. Haldane & G. R. T. Ross, Trans.). Cambridge, UK: Cambridge University Press
- Environment (n.d.). In *Meraim-Webster's collegiate dictionary*. Retrieved May 1st, 2019, from <https://www.merriam-webster.com/dictionary/environment>.
- Ford, M. P. (1981). William James: Panpsychist and Metaphysical Realist. *Transactions of the Charles S. Peirce Society*, 17(2), 158-170.
- Goff, P. (2009). Why Panpsychism doesn't Help Us Explain Consciousness. *Dialectica*, 63(3), 289-311.
- Goff, P. (2016). The Phenomenal Bonding Solution to the Combination Problem. In: G. Brünstrup & L. Jaskolla (Eds.), *Panpsychism: Contemporary Perspectives* (pp. 283-304). New York, NY: Oxford University Press.
- Goff, P. (2017). *Consciousness and Fundamental Reality*. New York, NY: Oxford University Press.
- Goff, P., Seager, W. and Allen-Hermanson, S. (2017). Panpsychism. In Edward N. Zalta (Ed.) *The Stanford Encyclopedia of Philosophy* (Winter 2017 Edition). URL: <https://plato.stanford.edu/archives/win2017/entries/panpsychism>

- Guyer, P. & Horstmann, R.-P. (2015). Idealism. In: E. N. Zalta, U. Nodelman & C. Allen (Eds.), *Stanford Encyclopedia of Philosophy*. Stanford, CA. Stanford University Press.
- Jackson, F. (1982). Epiphenomenal Qualia. *The Philosophical Quarterly*, 32(127), 127-136.
- James, W. (1890/1981). *The Principles of Psychology*. Cambridge, MA: Harvard University Press.
- Johnson, M. L. (2017). The Embodied Meaning of Architecture. In: S. Robinson & J. Pallasmaa (Eds.) *Mind in Architecture: Neuroscience, Embodiment, & The Future of Design* (pp. 33-50). Cambridge, MA: The MIT Press.
- Kessler, N. H. (2019). *Ontology and Closeness in Human-Nature Relationships: beyond Dualisms, Materialism and Posthumanism*. Cham, Switzerland: Springer.
- Kim, J. (1999). Making sense of emergence. *Philosophical Studies*, 95, 3-36.
- Kim, J. (2005). *Physicalism, or Something Near Enough*. Princeton, NJ: Princeton University Press.
- Koch, C. (2004). Qualia. *Current Biology*, 14(13), R496
- Lawtas, P. (2017). Building minds: solving the combination problem. *Inquiry*, 60(79), 742-781.
- Libet, B., Gleason, C. A., Wright, E. W. & Pearl, D. K. (1983). Time of conscious intention to act in relation to onset of cerebral activity (readiness potential): The unconscious initiation of a freely voluntary act. *Brain*, 106, 623-642.
- Libet, B., Gleason, C. A., Wright, E. W. & Pearl, D. K. (1983). Time of conscious intention to act in relation to onset of cerebral activity (readiness-potential). The unconscious of a freely voluntary act. *Brain*, 106(3), 623-642.
- Lokhorst, G.-J. (2018). Descartes and the Pineal Gland. In: E. N. Zalta, U. Nodelman & C. Allen (Eds.), *Stanford Encyclopedia of Philosophy*. Stanford, CA. Stanford University Press.
- Lycan, W. G. (2013). Is property dualism better off than substance dualism? *Philosophical Studies*, 164(2), 533-542.

- Mathews, F. (2003). *For Love of Matter: A Contemporary Panpsychism*. Albany, NY: State University of New York Press.
- Mathews, F. (2011). Panpsychism as Paradigm. In: M. Blamuer (Ed.) *The Mental as Fundamental: New Perspectives on Panpsychism* (pp. 141-157). Hausenstamm, Germany: Ontos Verlag.
- McLaughlin, B. P. (2016). Mind Dust, Magic, or a Conceptual Gap Only? In: G. Brünstrup & L. Jaskolla (Eds.), *Panpsychism: Contemporary Perspectives* (pp. 305-333). New York, NY: Oxford University Press.
- Mianji, F. (2015). A Journey from Reductionism in Neuroscience to Reductionism in Psychiatry. *International Journal of Body Mind Culture*, 2(2), 55-61.
- Montero, B. G. (2016). What Combination Problem? In: G. Brünstrup & L. Jaskolla (Eds.), *Panpsychism: Contemporary Perspectives* (pp. 215-228). New York, NY: Oxford University Press.
- Nagasawa, Y. & Wager, K. (2016). Panpsychism and Priority Cosmopsychism. In: G. Brünstrup & L. Jaskolla (Eds.), *Panpsychism: Contemporary Perspectives* (pp. 113-129). New York, NY: Oxford University Press.
- Nagel, T. (1974). What Is It Like to Be a Bat? *The Philosophical Review*, 83(4), 435-450.
- Pepperell, R. (2018). Consciousness as a Physical Process Caused by the Organization of Energy in the Brain. *Frontiers in Psychology*, 9(2091), doi: 10.3389/fpsyg.2018.02091
- Robinson, W. S. (2010). Epiphenomenalism. *WIREs Cognitive Science*, 1(4), 539-547.
- Seager, W. (1995). Consciousness, information, and Panpsychism. *Journal of Consciousness Studies*, 2(3), 272-288.
- Seager, W. (2016). Panpsychist Infusion. In: G. Brünstrup & L. Jaskolla (Eds.), *Panpsychism: Contemporary Perspectives* (pp. 229-249). New York, NY: Oxford University Press.
- Searle, J. R. (1995, December 21). 'The Mystery of Consciousness': An Exchange. *The New York Review of Books*. Retrieved from: <https://www.nybooks.com/articles/1995/12/21/the-mystery-of-consciousness-an-exchange/>

- Searle, J. R. (2007). Dualism Revisited. *Journal of Physiology*, 101, 169-178.
- Seymour, V. (2016). The Human-Nature Relationship and Its Impact on Health: A Critical Review. *Frontiers in Public Health*, 4(260), doi: 10.3389/fpubh.2016.00260
- Skrbina, D. (2003), Panpsychism as an underlying theme in western philosophy: A survey paper. *Journal of Consciousness Studies*, 10(3), 4-46.
- Skrbina, D. (2013). Mind Space: Toward a solution to the combination problem. In: Micheal Blamuer (Ed.) *Mental as Fundamental: New Perspectives on Panpsychism* (p. 117-129). Hausenstamm, Germany: De Gruyter, Inc.
- Stoljar, D. (2010). Physicalism. In: T. Bayne, A. Cleeremans & P. Wilken (Eds.) *The Oxford Companion to Consciousness*. London, England: Oxford University Press.
- Stoljar, D. (2015). Physicalism. In: E. N. Zalta, U. Nodelman & C. Allen (Eds.), *Stanford Encyclopedia of Philosophy*. USA: CA, Stanford University Press.
- Strawson, G. (2008). Realistic Monism: Why Physicalism Entails Panpsychism. In: G. Strawson (Ed.) *Real Materialism and other essays* (p. 53-74). Oxford, England: Oxford University Press.
- Strawson, G. (2016). Mind and Being. In: G. Brünstrup & L. Jaskolla (Eds.), *Panpsychism: Contemporary Perspectives* (pp. 75-112). New York, NY: Oxford University Press.
- Sturm, T. (2012). Consciousness regained? Philosophical arguments for and against reductive physicalism. *Dialogues in Clinical Neuroscience*, 14(1), 55-63.
- Taylor, C. (1979). The Validity of Transcendental Arguments. *Proceedings of the Aristotelian Society, New Series*, 79, 151-165.
- Vining, J., Merrick, M. S. & Price, E. A. (2008). The Distinction between Humans and Nature: Human Perception of Connectedness to Nature and Elements of the Natural and Unnatural. *Human Ecology Review*, 15(1), 1-11.