The Internal Structure of Consciousness

A thesis submitted to The University of Manchester for the degree of Doctor of Philosophy in the Faculty of Humanities

2014

Andrew James Routledge

School of Social Sciences
## Contents

0. Introduction ........................................................................................................6

1. The Unity Question .......................................................................................... 14

2. The Nature of Our Awareness ........................................................................ 49

3. Rival Approaches to Unity ............................................................................... 75

4. Temporalism: A New Account of Unity ............................................................ 112

5. The Counting Question: The Case for the One-Experience View .......... 152

6. The Dependency Question: The Holographic Conception ..................... 165
Abstract

Our understanding of the physical world has evolved drastically over the last century and the microstructure described by subatomic physics has been found to be far stranger than we could previously have envisaged. However, our corresponding model of experience and its structure has remained largely untouched. The orthodox view conceives of our experience as made up of a number of different simpler experiences that are largely independent of one another. This traditional atomistic picture is deeply entrenched. But I argue that it is wrong.

Our experience is extraordinarily rich and complex. In just a few seconds we may see, hear and smell a variety of things, feel the position and movement of our body, experience a blend of emotions, and undergo a series of conscious thoughts. This very familiar fact generates three puzzling questions.

The first question concerns the way in which all these different things are experienced together. What we see, for example, is experienced alongside what we hear. Our visual experience does not occur in isolation from our auditory experience, sealed off and separate. It is fused together in some sense. It is co-conscious. We may then ask the Unity Question: What does the unity of consciousness consist in?

The second question is the Counting Question: How many experiences does a unified region of consciousness involve? Should we think of our experience at a time as consisting in just one very rich experience, in a handful of sense-specific experiences, or in many very simple experiences? How should we go about counting experiences? Is there any principled way to do so?

The third and final question, the Dependency Question, concerns the degree of autonomy of the various different aspects of our unified experience. For example, would one's visual experience be the same if one's emotional experience differed? Is the apparent colour of a sunset affected by the emotional state that we are in at the time?

I offer a new answer to the Unity Question and argue that it has striking implications for the way that we address the Counting Question and the Dependency Question. In particular, it supports the view that our experience at a time consists in just one very rich experience in which all of the different aspects are heavily interdependent.
Declaration

No portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.
Copyright Notice

i. The author of this thesis (including any appendices and/or schedules to this thesis) owns certain copyright or related rights in it (the “Copyright”) and s/he has given The University of Manchester certain rights to use such Copyright, including for administrative purposes.

ii. Copies of this thesis, either in full or in extracts and whether in hard or electronic copy, may be made only in accordance with the Copyright, Designs and Patents Act 1988 (as amended) and regulations issued under it or, where appropriate, in accordance with licensing agreements which the University has from time to time. This page must form part of any such copies made.

iii. The ownership of certain Copyright, patents, designs, trade marks and other intellectual property (the “Intellectual Property”) and any reproductions of copyright works in the thesis, for example graphs and tables (“Reproductions”), which may be described in this thesis, may not be owned by the author and may be owned by third parties. Such Intellectual Property and Reproductions cannot and must not be made available for use without the prior written permission of the owner(s) of the relevant Intellectual Property and/or Reproductions.

iv. Further information on the conditions under which disclosure, publication and commercialisation of this thesis, the Copyright and any Intellectual Property and/or Reproductions described in it may take place is available in the University IP Policy (see http://documents.manchester.ac.uk/DocuInfo.aspx?DocID=487), in any relevant Thesis restriction declarations deposited in the University Library, The University Library’s regulations (see http://www.manchester.ac.uk/library/aboutus/regulations) and in The University’s policy on Presentation of Theses.
Acknowledgements

The basic ideas in this work go back a number of years now, first taking root in the many months I spent working in a series of menial jobs that I despised. In one particular office job, I would secretly read about the unity of consciousness in a small, minimised window on my computer, whilst pretending to write corporate reports about DVD sales in India, or automobiles in Ecuador. My first thanks, then, must go to this unwitting corporate sponsor who shall remain nameless.

In this time I been helped by a huge number of individuals in many different ways, some directly, others indirectly. Some have simply kept a smile on my face and provided much-needed laughter when too many days alone with books might otherwise have dulled my passion for the subject. To the friends who have provided countless memories that I will always look back on still laughing, I thank you from the bottom of my heart. You have kept my interest in these ideas alive and bubbling, and given me the energy to return to the most difficult philosophical problems over and over again, with renewed fascination each time.

My deepest debt, though, is to my parents. Without their tireless support I would not have been able to pursue the work that I love. Their backing has always been unconditional and I will never forget this. Their selflessness is an inspiration to me.

A particular thank you goes to my grandma, Teresa Routledge, who is no longer with us. Putting a small amount of her pension aside each week, she saved enough to eventually help me to re-enter higher education at a point when my own avant-garde methods of budgeting were not quite so successful. Without her, I might still have been pretending to write reports about automobiles in Ecuador.

And then there is the wealth of philosophical support that I have been lucky enough to receive. Joel Smith has been a rock in the University of Manchester philosophy department. Routinely going above and beyond the call of duty, his eagle-eyed feedback as my Masters supervisor pushed me to sharpen my thinking and writing. Peter Goldie, who is sadly no longer with us, was also a source of great encouragement in my earlier years at the university. His exceptional achievements in various areas of life never seemed to diminish his kind, gentle temperament and his encouraging words spurred
me on. He seemed to appreciate, more than anyone, the importance of balancing critical academic feedback, with the personal touch. This is sometimes forgotten.

I would like to thank Barry Dainton whose book *Stream of Consciousness* got me thinking about these questions a number of years ago now. As will become clear, we offer very different answers and disagree on almost every core claim. Yet I take *Stream of Consciousness* to ask exactly the right questions and without it, I would not even be aware of these issues.

I would also like to thank Cynthia Macdonald and David Liggins who have provided detailed and thoughtful feedback on a number of drafts of the present work. It would be in a far worse shape without them. My fellow PhD students at the university have also offered helpful feedback on a series of occasions. They have seen this work lurch from draft to redraft, occasionally veering off into a new direction, before stumbling back again sheepishly. My gratitude and apologies go out to them.

I owe a huge debt to Tim Bayne who has supervised my PhD. I thank him in particular for his tolerance. As the work has stalled and hammered against various brick walls, I have grown tired of hearing myself apologise for delays in the drafting process. In spite of this, his feedback has always been penetrating and prompt, and has kept my eyes on the bigger picture, when at times I might easily have got lost in the detail. Thank you Tim.

I would also like to acknowledge the assistance of the Royal Institute of Philosophy, and the University of Manchester who both provided funding for my PhD.

Last but never least, I would like to thank Emma. She has singlehandedly kept me sane (or thereabouts) in the final months of writing. Her patience and generous spirit has been a lifeline for me. She has brought me food when I have been hungry and poverty-stricken, and lifted me when I have been low. Her support and understanding is deeply appreciated. I dedicate this work and all of its ideas to her.
0. Introduction

Everyday experience is extraordinarily rich and complex. In just a few seconds we may see, hear and smell a variety of different things, feel the position and movement of our body, experience a blend of emotions, and undergo a series of conscious thoughts. This very familiar fact generates a number of puzzling questions. This thesis will set out and examine three core questions regarding the internal structure or constitution of consciousness. These are questions about the basic makeup of complex human experience, as seen from the inside.

The first core question concerns the way in which all these different things are experienced together. What we see, for example, is experienced alongside what we hear. Our visual experience does not occur in isolation from our auditory experience, sealed off and separate. It is fused together in some sense. It is co-conscious. We may then ask the Unity Question: What does the unity of consciousness consist in?

The second core question is the Counting Question: How many experiences does a unified region of consciousness consist in? Should we think of our experience at a time as consisting in one very rich experience, in just a handful of sense-specific experiences, or in many sense-specific experiences? Or should we perhaps carve our experience into chunks that straddle more than one sense? Closely connected to this is the issue of individuation. How should we go about counting experiences? What method should we use to carve up this rich inner world of sounds, smells, thoughts, and feelings? Is there any principled way to do so?

The third and final core question, the Dependency Question, concerns the degree of autonomy of the various different aspects of our unified experience. For example, would one’s visual experience be the same if one’s emotional experience differed? Is the apparent colour of a sunset affected by the emotional state that we are in at the time? And how should we understand any such dependency relations?

The thesis has two broad aims. Firstly, to set out these questions in detail, map some of the possible answers we might give, and record the respective connections between them. In doing so, I hope that the work can provide a useful framework within which to think rigorously about the internal structure of consciousness. Secondly, I wish to argue for a novel package of answers to the three core questions. I will argue that a very simple yet compelling answer to the Unity Question has been overlooked.
Furthermore, this answer entails clear and striking answers to both the Counting Question and the Dependency Question.

Before I elaborate on these core questions, I should say a little about the wider context that this work is situated in. There is a growing recognition that if we wish to somehow bridge the explanatory gap that lies between the physical and the experiential, we must first make progress in understanding what it is that lies at either side of the gap. Naturally, such a project is two-pronged. On one hand, we must look to better understand the nature of the physical. This has a philosophical dimension and a scientific dimension. Physics professes to offer a picture of the particular fundamental nature of our physical universe. But this picture will always be incomplete without the conceptual analysis provided by philosophy: What does it mean to say that something is physical?

This question has been pressed by Hempel, Feigl, Chomsky, Crane and Mellor, Melnyk, Daly, Montero and Papineau, and Stoljar, amongst others. Both the conceptual and empirical dimensions are crucial to understanding the nature of the physical. In tandem with this investigation, though, there is an urgent need to directly examine experience on its own terms, in detail, as it appears from the inside. This angle has been pushed by Nagel, Flanagan, Searle, Chalmers, Siewert, Dainton, Revonsuo, Gallagher, Zahavi, Strawson, and Bayne. The two prongs of the project must run in parallel, each alert to


developments in the understanding of the other and aware of any constraints that such developments might generate. These constraints serve to define the possible relationships that might hold between the two. The hope must be that as our understanding of each of the relata increases, the relationship between the physical and the experiential slowly comes into view.

This work attempts to offer support to the phenomenological prong of the project. It will examine the internal structure of consciousness, as it appears to us in our ordinary lives. This is a real feature of the phenomenon and one that any theory of consciousness must be able to accommodate. In the course of our investigation into the structure of experience, I will point to a number of implications that emerge for this wider debate in the philosophy of mind.

Despite the importance of these structural questions, the basic model of experience in Western analytic philosophy has remained largely unchanged. The orthodox view conceives of our experience at a time as composed of a number of different simpler sense-specific experiences with a character and content that is largely independent of the others. This traditional atomistic picture is deeply entrenched. whilst the work of O’Callaghan⁴ has been important in pushing the philosophical community to slowly – very slowly – accommodate psychological evidence for certain intermodal effects, it

---


remains the dominant view that the phenomenon is not systematic and does not reflect a metaphysically significant form of interdependency.\(^5\)

The prestige that this atomistic picture holds can hardly be said to be the outcome of rigorous philosophical investigation. Dainton is one of the few to have advanced a substantial defence of the independence of the different aspects of our experience.\(^6\) The core structural questions have simply not been examined closely enough to warrant the traditional consensus. To the credit of a number of philosophers such as Dainton, Bayne, and Tye, these issues are gradually being brought out into the open but it remains a woefully underdeveloped area.\(^7\) The orthodox view is the default position but it is little more than that. For these reasons, we should be open to the possibility that sustained investigation will reveal surprising results. This has certainly been the case in the physical sciences. The microstructure of the physical world has been found to be far stranger than we could previously have been envisaged. The traditional atomistic view in this domain saw the world as composed of simple, unchanging particles, clearly localised in space, and independent of one another. This view has now been widely discredited. A radical restructuring was necessary. Our understanding of the physical world has evolved drastically over the last century but our model of experience itself has remained largely untouched. We have barely begun to scratch the surface.

The phenomenological prong of the project must remain open to the possibility of comparable changes in its own domain. This is particularly the case for those who believe that all concrete phenomena are identical with or reduce to fundamental physical phenomena. Put simply, if the structure of the fundamental physical domain is deeply peculiar, we might reasonably expect this to show up in the form of structural peculiarities in the experiential domain.

This work has been produced with this spirit of openness at its centre. There is a widespread feeling that current theories of consciousness remain dissatisfying at best,

---

\(^5\) In Chapter Six I will describe how the phenomenon of intermodal dependency has been interpreted as an occasional phenomenon that involves only a contingent, causal dependency. Against this, I will argue for a necessary ontological dependency.

\(^6\) Dainton provides a book length investigation into a number of key structural questions in *Stream of Consciousness*.

hopeless at worst. To break open new fertile ground in the debate we need to be prepared to look critically at our most basic assumptions about consciousness. Some of the most fundamental concern its core structure, the way it is pieced together. In this thesis I will suggest a new way of understanding the internal structure of consciousness. The model that I will advance inevitably generates many more difficult questions. It is sufficiently different to the orthodox view of consciousness that it will perhaps seem strange when first encountered. However, I will try to show that - whether we feel entirely comfortable with it or not - the arguments and evidence push us inexorably in that direction. Needless to say, this initial unease and difficulty should not be taken as an insurmountable obstacle, but, rather, the hallmark of any radical overhaul. The ideas that I will introduce and apply to this phenomenological debate, however, are not entirely new. I will draw on existing, more familiar concepts from the wider philosophy of mind and the philosophy of science.

The view that I will defend has clear, specific implications for the neuroscientific investigation into consciousness. I take this to be an example of the way in which phenomenological investigation can generate useful constraints on the plausibility of different physical accounts of experience. In particular, I will show how the view challenges a common assumption in neuroscience.

Before I turn to examine these core questions in more detail, I wish to make a few brief methodological remarks. Firstly, although I hope to draw out certain implications for the wider debate regarding the mind/brain relationship and associated issues, my start-up position will be neutral on the issue. That is, my argument will not depend on a particular stance on the relationship between experiential states and neural states or, more broadly, on the relationship between the experiential and the physical. Secondly, throughout the work, I will be restricting my attention to ordinary human experience. Accordingly, my claims should be read in this restricted sense. Finally, my arguments will often involve introspection. If all introspection is fatally flawed, then so is my argument. But I do not believe this to be the case. Wholesale scepticism is unmotivated. I will take it that introspection of an appropriate kind can provide useful prima facie support for a given position. Indeed, I will take it that on certain issues – such as the internal structure of experience – some kind of introspection is clearly going to be necessary, however fallible it may be. We have no choice but to try and muddle through. Nevertheless, some approaches are better than others. Where possible, I will
take it that it is preferable to try to root arguments in phenomenological observations concerning very general structural properties. The higher the level of abstraction, the greater the possibility of consensus on these issues.

There is sometimes a temptation to casually assume the likelihood of error whenever we are considering the evidence from introspection yet this temptation should be resisted as robustly as the temptation to assume infallibility. Those who posit error should explain why systematic error of the relevant kind is likely or inevitable. It is just as inappropriate to take error as the default position as it is to take infallibility as the starting point. In the absence of good reasons to expect error, we might cautiously endorse a hypothesis based on the apparent nature of the experience. It is only by doing this that we will ever be in a position to make progress in understanding consciousness. Without this method we will have to abandon any serious study of consciousness. Fallibility is not thought to wholly devalue perception or knowledge from testimony, for example. Introspection should be no different.\(^8\)

In Chapter One and Chapter Two I will examine the Unity Question in more detail. My answer to this will lay the foundations for my answers to the Counting Question and the Dependency Question so I will devote the majority of the thesis to it. In Chapter One I will look at the best way to initially characterise the phenomenon of co-consciousness, the range of cases in which it is plausibly involved, and describe the kind of answer that I am looking for. I will argue that the phenomenon is far broader than has previously been recognised yet a single, general account is desirable. Furthermore, Primitivism about the phenomenon should only be accepted as a last resort.

In Chapter Two I will explore some of the immediate implications of the way that we have characterised the unity of consciousness. This discussion will further sharpen the focus of our investigation, revealing the nature of our awareness that we have of both the unity relation, and the properties of our own experience. I will argue that we represent both.

\(^8\) For a very fair and nuanced assessment of introspection see E. Schwitzgebel, ‘Do You Have Constant Tactile Experience of Your Feet in Your Shoes? Or Is Experience Limited to What’s in Attention?’, *Journal of Consciousness Studies*, (2007) 14 (3). In short, Schwitzgebel argues that we have no choice but to use introspection, however problematic it may be. For a defence of introspection from certain important challenges see: A. I. Goldman, ‘Can science know when you’re conscious? Epistemological foundations of consciousness research’, *Journal of Consciousness Studies*, (7) 5 (2000).
In Chapter Three I will move on to critically assess and reject what I take to be the strongest existing accounts of unity. My aim in this chapter is entirely negative: I argue that the Self-Unity View, Spatialism, and the Mereological Approach all fail to adequately answer the Unity Question.

In Chapter Four I offer a new account of unity: Temporalism. I argue for the reduction of unity to the representation of B-series temporal relations between the various unified entities. I lay out the proposal and then consider a few objections.

In Chapter Five I turn to the Counting Question. Building on my answer to the Unity Question, I argue that we should understand a unified region of experience as consisting in just a single, very rich experience.

In Chapter Six I conclude my study of consciousness by examining the Dependency Question. I suggest that the most plausible approach to the Unity Question leaves us with only one option. We must accept a form of structuralism about experience. I argue for the Holographic Conception of Consciousness in which each aspect of a unified region reflects the whole. This amounts to a strongly holistic approach whereby the content and character of our unified experience is interdependent, right across the modalities.

In philosophical work the journey is often just as important as the final destination. I hope that this work will be no different. Along the way I have things to say about the transparency thesis, the character and role of self-awareness, and the phenomenology of agency. I will talk about the nature of imagination, and explore our experience of space, abstract entities, and indeterminacy. I will also describe certain implications that the emerging view has for the claim that phenomenal properties supervene on representational content, and for understanding our experience of continuous change.
1. The Unity Question

1.1 The Unity Phenomenon

In this chapter I will explore the Unity Question in more detail: What does the unity of consciousness consist in? Our discussion of this question will lay the foundations for answering the Counting Question and the Dependency Question so I will devote the majority of the thesis to this issue. In this chapter I will spell out the nature of the project I am undertaking and the kind of answer that I am looking for.

The unity of consciousness is typically introduced in a relatively rough, intuitive way before any attempts are made to pin down exactly what the phenomenon consists in or how we might understand it. To see how current theorists conceive of the unity of consciousness it will be useful to set out a few phenomenological passages that are representative of the debate. I will argue that these startup descriptions characterise unity in different terms but point to a single, underlying phenomenon.

“[L]ook at your hand and snap your fingers,” suggests Dainton,

What happens? You see and feel a movement, and hear a sound. These three experiences – one auditory, one visual, and one tactile – do not occur in isolation from one another, they occur together within your consciousness, you are aware of them all at once.\(^9\)

Tye offers an alternative entry into the issue:

Suppose that at midday a wine taster is tasting a Cabernet Sauvignon. He sees the red wine in the wineglass beneath his nose, as he brings the wine to his lips. He smells the rich bouquet of the wine, as he tastes its fruity flavor in his mouth; and in tasting it, he experiences the liquid touching his tongue and the back of his mouth. Perhaps, as he does this, he flicks a finger against the glass, thereby producing a high-pitched sound. One way to describe the wine taster’s phenomenal state is to say that he has an experience of a certain coloured shape and further he has an experience of a certain smell and in addition he has an

experience of a taste and…etc. But intuitively, this is unsatisfactory. It leaves something out: the unity of these experiences. There is something it is like for the wine taster overall at midday, as he brings the wine to his lips and smells and tastes it. There is a unified phenomenology.\textsuperscript{10}

“Consider…what it’s like to hear a rumba playing on the stereo whilst seeing a bartender mix a mojito…” Bayne remarks, painting another picture of the phenomenon:

[These two experiences possess a conjoint experiential character. There is something it is like to hear the rumba, there is something it is like to see the bartender work, and there is something it is like to hear the rumba while seeing the bartender work [emphasis in original].\textsuperscript{11}

Finally, Brook, and Raymont observe that:

Human consciousness usually displays a striking unity. When one experiences a noise and, say, a pain, one is not conscious of the noise and then, separately, of the pain. One is conscious of the noise and pain together, as aspects of a single conscious experience.\textsuperscript{12}

These theorists present these passages, in part, as ostensive definitions of the phenomenon. They are positive attempts to point to the feature of experience in question. James adopts a different approach. We might think of this as the contrast method of exposition:

Neither contemporaneity, nor proximity in space, nor similarity of quality and content are able to fuse thoughts together which are sundered by this barrier of belonging to different personal minds. The breaches between such thoughts are the most absolute breaches in nature.\textsuperscript{13}

\textsuperscript{10} Tye, Consciousness and Persons, p. 18.

\textsuperscript{11} Bayne, The Unity of Consciousness, pp. 10-11.


In this arresting passage he describes the *disunity* that divides the thoughts of different minds. Contrast this situation with a scenario in which a single person has a brief series of thoughts. What is missing in the first case – and present in the second – is *co-consciousness* of the different neighbouring thoughts as they unfold.¹⁴ This difference is what we are interested in here. There is an experiential difference of some kind between a unified set of states and a mere collection of disunified states. The question is what this difference consists in.

Many see the problem as an important part of understanding consciousness more generally and take it to be likely that any solution will place constraints on an adequate account of the relationship between the mind and the brain.¹⁵ Yet the question is not an easy one. Indeed, the issue drew open despair from the great minds of Hume and James.¹⁶

As both Dainton and Tye note, the phenomenon can easily be overlooked precisely because it is so common and familiar. We take it for granted. Despite this, however, different theorists characterise the phenomenon in different terms when setting out the problem. It seems to be both ordinary and everyday, and slippery and elusive.

Dainton speaks of *three* experiences - one auditory, one visual, and one tactile – occurring together in our consciousness. The implication – later explicitly defended – is that the unity relation holds between different experiences, of which there are many. This presupposes an answer to our Counting Question. Namely: At any given time we have a *multitude* of experiences. I think it is preferable to avoid building this into the startup formulation of the unity problem. It is a substantial claim that needs defence. In fact, I will argue in Chapter Five that the claim is false. At this point, however, it is desirable to simply remain neutral on the question, if at all possible.

¹⁴ Over a longer interval of time thoughts from the same series may fail to be unified with one another. Precisely what the extent of unity is through time is an interesting and important question but not that I can pursue here.


Relatedly, we should resist the temptation to characterise the experience of unity in terms of a multitude of experiences entering as parts into a single, more complex state. This is a common idea but, once again, a substantial proposal. It is by no means obvious that experience can or should be understood in mereological terms. If what I say in Chapter Five is correct, it cannot be the right way to characterise the phenomenon. Neutrality on these issues is preferable at this stage.

An initial step towards neutrality, then, might be to provisionally characterise the phenomenon in terms of property instantiations. When we look at our hands and snap our fingers, we seem to be aware of at least three phenomenal properties. We are aware of what it looks like, we are aware of what it feels like, and we are aware of what it sounds like. These phenomenal properties do not appear to be instantiated in isolation from one another. They seem to be instantiated together – in some yet to be specified sense - within our consciousness. We are aware of them all at once. This characterisation takes no stance on the Counting Question. It does not rule out the possibility that each of these phenomenal properties corresponds to a different experience but it also leaves open the possibility that they are properties of a single, rich experience. For these reasons, it is a less controversial articulation. It is a step in the right direction. Nevertheless, I will argue later that even this characterisation of unity is inadequate to adequately capture its real nature. For now, though, it will serve as a useful provisional characterisation.

In spite of these differences in the way the unity of consciousness is introduced, it is reasonable to think that these theorists are interested in a single underlying phenomenon. What plausibly unites these different philosophers is the project of understanding the most pervasive form of unity within consciousness, whatever it may be. There is a broad consensus that the unity of consciousness has a wider scope than the kind of unity involved in our experience of individual physical objects. The unity of consciousness is more than just physical object-unity. This is the way in which different represented properties, such as colour, shape and texture, are bound together in our experience into a single physical object. All participants in the debate agree that there is a form of unity that is far more wide-ranging than any such physical unity. Imagine seeing a cat run past and, at the same time, feeling pins and needles in your foot. They are not bound into a single physical object in our experience but we can still experience them together in some sense. Ordinary physical object unity is not necessary for this wider, less restricted form of unity.
In fact, most participants in the debate accept that the unity relation typically connects every region of our conscious experience at a given time to every other. This includes conscious thoughts. Our thoughts do not appear to occur in isolation from our perceptual experience. Even if they are not spatially related (an issue I will return to in Chapter Three), there is still a sense in which we experience our thoughts together with what we see, hear, and feel. The scope of the unity relation, in sum, is taken to extend across the full spectrum of conscious experience at a time.

Equally, however, it is widely accepted that there are both synchronic and diachronic cases of unity. We have seen a number of examples of unity at a given time. But it is also commonly recognised that unity can hold across time. Consider what it is like to hear a musical melody. As each note is succeeded by the next, it does not instantly disappear from our consciousness; rather, we continue to be aware of it alongside the notes that immediately succeed it. We are jointly aware of neighbouring notes together, in some sense. It is this that makes music worth listening to. We are not merely aware of a succession of static slices. We are non-inferentially aware of both change and persistence. This everyday feature prompts the idea of experience as being like a stream. The precise extent of this diachronic unity is not crucial for our purposes here. We can remain neutral on just how long this window of experience is. But an adequate general account must be able to help us understand what both synchronic and diachronic forms of unity consist in.

Another important point of convergence concerns the way in which we gain knowledge of the unity relation. It is introspectable. It is evident to us in our own experience. It is worth stressing that to say it is introspectable is not to say that it does not exist unless it is introspected. Dainton makes the case convincingly that this is not so. What it means is that it is an internal feature of our consciousness. It is not solely a physical or functional relation, for example. Turning our attention to it allows us to think about it

---

17 This kind of example is a classic case in the psychological literature on Gestalts: Cases where the qualitative character of the parts (the notes) arguably depend on the whole (the wider melody). Whilst I wish to defend a holistic approach to experience in Chapter Six, I make no such claim here. We might accept that the neighbouring notes are unified without accepting that a Gestalt effect is in operation. Whilst the latter is – I think – arguable, the former is undeniable.

18 James brought this metaphor into popular usage in his magnum opus Principles of Psychology and it has been kept alive in more recent years by Dainton’s Stream of Consciousness.

19 Dainton, Stream of Consciousness, pp. 28-41.
and report it. It does not create it. But because it is something we experience, it is *possible* for us to introspectively attend to it.

In describing the phenomenon, it is also standard for theorists to carefully distinguish the claim that our experience is unified from the claim that it is holistic or has Gestalt qualities. If our experience is holistic or displays Gestalt qualities, there is a sense in which the different aspects of the experience are dependent upon one another or upon the overall whole for their content or character. Whether this is the case is the subject of the Dependency Question, to be examined in Chapter Six. Nevertheless, it is entirely appropriate that unity theorists should mark a clear distinction between the two claims and deter potential confusion. There is undoubtedly a *conceptual distinction* between the claim that experience is unified and the claim that experience is holistic. The claim that experience is unified does not *mean* that experience is holistic. Even if our account of unity necessitates a holistic picture of experience, this will require substantial argument. It does not fall simply out of the meaning of the words.

Finally, the majority of participants in the debate typically distinguish the claim that our experience is unified from the possible claim that it is *coherent*. We might think of the latter as a kind of *normative* unity. It is often thought that our experience can be unified *without* being coherent. The respective contents may contradict one another in some way. As we can see, then, although the unity of consciousness has been characterised in different terms, there remains an important shared ground in which to root the subsequent investigation.

Before we begin, it should be noted that, unless otherwise specified, I will use ‘conscious’ and ‘experience’ interchangeably. This is solely for stylistic reasons. I will flag up any points at which a distinction may be necessary. For example, if you think that experiences necessary involve phenomenal properties and that some conscious

---

20 See Bayne, and Chalmers, ‘What is the Unity of Consciousness?’ for discussion. There is not a complete consensus on this point, however. For an opposing view that takes the two to be closely connected see either S. Shoemaker, ‘Consciousness and co-consciousness’, or G. O’Brien, and J. Opie, ‘The Disunity of Consciousness’, *Australasian Journal of Philosophy*, (1998) 76 (3).

21 For example, we may see a stick underwater as being bent whilst *feeling* it as straight. Equally, we may see a shape moving in a visual illusion yet *believe* that it is not really moving.
states – such as thoughts – lack phenomenal properties, then you may have reason to hold the two terms apart in certain contexts.\textsuperscript{22}

One further terminological note: When I speak of the \textit{contents} of consciousness I will be speaking solely of the kind of contents that are \textit{introspectable} or evident to us \textit{within} consciousness. My claims about contents should be read in this way. I do not wish to deny that there are certain notions of content that do not involve the assumption that the contents are introspectable or evident within consciousness. My interest, though, is in the type of content that is.

In my discussion of unity, I am not primarily concerned with the question of whether unity \textit{necessarily} holds between \textit{all} of a subject’s states (or the relevant entities) at a certain time. Accordingly, I will not be addressing the literature on brain bisection or ‘split-brain’ patients.\textsuperscript{23} In these cases, it may be thought that a single subject undergoes a number of disunified experiences. I take no position on this. I am interested only in the regions of experience where unity \textit{does} hold. I am interested in understanding unity in ordinary cases.

\subsection*{1.2 My Approach to the Unity Question}

This work centres on the most wide-ranging or pervasive form of unity in consciousness. This form is arguably involved in \textit{all} of our experience and is evident \textit{within} experience. More precisely, I wish to see if we can avoid positing the existence of a primitive, unanalysable co-consciousness relation. In this sense, my approach to the Unity Question is \textit{reductionist}. I want to reduce ‘co-consciousness’ to something more familiar. This positions the project in opposition to Dainton.\textsuperscript{24}

Dainton’s defence of what I will call \textit{Primitivism} is robust. He forcefully denies that the notion is helplessly shrouded in mystery. As he emphasises, if a primitive co-

\textsuperscript{22} For exploration of this and related questions see the collection of essays in \textit{Cognitive Phenomenology}, eds., T. Bayne and M. Montague, (New York: Oxford University Press, 2011).


\textsuperscript{24} Dainton, \textit{Stream of Consciousness}. 
consciousness relation is an ordinary, everyday feature of our experience then there is a
sense in which this primitive is very familiar indeed. There are many features of
experience that we take as primitive, he observes, yet we do not deride them as strange,
spooky, or spiritual. We just need to add one more feature to the list. Not everything
can be understood in terms of something else.

These points are fair. Yet it still seems as if there are a number of ways in which it
would be desirable to avoid positing a new relation. Firstly, Primivitism is less economical. If we can do what we need to do with an existing, familiar relation, why introduce an
additional relation? Secondly, it is not clear that a primitive co-consciousness relation is
an ordinary, everyday feature of our experience. We know that some kind of unifying
relation is in there yet it would beg the question to assume that it is a primitive. Moreover, there is little explicit support from common-sense talk for anything of this
kind, compared with, for example, support for recognising phenomenal-spatial relations, or phenomenal-temporal relations. We speak regularly and freely of these
relations. Thirdly, a primitive co-consciousness relation has no counterpart in physical
theory. As such, its introduction may pose an additional problem for the naturalisation
of consciousness or any monistic world-view.

For these reasons, it seems correct to say that Primitivism does introduce a certain
degree of mystery to the issue, and that a reductionist account would be preferable, if at
all achievable. We should at least give reductionism a go. For each of the flaws of
Primivism described above, reductionist approaches have corresponding virtues. A
reductionist approach is simpler, less obscure in terms of common sense parlance, and
more amenable to naturalisation or a monistic world-view. It may also be that the
proposed relation is already well-studied in empirical psychology. If so, the account will
reveal the way forward for a more sharply focused empirical study of the unity of
consciousness. In sum, Primitivism should be considered as one of the last resorts: a
position that should be grudgingly accepted only when all other avenues are blocked.

Indeed, in Dainton’s defence of Primitivism, the position is, understandably, arrived at
negatively - solely via a process of elimination. Dainton examines a series of possible
accounts but finds them wanting. Consequently, the availability of another plausible and
more informative account would undermine the case for Primitivism.
Primitivism can come in different forms. It can be a matter of degree. In its deepest form, we cannot say anything about the co-consciousness relation, except note its basic role and some of its logical properties. A weaker form, however, might allow that we can identify or associate it with a more familiar physical or functional relation or set of conditions. This is informative in that it tells us something about the nature of co-consciousness yet it can remain a form of Primitivism in one important sense. It might still be the case that it is experientially primitive. That is, we cannot identify it with any other more familiar phenomenal relation. In terms of how it appears to us in experience, it is unique and irreducible. It is primitive from the inside. It may be the case, then, that a theory could help us understand the physical or functional conditions under which it occurs, yet still require us to accept a basic co-consciousness relation in addition to the various other phenomenal relations. Dainton’s investigation is primarily phenomenological. Accordingly, I take him only to be committed to a weak form of Primitivism of this kind. When I refer to Primitivism, I will be referring to any position that has at least this minimal experiential commitment. I will show how many accounts, on closer inspection, need to introduce a second relation to fully explain unity yet this crucial missing link is often left entirely unspecified. At this point, the proponent of such an account may reluctantly complement the initial proposed relation with a further primitive co-consciousness relation. In this scenario, an account offers certain necessary conditions that are phenomenological, yet is unable to avoid positing an additional primitive relation. This type of view is partially primitivist.

I will take it that weaker forms of Primitivism are preferable to deeper forms yet all remain last resorts. If possible, all forms of Primitivism should be avoided. In short: The less mystery, the better.

In answering the Unity Question my main aim is to present a plausible reductionist picture. A more modest aim of the work, however, is to issue a call for fellow theorists to be more explicit in specifying the kind of accounts that they are offering of the unity of consciousness. Primitivism is a serious position however the scale of its challenge is obscured by the volume of accounts that fail to specify whether they are being presented as reductionist views. Many appear, on first glance, to be possible alternatives, yet when pinned down and assessed on these terms the accounts are shown to be unsatisfactory.
Pluralism is another position that should only be adopted in the absence of alternatives. Pluralism, in its most basic form, denies that there can be a single, general account of the unity of consciousness, even when considering only synchronic co-consciousness. Instead, co-consciousness really consists in a number of different relations. It is disjunctive. Hill advocates a position along these lines.\(^{25}\) There are two different routes to this position. Firstly, we might think that no single relation is able to do the job in all cases of unity. In other words, that every proposed relation suffers from counterexamples. Alternatively, Pluralism might be motivated by the claim that more than one relation is able to do the job in at least some cases: More than one relation is individually sufficient for unity. Hill grounds his form of Pluralism in the second claim – yet some of what he says is also compatible with the first.

Hill scrutinises a number of different relations but argues that none of them can be considered the unity relation. His case is very simple: No matter which relation is proposed, we can always find another relation which also fulfils our intuitive notion of unity. For example, it might be thought that our experiences are unified in virtue of being owned by the same subject. On this interpretation, we should identify unity with the owned by the same subject relation. But consider our experience of things in space. We often experience their spatial relations to one another. We might experience a tree as being next to a post-box. This is also a form of unity. Yet being owned by the same subject is not the same relation as being next to. Consequently, we must accept that there is more than one unity relation. There are different, independent sources of unity.\(^{26}\)

Clearly, there is a natural line of response available to the opponent. One might accept that all such cases do involve unity but argue that they do so because the various respective relations entail a single, underlying co-consciousness relation, whether this is primitive or not. It is the presence of this single relation that accounts for unity in each of these cases. Insofar as they do unify, the other various relations derive their power to do so from this special relation. Hill assesses this kind of proposal with regards to the possibility that being owned by the same subject may be the special underlying relation responsible for unity. Being next to may unify but only because it entails being owned by the


\(^{26}\) Ibid, pp. 228-30.
same subject and it derives its power to unify from the latter. Hill concludes, nonetheless, that this view is “unfair and misguided”.27

It is unfair, he elaborates, because it conceptually possible – and therefore perhaps logically possible – to have a pair of sensations that are unified spatially yet not owned by a subject. The spatial relation cannot therefore entail the subject relation.

Furthermore, it is misguided because even if one entails the other, it still need not be the case that it owes its power to unify to the other. On the contrary, Hill goes on, two sensations that are both had by the same subject and spatially related are unified in two different ways. In fact, these two sensations are more unified than two sensations that are merely had by the same subject but are not spatially related.28

To reiterate the core claims here, then: It is possible for the two relations to come apart and where they do occur together, we can distinguish two different forms of unity and they amount to a greater degree of unity overall. Consequently, one cannot entail the other and derive its power to unify from it. Although Hill focuses on the being had by the same subject and next to relations here, it seems possible to make an equivalent case for any pair of phenomenal relations.

I will argue that there is a kind of phenomenal relation that is necessitated by all the other phenomenal relations that we commonly experience. Namely: B-series temporal relations. Moreover, I will argue that these other relations cannot unify without the involvement of this special relation. To make this case, we clearly need to look at the details of the relevant relations. I will do this in the next few chapters. For now, though, we need to recognise an important fact about the unity of consciousness. Different instances of synchronic unity are phenomenologically similar.29 Let us consider two cases. Firstly, imagine that you are walking down the road and you have the conscious thought ‘I left the door unlocked!’ Your perceptual experience is unified with the conscious thought. What you can see and hear is experienced alongside the thought. It all happens together in your consciousness. Now consider a case in which you’re running in a race. As you approach the finish line you feel a surge of euphoria.


29 I will consider diachronic cases shortly.
This emotional experience is unified with your bodily experience. What you feel emotionally is experienced alongside what you feel physically. It all happens together in your consciousness. These two cases are very different in terms of what the unity relation relates but there is arguably a phenomenological similarity between them. There is something it is like just to experience things together and this is plausibly present in both cases. Certainly, there may be differences in the way that these things are related. For example, you may experience a certain constitutive connection between your emotional feeling of excitement and the bodily sensations that are standardly involved in such states. Alternatively, in the first case you might experience what you see in front of you as causally triggering the thought. Perhaps you were walking past a locksmith. But these differences are compatible with there being a shared component in both cases. There is arguably a simpler experience of togetherness that is present in both.

There is a single underlying phenomenon: A distinguished relation. It is so ubiquitous that we would be forgiven for overlooking it on first glance and seeing only the differentiating features of such cases. Yet on close inspection it seems undeniable.

As noted, Hill claims that two states that are had by the same subject and are spatially related are more unified than two that are merely had by the same subject. When we restrict our attention to the kind of unity described above, this seems deeply dubious. It does not seem to make sense to think that they are more or less unified. In both cases there is a very simple experience of togetherness. It does not normally appear to come in degrees. As recognised, we can allow that there may be other additional relations, without abandoning the idea that there is a single shared element in all cases of unity. Even if other relations are layered over on top, a very simple, common relation lies beneath each stack.

As it stands, this doesn’t falsify Pluralism. It might still be maintained that as well as this special very general relation, there are also other relations that fulfil our intuitive notion of co-consciousness. This would be a Pluralism that that allows special treatment for certain relations. There are many but they are not all equally important. We might go on to debate whether the title ‘unity relation’ should be reserved for the most general relation or not, but this would be little more than a verbal issue.

What it does do, though, is open the door to the possibility that once we better understand this very general relation, we see that the other phenomenal relations do depend on it for their power to unify. This is not a necessary consequence of
recognising its scope – it could just be that one relation happens to be very wide-ranging – but it would be a neat explanation of its prevalence and provide us with an attractively simple account of unity. To find out, we need to look in more detail at the various relations. But I will take it that if a single, simple account is available, it is to be preferred over Pluralism. Just as with Primitivism, Pluralism is a view that should only be adopted if a simpler theory is unavailable. Indeed, Hill implicitly concedes this by the very nature of his approach. He considers a range of options and, as we have seen, argues against taking any to be sufficiently special or essential for unity.

I will argue that many seemingly attractive accounts of co-consciousness in fact involve a disguised Pluralism. Very often, this is not apparent when the account is only loosely formulated yet close scrutiny reveals that more than one relation is actually needed to make the account work. In my discussion I describe a response to this problem that may tempt many opponents who find themselves in such a situation: Simply posit a determinable relation that sweeps together all the other relations and claim that this determinable is the real co-consciousness relation. I call this response the Magic Bullet. To see whether the Magic Bullet helps we need to look at the details of the particular determinates in each case. Is it plausible to think that we experience a single general determinable in addition to the supposed determinates? Furthermore, can we characterise this determinable without slipping back into Primitivism? I will argue that many leading rival accounts struggle to escape the gravity of both Pluralism and Primitivism.

There is a limited sense in which a form of Pluralism may be thought to be true, nonetheless. There are both synchronic and diachronic cases of unity. Any adequate general account must be able to accommodate this.

There seem to be three ways that we might read the phenomenon. Firstly, it might be maintained that there is only one unity relation in play in both synchronic and diachronic cases. This is a simple experience of togetherness of some kind. This relation is symmetric. The only difference between the two cases is that in synchronic cases the unity relation connects properties that appear to be simultaneous, and in diachronic cases it connects properties that appear to be successive. In short, the difference consists in further temporal-relations. But the same unity relation is involved in both.
The second reading allows for a strictly limited form of Pluralism. It accepts that there are two kinds of unity relation: A synchronic unity relation, and a diachronic unity relation. The first is symmetric however the second is not. Nevertheless, Pluralism is false within each kind of case.

Finally, it might be held that there are both synchronic and diachronic unity relations yet these are determinates of a further, third unity relation. The symmetric determinable unity relation is some kind of more basic togetherness. This need not slip into laissez-faire Pluralism in which any old relations qualify as unity relations, however. It might maintain that there are no further unity relations below this point in the hierarchy. There is a basic togetherness and two determinates of this togetherness yet no more than this. This structure exhausts the phenomenological variety in unity relations.

It is not clear which of these readings is the correct one. What I say will be compatible with each of them. It does generate a loose constraint, nonetheless: Any serious reductionist account must pinpoint a relation that fits this somewhat fuzzy possible profile.

It should also be made clear that my opposition to Pluralism about unity is restricted to ordinary human experience. I am claiming that there is a very general kind of unity relation in our experience. We do not need to endorse Pluralism to account for human unity. Nevertheless, I do not go as far as to claim that no other form is possible.

To its credit, Primitivism does offer a perfectly general relation. Given that little is said about the intrinsic nature of the proposed primitive relation – except its inherent capacity to unify – we have no reason to think that it will be unable to hold in certain cases, or between certain kinds of states or representations. It has been built for purpose. This opens up a further possibility. We might opt for a hybrid model that combines Pluralism with Primitivism. If this primitive relation is involved in every case, then it is possible to explain the common element, the shared phenomenological feature. One way to fuse the two positions is to think of each of the familiar phenomenal relations – such as spatial relations – as determinates of this further primitive relation. In every case of unity there is a familiar relation and a primitive unity relation.

For example: We might think that phenomenal–spatial relations and being jointly attended to are determinates of a general co-consciousness relation. In a given case of unity, we experience a familiar relation and we experience its determinable, the primitive relation.
The experience of the determinable accounts for the phenomenological similarity of co-consciousness across cases.

This general co-consciousness relation remains primitive in the sense that in itself it cannot be analysed further or understood in any other terms, although we might gain a greater grip on it by seeing the various determinate forms it can take. This arguably eases – though does not eliminate – the worry of obscurity about primitives whilst giving a relatively central role to the plurality of more familiar relations. For these reasons, it might be seen as the most stable and attractive model for each school.

But it remains the case that a primitive relation is being proposed only to solve a certain problem. Its role is to provide a perfectly general relation that works in all cases and accounts for the phenomenological similarity of each. If an existing, familiar phenomenal relation can do this then we have no reason to posit such a thing. Consequently, this hybrid form of Primitivism/Pluralism remains a last resort.

The rejection of Primitivism involves a commitment to a reductionist account. The rejection of Pluralism involves a commitment to a simple, general account. We can set out three central constraints for any such account:

**The Consciousness Constraint:** Any satisfactory account must point to something in consciousness that explains how it is that we are consciously aware of this unity.

The unity of consciousness is a phenomenon that can be discovered through introspection. It is not a fact that can only be discovered by scientific investigation, for example. It is experienced by each of us. A full account must explain how this is possible. Of every proposed account we must ask the question: ‘Would we be able to experience this unity if the account was both complete and true?’ If the answer is ‘no’ then we must either set the theory aside or seek further development.

In looking to reduce co-consciousness to a more familiar relation, any proposed candidate must match the capacity of a primitive. A primitive co-consciousness relation is a phenomenal relation; it is evident in experience. This is what enables it – in principle - to account for the introspectable nature of unity. Any replacement must be able to fulfil this role. Simply spelling out physical conditions, for example, will be inadequate. Even if they are necessary conditions for unity we might still need a primitive co-
consciousness relation to account for our ability to experience this unity. To see this, let us look at a specific example. Consider the following quote from Armstrong:

> What, then, does constitute the unity of the group of happenings that constitute a single mind? We are back at the problem that proved Hume’s downfall…I do not see any way to solve the problem except to say that the group of happenings constitute a single mind because they are all states of, processes in or events in, a single substance…the mind is the brain.  

These remarks suggest a very quick and easy answer to the Unity Question: Two states are unified if they are states of the same, fully integrated brain. The unity in question is neural. Can we all pack up and go home now? Unfortunately, no. The position is clearly inadequate as a reductionist account of co-consciousness. It fails to meet the Consciousness Constraint. It does not point to anything in consciousness that can explain how it is that we are consciously aware of this unity. As Dainton notes, we are not consciously aware of our brain states as brain states. Accordingly, we cannot experience relations as holding between brain states. We do not experience a ‘same-brain’ relation. Neural unity is not sufficient, then, for our experience of unity. Even if it is a necessary condition – and it is by no means obvious that it is – the account would be unable to displace Primitivism. It would still need to point to a phenomenal relation to account for the fact that we can and do experience unity. And until such a relation is specified, we cannot dismiss the possibility that it may be a primitive, unfamiliar phenomenal relation that these neural conditions give rise to. If this was the case, the Neural Unity View would not be wholly primitive but it would be experientially primitive. It would be primitive from the inside.

These remarks apply to all neural approaches, including oscillation theories. If we do no experience neurons as neurons, then unity cannot just be characterised in terms of the synchronisation or resonance of neural firing patterns. These sub-personal physical conditions are just not evident to us in experience.

---

31. The phrase “fully integrated” serves to set aside split-brain cases.  
33. Prinz links unity to a form of neural resonance yet he also appreciates the need to characterise the relation in phenomenological terms, as well, endorsing a Mereological Approach. I will consider this aspect of his view in Chapter Three.
As Bayne observes, there are different positions we might take on whether the unity of consciousness can be *wholly* explained in experiential terms that are first person-accessible.\(^\text{34}\) Objectivists hold that unity should at least partially be accounted for in terms of factors that are not experiential. Hurley argues for this position.\(^\text{35}\) Subjectivists hold that unity can be wholly explained in terms of factors that are experiential. Two forms of Subjectivism are possible. Content Subjectivists claim that we can explain unity in terms of the *contents* of consciousness. Non-Content Subjectivists, on the other hand, maintain that we must look beyond the content to other experiential factors. We might, for example, argue that an objective phenomenal relation holds between the experiences themselves, rather than pointing to a relation *represented* by our experiences.

The Consciousness Constraint is perfectly compatible with Objectivism. It does not claim that we must *wholly* explain unity in terms of experiential factors. It simply captures the elementary observation that a crucial *part* of the story must be experiential. Consequently, an answer to the Unity Question is not obliged to provide necessary and sufficient conditions for *all* forms of mental unity, or the phenomenon as a whole. It is, however, obliged to provide necessary and sufficient conditions for the *experience* of unity.

The second constraint that I will lay out concerns the range of cases that we are looking to understand:

**The Scope Constraint:** The form of unity in question must hold between *all* the different kinds of elements involved in *every* unified stretch of experience.\(^\text{36}\)

I will spell out in due course what I take these elements to include. Phenomenal properties are the most obvious kind. Yet I will argue that there are other kinds of entities that need to be unified that are not so obvious. Before I get to this, it should be noted that this constraint really consists in two requirements. Firstly: The requirement that the account must allow for the unity in question to hold between every *type* of thing that needs unifying. Imagine overhearing somebody speaking Spanish, feeling tired, and

---


\(^\text{36}\) I wish to restrict this to ordinary human experience, however.
having the thought ‘I wonder if there’s life on other planets’. This stretch of experience involves perceptual experience, bodily experience, and conscious thought. Yet despite the eclectic diversity of representations that region of experience (ordinarily) remains unified. Any satisfactory characterisation of unity must be able to account for this wide-ranging scope. Whatever relation we look towards to do the job, it must be able to work with all these different kinds of experience. Secondly: The requirement that it must also reliably hold in each and every individual case of unified experience. It is not enough, for example, that it sometimes unifies thought and perception but on other occasions the relation is absent. The conditions must hold without exception wherever there is unity in a stream of ordinary human experience.

Any proposed relation must be able to rival the scope of a primitive co-consciousness relation. Minimally described, a primitive is able to unify all kinds of experience. Any alternative must match this.

In meeting the Consciousness Constraint and the Scope Constraint, an account is in a position to argue for reduction. Whilst it is theoretically possible to accept the existence of a particular familiar relation and a primitive co-consciousness relation in every case of unity, such a position is uneconomical, involves obscurity, and lacks phenomenological motivation. If the familiar relation is sufficient for unity we have no need for a further primitive.

It might be thought that this still leaves the door open to a form of Pluralism. Even if there is a very pervasive, familiar kind of phenomenal relation and we have no reason to posit a primitive, it may be argued – in line with Hill – that there are still various other phenomenal relations that in some sense unify. Some may be more pervasive than others but all have equal right to be called unity relations. As we saw earlier, Hill accepts that one would be privileged if its instantiation was necessitated by the instantiation of the various other relations and they derived their power to unify from it. We might articulate this requirement as follows:

**The Power Constraint:** The proposed unity relation must be necessary for the instantiation of all other unifying phenomenal relations and their power to unify must depend upon it.

Any relation that satisfies this constraint has a justifiable claim to being the unity relation. It would not simply be a verbal stipulation based on its pervasiveness.
Any account that fails the Scope Constraint will automatically fail the Power Constraint. Accordingly, I will only discuss the Power Constraint once we have a plausible account in place of a relation that is present in all cases of unity.

1.3 A Table of Elements

I claimed earlier that it was preferable to characterise unity in terms of the unity of instantiations of properties, rather than the unity of experiences. Yet I also claimed that this is no more than a small shuffle in the right direction and that further revision would be required. I will now explain why.

The claim that phenomenal properties appear to be unified is ambiguous in an important respect. It is ambiguous because the term ‘phenomenal properties’ is ambiguous. In order to really get to the heart of the Unity Question we need to first pin down the different possible meanings of this term and understand some of the issues that arise.

When we refer to phenomenal properties we might, firstly, be referring to whatever qualitative properties that we are aware of in our experience. For example, this might include the qualitative property of *solidity* that the table in front of us possesses. Alternatively, we might be talking about properties that appear in consciousness to be *experiential in nature*. We might, for example, be thought to be aware of *what it is like* to eat a very hot chilli. Both of these might be thought to determine – in some loose sense – what it is like to be you, or what it is like to undergo your experiences. Being aware of one particular property rather than another will affect what it is like to be conscious at that time. But they are very different notions.

*Transparency* theorists deny that we can attend to phenomenal properties of the second kind. That is, they deny that we can attend to properties that appear to be experiential in nature. The transparency theorist claims that our experiences are transparent in the sense that we always ‘see’ right through them to their objects: Physical things in the external world. Harman expresses the case for transparency like this:

> When Eloise sees a tree before her, the colors she experiences are all experienced as features of the tree and its surroundings. None of them are experienced as intrinsic features of her experience. Nor does she experience any features of anything as intrinsic features of her experiences. And that is true of
you too. There is nothing special about Eloise’s visual experience. When you see a tree, you do not experience any features as intrinsic features of your experience. Look at a tree and try to turn your attention to intrinsic features of your visual experience. I predict you will find that the only features there to turn your attention to will be features of the presented tree...³⁷

Defending a related thesis, Heidegger captures the basic idea well:

“We never … originally and really perceive a throng of sensations, e.g., tones and noises, in the appearance of things…; rather, we hear the storm whistling in the chimney, we hear the three-engine aeroplane, we hear the Mercedes in immediate distinction from the Volkswagen. Much closer to us than any sensations are the things themselves. We hear the door slam in the house, and never hear acoustic sensations or mere sounds.”³⁸

The modern transparency thesis concerning phenomenal properties might be roughly articulated as follows: We cannot attend to properties that appear to be experiential in nature. A more general transparency thesis might be formulated, of course, in terms of mental properties however this formulation will suffice for our purposes now.³⁹

This supposed inability to attend to such properties is typically taken to be evidence that we are not consciously aware of them in our experience *at all*. We cannot attend to them because they are not there in our consciousness. This is a controversial move but not one I wish to query here. I will consider the position as an overall package from this point on. This can be referred to simply as *Transparency*.


**Transparency**: We are not consciously aware of properties that appear to be experiential in nature.

The kind of conscious awareness under consideration is *pre-reflective*. A Transparency theorist might happily accept that philosophers occasionally *think* about such properties. However, the claim denies that we are aware of such properties in our pre-reflective experience. A Transparency theorist who accepts this strong conclusion can clearly only allow for the existence of phenomenal properties in the first sense that we set out above: Whatever properties we are aware of in our experience. For a Transparency theorist these will simply be represented *physical* properties, or perhaps abstract entities.

The term ‘phenomenal properties’ is often used in a way that is neutral on these two different senses. This neutrality is deemed to be useful in many dialectical contexts. Yet it is unhelpful in this one. A coarse-grained use of the term obscures the full role and real nature of the unity relation. I want to be able to distinguish between the two readings I have laid out above and be able to clearly pick out the second sense. For this reason, I will now exclusively reserve the term ‘phenomenal properties’ for properties that appear in consciousness to be experiential in nature. This will allow me to avoid having to laboriously specify this each time. It is also perhaps the more legitimate of the two uses of the term, strictly speaking. The notion is equivalent to certain uses of *qualia* and Block’s notion of *mental paint*. I take the term to carry less baggage, however, than these and to imply less of a distance from our awareness of *physical properties*. When I speak of our awareness of physical properties I will, in a parallel way, be referring to properties that appear in consciousness to be physical in nature.

We might say that where Transparency is violated, **Translucency** holds. As Smith remarks during his deployment of this helpful term, “when you have such experience, you are, to be sure, apparently aware of worldly objects, but you are also aware of features of your own experience.”

We can formulate two counter-claims to Transparency as follows:

**Weak Translucency**: We are sometimes consciously aware of properties that appear to be experiential in nature (phenomenal properties)

---

40 Block, ‘Mental paint and mental latex’.

**Strong Translucency:** We are continually consciously aware of properties that appear to be experiential in nature (phenomenal properties).

As we noted earlier, the orthodox characterisation of co-consciousness understands the phenomenon in terms of the apparent unity of experiences. This implicitly presupposes the falsity of Transparency and the truth of some kind of Translucency. In order to be aware of our experiences as unified we must be aware of certain phenomenal properties. In fact, it is committed to rampant violations of Transparency and something close to Strong Translucency. In short, wherever experiences appear to be unified Transparency must be false.

It is far from clear that Strong Translucency is true. Nevertheless, Weak Translucency is very plausible. I will assume in this work that this more modest claim is correct. I will not fully defend this assumption however I will say a few words about what the view amounts to.

Consider a mood such as euphoria, for example. It seems entirely correct to understand such states as involving *some* kind of representation of the world around. In particular, we are representing almost everything we encounter in a highly positive light. But it seems wrong to think that this exhausts what we are aware of. We also seem to be aware of the quality of the mood itself. Indeed, it is the feeling of euphoria that seems most central to the state.

Bodily sensations such as pain seem very similar in this respect. They undoubtedly convey something about the state of our body and the nature of the injury or physical issue but this is plausibly only an ingredient in the overall state. We are also aware of what the experience itself is like. It is not implausible to think that the same is at least sometimes true of perceptual experience, although perhaps often subtler. Consider the following scenario:

It is autumn. Dead leaves from the trees cloak the ground. As you walk down the road you feel the satisfying crunch of them beneath your feet. You are aware of how dry and crisp they are, their brittleness, and the way that the pressure of your feet crushes them into the ground. These are physical facts. You are aware of the physical properties of the leaves. But as you continue to walk down the road you begin to take a childlike pleasure in marching through them. You remain well aware of the physical properties of the leaves however this is no
longer what you are primarily interested in. Instead, you have turned your attention to the quality of the experience itself. As the leaves crunch beneath your feet, you take pleasure from what it *feels like* to press down on them and what it *sounds like* to hear them break up. The experience has a certain quality and it is this that you are enjoying. You are now attending to phenomenal properties.

It is worth repeating that the claim that we can attend to phenomenal properties in no way implies that we can be *exclusively* aware only of phenomenal properties. In attending to what the experience is like we continue to be well aware of what the experience is conveying about the world.

I present this case only to illustrate the phenomenon. I will not defend Weak Translucency properly here. Yet, as we have seen, it is an assumption shared by the majority of participants in the unity of consciousness debate. Indeed, it is a rather more modest assumption than the one that underwrites the orthodox characterisation of co-consciousness.

Weak Translucency is fairly minimal in its commitments and is compatible with a range of views about the relationship between phenomenal properties, representational properties, and represented physical properties. It simply claims that – at least sometimes – we are aware of properties that appear to be experiential. This leaves a lot open.

Weak Translucency also takes no stance on the *nature* of our awareness of these phenomenal properties. It may be, for example, that we *represent* them. I will return to this issue in the next chapter.

Weak Translucency may leave a faint sense in the stomach of some readers. When we claim that some of our experiences involve an awareness of *both* phenomenal properties and physical properties, are we not over-counting? Do we ever really experience phenomenal red *as well as* physical red? This is a legitimate concern but not one that should be allowed to block the claim. To see the force of the claim we first need to recognise that in certain cases we seem to be able to attend to the quality of our own

---

experience. Once this is accepted, a simple question presents itself: Do you completely lose awareness of the corresponding part of the physical world? If the answer is ‘no’ then it seems plausible to think that you are aware of both phenomenal and physical properties. This is not to deny that the two properties are intimately connected. There’s no light between them. However, this is plausibly because the phenomenal property appears involved somehow in the representation of the physical property. Yet even if they are inseparable in such cases, this does not mean that they are simply one and the same.

1.4 The Real Scope of Unity

We are now in a position to begin to fully characterise the unity phenomenon. I claimed earlier that it was better to characterise unity in terms of the unity of instantiations of properties than in terms of the unity of experiences. Yet I went on to suggest that this should be no more than a stopgap. I claimed that in order to really get to the bottom of the Unity Question we needed to first drain away the ambiguity surrounding the notion of phenomenal properties. I offered a sharpened conception of phenomenal properties and set out my commitment to Weak Translucency.

Against this backdrop I will now argue that the traditional characterisation of unity is severely limited, even when we tweak the account to remain neutral on the Counting Question. The orthodox view characterises unity in terms of the unity of experiences or, in our revised terms, the unity of phenomenal properties. However, I will argue that this is just one of the many roles that the unity relation plays. In fact, I will suggest that the unity relation fulfils four different kinds of roles. The unity relation is even more wide-ranging and important than previously thought. I will argue that although only one unity relation is in play\(^43\), in these different cases it relates different things. Accordingly, any proposed relation must be able to work in these different roles.

In particular, I will argue that we can be i) aware of two or more phenomenal properties as together, ii) aware of two or more physical properties as together, iii) aware of two or more abstract entities as together, and iv) aware of two or more entities of different apparent ontological kinds as together. This final mixed role involves the properties of the previous three kinds of cases but is important in its own right when it comes to rigorously testing the structure of a given proposal.

\(^{43}\) I am simplifying here somewhat and setting aside doubts over whether synchronic and diachronic cases involve precisely the same relation.
Because the same relation is in play in each of these cases, we need not turn to Pluralism. However, understanding the full role of the unity relation is essential if we are to really assess the adequacy of each account and grasp the true nature of the relation. I will now say a few words about each kind of case before considering a possible objection.

As we have seen, the first kind of case is widely recognised, albeit expressed in the problematic terms of experiences. It is the bread and butter of the unity literature. For this reason, I will move swiftly on. It may be more fruitful, however, to consider certain mixed cases next as a way of gently introducing the somewhat revisionary idea at the heart of the latter three cases.

I will look next, then, at our awareness of phenomenal properties and physical properties as together. I will suggest that this kind of case is common and roughly co-extensive with failures of Transparency. Indeed, it may be because it is so common and mundane that it has been overlooked.

Take any ordinary case in which Transparency does not hold and we are consciously aware of a phenomenal property. In such a case we are aware of both physical and phenomenal properties. Moreover, we experience them as together in some sense. When we shamelessly stomp through a patch of dead leaves, for example, we are aware of what it is like to experience the crunch under our feet and aware of certain physical properties such as the brittleness and dryness of the leaves. Crucially, though, we are aware of these different properties all together, at once, alongside one another in some sense. The irresistible quality of the experience does not seem to exist in isolation from the physical world. It is important to emphasise that this claim goes beyond simply asserting that we are aware of our experience of what it is like to stomp through leaves together with our experience of the brittleness and dryness of the leaves. The claim, rather, is that the physical properties themselves appear to stand in this togetherness relation to the various phenomenal properties. If this sounds strange, it should be remembered that my eventual aim is to identify these togetherness relations with apparent temporal relations. For now, though, I just wish to establish that such unity relations do directly connect

---


38
physical properties in our experience to other properties, such as phenomenal properties.

As we have seen, in some of these mixed physical/phenomenal cases there may be a close, intimate connection between corresponding properties. Suppose that visual experience is sometimes translucent and that we can be aware of the qualitative properties of our own visual experience. These properties will correspond to the physical colour properties that we represent. When we look at the tomato in Fig. 1 in a philosophical mood we may be aware of physical red and phenomenal red. Not only will we be aware of them as together in some general sense, we will also be aware of the close, very particular relation that they stand in to one another. Phenomenal red is connected to physical red here in a way that phenomenal red is not connected to physical circularity or, moreover, the physical sound of conversation in the background. They correspond to one another somehow. It may reasonably be thought that phenomenal red appears to be involved somehow in the representation of physical red. Whatever the details of their intimate connection, however, two properties can only appear to stand in such a particular relation to one another if they appear as together in some sense. If phenomenal red appeared to exist in isolation from physical red, phenomenal red could not appear to correspond to, or be involved in the representation of, physical red.

Fig. 1

In other mixed physical/phenomenal cases of unity we may experience two instantiations of properties without experiencing them as standing in this intimate relation. Suppose, for example, that you are eating some honey whilst looking at something that is triangular. What it is like to taste honey will not (normally)
correspond to the physical property of triangularity. Yet we still experience the two property instantiations as together in some way. They do not appear to exist in isolation from one another.

These kinds of mixed physical/phenomenal unity cases are routinely overlooked even by those who accept that we are – at least sometimes – consciously aware of both phenomenal properties and physical properties.

If we are in any doubt about the presence of a unity relation in these cases we need only consider the fact that we seem to be aware of what it is like to undergo the experience at the same time as we are aware of the physical properties that the experience represents. Physical and phenomenal properties appear to stand in clear temporal relations to one another. If a phenomenal property appears to be simultaneous with a physical property, then they must appear to be together in some sense.

If we were not aware of physical and phenomenal properties as together, our conscious awareness of the world would be bizarrely bifurcated into two isolated realms: We would experience a purely phenomenal realm and a wholly physical realm. This is evidently not the case. These different aspects of our experience run through one another. They intermingle.

At this point it might be objected that I am stretching the meaning of the term ‘unity’ too far. On one narrow interpretation of the term this is indeed the case. It might be thought that when we say that A and B are unified we mean that A is conscious, B is conscious, and – furthermore – there is some sense in which they are conscious together. But this is only one reading of the term. On a broader reading, when we say that A and B are unified we say only that we are aware of A and B as together in some sense. This remains neutral on whether A and B are themselves conscious. Importantly, it does not rule it out. We can say that we are aware of A and B as together and that A and B are phenomenal properties that are themselves conscious. But we do not need to do so. It might be that A, for example, is a represented physical property. This perfectly captures the standard unity of phenomenal properties but also allows for other forms. When I

---

45 It might well be a fertile line of inquiry to explore the phenomenon of synaesthesia with some of these fine-grained distinctions in mind. The existing literature tends to ride roughshod over many such distinctions.
speak of the unity of two entities, then, I am referring to the idea that we are aware of two entities as being together in some basic sense.

The need for a broader interpretation of unity is made vivid by the mixed physical/phenomenal case. There is clearly some sense in which we are aware of phenomenal properties and physical properties as together. We are, most obviously, aware of the way that they correspond to one another. Our awareness of such a relation presupposes an awareness of the two kinds of properties as together in some sense. It is not an option for us to interpret the unity in this case as consisting in the unity of two entities that - in themselves - appear to be conscious: A represented physical property does not - in itself – appear to be conscious. We have no choice, then, but to accept the existence of another case of unity. Two entities can be unified in the sense that we are aware of them as together in some way, regardless of whether they themselves are conscious states.

Although the popular formulation of the unity of consciousness is in terms of experiences – or their phenomenal properties – a few theorists have rejected the first, narrower reading of unity. Brook and Raymont, for example, allow that unity can hold between either conscious representations or the objects of representations whilst Tye maintains that the only real unity relation holds between the contents of experience.

As we have seen, the broader interpretation allows for unity to hold between phenomenal properties. This kind of case is just a subset of all unity cases. In opting for this reading, we load less into the notion that is controversial. Crucially, though, there is a clear phenomenological motivation for thinking that there is a single underlying unity phenomenon that can involve different kinds of properties. There is something it is like to be aware of two different entities as together, whether they are physical or phenomenal.

---

46 To their credit, they seem to acknowledge the possibility of mixed cases – though they do not explore the implications of this. In some respects, their project might be thought of as closest in spirit to the one developed here because of this stance and the fact that they aim to remain neutral on the mereological view of experience in their setup of the problem. See: Brook and P. Raymont, ‘Unity of consciousness’, Proceedings of the 28th Annual Conference of the Cognitive Science Society, (New York: LEA, published on CD, 2006), A. Brook, Kant and the Mind, (New York: Cambridge University Press, 1994), A. Brook ‘Unity of consciousness: What it is and where it is found’, Proceedings of the 22nd Annual Conference of the Cognitive Science Society, (New York: LEA, 2000).

47 Tye, Consciousness and Persons, op cit.
There is a phenomenological similarity running throughout these different cases. In each case, this togetherness, whatever it amounts to, provides a clear contrast to a scenario in which the two entities seem to exist in isolation from one another. The kind of entities that they are is just a further fact.

I have laid out two kinds of cases so far - phenomenal/phenomenal, and a mixed physical/phenomenal case - and described the motivation for attempting to understand these cases in terms of a single, underlying phenomenon. I will now argue for a further expansion of the scope of unity by arguing for physical/physical unity.

Consider the way in which we experience the colour of an object together with its shape. For example: The physical redness of the tomato with its physical sphericity. In such a case, we represent the relevant properties as properties of the same physical object. But we could not represent them as standing in this relation to one another unless we were aware of them as being together in some sense. If one property appeared to exist in isolation from the other we could not be consciously aware of the fact that they both belong to the same object. Object unity presupposes that represented physical properties can appear to be together in some sense. Yet this kind of case is by no means restricted to properties that are bound together into a single individual. Take any two physical properties that you are aware of now. There is a clear sense in which you are aware of them as together. You are aware of them as constituents of a single objective world.

If this seems doubtful, consider their apparent spatial relations to one another. Once again, this presupposes some kind of apparent togetherness. If one physical property appeared to exist in isolation from the other you would be unable to experience their apparent spatial relations. As emphasised earlier with respect to physical/phenomenal cases, this claim should be sharply distinguished from the weaker claim that we must be aware of our experience of one property as together with our experience of the other. Rather, the claim is that the physical properties themselves appear in our experience to stand in a direct togetherness relation of some kind to one another. I will consider a possible objection to this shortly, nonetheless.

I have made a case for thinking that the unity relation can hold between physical properties, phenomenal properties, or a mix of the two. I will now conclude the expansionist mission statement by considering abstract entities. Once again, it may be most intuitive to consider a mixed case first before moving on to a purely abstract unity.
Let us begin, then, with physical/abstract unity. Suppose you're in the local bakery trying to work out whether you have enough cash for your shopping. As you get closer to the checkout you quickly engage in mathematical thinking in order to add up the prices of your items. You are consciously thinking about a collection of abstract entities. Namely: Numbers and their respective relationships. But you are also consciously aware of much else besides this. You are, for instance, aware of the smell of the freshly baked croissants. Significantly, though, you are not aware of these things in isolation from one another. You are aware of the abstract entities and the physical properties of the food as together, existing within the same objective world. You are aware of a swirl of different interrelated entities.

Now, let us consider abstract/abstract unity. As you grapple with the basic mathematics necessary to work out the price of your shopping you undergo a series of conscious thoughts. In doing so, you are aware of the contents of successive thoughts as together in some sense. Indeed, it is only this that allows you to make certain inferences and rationally direct the process. If each content appeared to exist in complete isolation from the surrounding content, the thought process would be unlikely to lead anywhere of use.48

It may be thought that there are various other examples of abstract unity, or of mixed cases involving abstract entities. For example, it might be suggested that we can be consciously aware of states of affairs as composed out of other states of affairs. Yet in order to be aware of this composition relation we must be aware of the simple states of affairs and complex states of affairs as together in some sense. It cannot be the case that the simple states of affairs appear to exist in isolation from the complex states of affairs. This provides a further possible case of abstract/abstract unity. Similarly, it may be maintained that we can be consciously aware of propositions and that these are composed of certain properties and relations. If awareness of composition requires awareness of the parts and the whole as together, then this provides a further possible mixed case, whether it is abstract/physical, or abstract/phenomenal.

To recap on the four kinds of cases, then. I have argued that we can be i) aware of two or more phenomenal properties as together, ii) aware of two or more physical

48 This is fundamentally Kant's point, when discussing how we synthesize successive representations when we're counting. I have put the idea in my own terms, however. For discussion see: P. Kitcher, Kant's Thinker, (New York: Oxford University Press, 2011).
properties as together, iii) aware of two or more abstract entities as together, and iv) aware of two or more entities of different apparent ontological kinds as together.

In each of these cases there is arguably a very general kind of unity that captures what traditional formulations of unity have aimed to express and allows for these other non-traditional forms. If we understand unity to be an awareness of different entities as being together in some general sense, then we can capture the idea that phenomenal properties are unified. We are aware of the different phenomenal properties as being together. Yet we can also say that we are aware of physical properties, abstract entities, or a mix of some kind as together with one another. In each of these cases, there is a shared relation. The ontological kind of each relatum is just a further fact. The kind of unity present in the non-traditional cases that I have described exhausts the unity found in traditional cases. The mere fact that the apparent relata are phenomenal entities, rather than physical or abstract entities, in no way adds to or modifies the kind of togetherness in play.

In claiming that the apparent togetherness of entities exhausts the unity of two phenomenal properties I do not wish to claim that it exhausts mental unity considered in all its aspects. I claim only that it exhausts the experience of unity. This is compatible with phenomenal properties or experiences being unified in further objective ways. For example, two experiences may be physically or functionally unified, or unified in virtue of being had by the same subject - as a matter of objective fact. In this work, however, I am concerned only with offering necessary and sufficient conditions for the experience of unity, not unity in all its mental forms.

My position, then, can be boiled down to the following claim. The unity of phenomenal properties is just a special case of a much wider phenomenon: Our being aware of two things as together in the most general sense. In Chapter Four I will go on to add that this very general sense is being aware of two things as together in time. We don’t need a new primitive unity relation. The kind of relation that we already allow for the temporal unity of physical entities can be deployed to unify physical, phenomenal and abstract entities. We need not introduce anything else.

At the very least, though, we should adopt the broader, less constricted reading of unity as an initial characterisation. We then need to examine the best accounts of unity to see if it is possible to find a perfectly general explanation of this phenomenon of togetherness. It may, of course, turn out to be the case that no such account is available.
It may be that when we study these different cases in more detail we see that each demands its own special treatment – that different relations are involved in different cases. But it is better not to rule out the possibility of a general account in advance, simply by stipulation. This would be unduly dogmatic. If we restrict ourselves to the narrow reading of unity we run the risk of obscuring the true nature of the unity relation. We run the risk of building too much into our conception of unity, based on the cases we happen to be most familiar with. Let us instead see how the best accounts fare at offering a perfectly general account and assess their adequacy in light of the full range of possible cases. In short, it remains an open question whether we should be a Pluralist about the unity relation. However, there is phenomenological motivation for thinking that there may well be a shared, underlying phenomenon in all of these cases. If we can find a simple, elegant explanation of this, such an account would clearly be preferable to Pluralism.

1.5 The Key Objection

The opponent is no doubt itching to speak at this point. It seems likely that many objections will centre on the following claim in some way: Physical properties and abstract entities are only unified in a derivative sense. Let us give voice to the objection as follows:

Yes, if two physical properties appear to be bound together into a single physical object or spatially related they must be unified in some sense. But they are only unified in virtue of the unity of the corresponding experiences that represent them. Similarly, it is clearly true that if the contents of successive abstract thoughts are inferentially connected they must be unified in a certain sense. But they are only unified in virtue of the thoughts that represent them. In both cases the non-mental entities are unified only derivatively. To claim that physical properties are unified with one another directly and non-derivatively is to slip into absurdity. To be unified is to be co-conscious. Two physical properties clearly cannot be co-conscious as they are not even conscious.

This objection really breaks down into two points: One positive and one negative. I will take them in reverse order. The objection suggests that it is absurd to claim physical properties are unified given that unity is synonymous with co-consciousness and that the physical properties are not themselves conscious. This represents a
misunderstanding of my claim, however. I have offered a new broader conception of unity according to which two entities are unified if they are experienced as together. This broadened conception does not require that the relata are themselves conscious, although it does not preclude it either. For this reason, it may be wise to abandon the term ‘co-conscious’ at this stage due to its misleading connotations and instead deploy ‘unified’ wherever possible. In the sense of unity that I have specified, there is no absurdity in taking two physical properties to be unified. It does not entail that the physical properties are conscious together. What should be highlighted once more, nonetheless, is that the unity relation holds between physical properties as they are given to us in our experience. That is, as elements in our representational content. I am not claiming that the objective physical properties that our experiences are about stand in unity relations, independently of our experience. Parallel points hold for the unity of abstract entities.

The second strand to the objection demands a closer discussion. It seems to me that the claim can be read one of two ways. The first is no real help to the opponent. On this reading we are aware of a unity relation as holding directly between the respective non-mental entities but this is grounded in the fact that the corresponding mental properties appear to be unified. This reading does not actually deny that we are aware of unity relations between non-mental entities. It simply makes a claim about how this occurs. In particular, it claims that it ontologically depends on our awareness of the unity of the corresponding mental properties. This reading is perfectly compatible with what I have claimed. It merely offers an additional claim about a dependency relationship between certain aspects of our experience. I will assume, then, that this reading of the objection is no good for the opponent.

On the other reading of the objection, we are not aware of a unity relation as holding directly between the respective non-mental entities. The simplest version of this view will claim that only mental entities such as experiences or phenomenal properties are unified. Indeed, this is the orthodox view. The problem with this position is that it fails to explain how it is that physical (and abstract) entities appear to have even a derivative or indirect unity. Correspondingly, it cannot explain how it is that they appear to stand in the relations that we know them to stand in – such as spatial or object relations. To see why this is the case, consider our translucent experience of the tomato once more. Suppose that there is awareness of the following components:
According to the view under consideration, we only experience phenomenal red and phenomenal sphericality as unified. In such a scenario, this is very plausibly a necessary condition for experiencing physical red and physical sphericality as standing in certain relations such as spatial or object relations. If two different individuals experienced the two phenomenal properties, for example, then there would be no sense in which the corresponding physical properties appeared related. Yet it is not a sufficient condition. Even if a single individual experiences phenomenal red and phenomenal sphericality as together physical red and physical sphericality will still appear to be completely isolated from one another unless in experiencing phenomenal red we experience it as together with physical red and in experiencing phenomenal sphericality we experience it as together with physical sphericality. Yet, by hypothesis, only mental entities can be unified. Therefore, when we are aware of the phenomenal properties of an experience we cannot be aware of them as together with the physical or abstract entities that the experience represents. Because of this, the simple orthodox view fails to explain how it is that physical (and abstract) entities appear to have even a derivative or indirect unity. Correspondingly, it cannot explain how it is that they appear to stand in the relations that we know them to stand in – such as spatial or object relations. It is perhaps because we take for granted the unity of an experience and its phenomenal properties with what it represents that such problems may be overlooked. Yet it is for these reasons that the view must be set aside.

An alternative is possible, however. This also looks to deny that the unity that holds between two physical properties is direct and non-derivative however it allows an indirect chain of unity relations that connects each non-mental entity to a mental entity that is, in turn, connected to the other mental entity. Consider our experience of the tomato again. This reading amounts to the claim that our translucent experience consists in the following components:

1) We are aware of a unity relation between physical red and phenomenal red.
2) We are aware of a unity relation as holding between phenomenal red and phenomenal sphericity.

3) We are aware of a unity relation as holding between phenomenal sphericity and physical sphericity.

According to this proposal, then, the only sense in which we are aware of the two physical properties as unified is *indirectly* via this three relation-long chain. As far as I can see, this is the only way of potentially blocking the claim that physical properties are directly unified whilst accommodating the fact that they do appear to be related in certain familiar ways. Nevertheless, the view faces two serious problems.

To bring the first problem into view, it must be registered that awareness of this chain of relations, by hypothesis, does not generate a *further* direct unity relation between the two non-mental entities. *Transitivity* does not hold in this phenomenological sense. Do not imagine, then, that as we experience this three relation-long chain it somehow ‘collapses into one’ in our experience and in being aware of the whole chain we are aware of a singular unity relation as holding directly between physical red and physical sphericity. This just returns us to the first position that we considered earlier. It would simply be a way of claiming that our awareness of the unity relation between the physical entities was *grounded* in the unity of the mental entities. In order to avoid conceding the case, the opponent must deny that the indirect chain gives rise to any further experience of a singular relation holding directly between the two physical properties.

Once we have clearly distinguished this reading from the earlier position and we can no longer unwittingly smuggle in the idea that the chain somehow appears to ‘collapse into one’, as it were, it is obvious that this proposal fails to capture the phenomenology of the experience. When we look at a tomato it does not seem as if we are aware of the togetherness of its redness and sphericity only circuitously, in the sense of being aware of a long, indirect chain. When we are aware of the two physical properties as together, and properties of the same object, they appear to be connected as intimately as when we are aware of two phenomenal properties as together. They are fused as tightly as could be. It doesn’t get any tighter. The colour of a tomato almost seems to *intersect* its shape. Nothing can get between.
This claim is perfectly compatible with the claim that—as a matter of objective fact—in order to be aware of the two physical properties as together we must be aware of the properties of our own experiences as together. Even if this is a necessary condition, it does not affect this claim about how it appears to us. This formulation of the objection is incompatible with the phenomenology, then.

There is a further problem, however. The opponent is arguing that when we are aware of two experiences and their phenomenal properties we are aware of these phenomenal properties together with what the respective experiences represent. It is this that is said to account for the derivative or indirect unity of the physical properties with each other. Yet to grant the unity of each phenomenal property with its corresponding physical property is to concede the existence of physical/phenomenal unity. Once the opponent grants this, however, there is little motivation for denying physical/physical unity. If it is allowed that the unity relation can relate a physical property to another property, why not allow that it can relate a pair of physical properties? This is particularly compelling when we consider the remarkably direct and intimate way that many physical properties appear to be related.

It seems that parallel points may be made in support of mental/abstract unity, physical/abstract unity, and abstract/abstract unity. If we consider a complex abstract thought, for example, our awareness of its constituents as together seems to be as direct as our awareness of any two phenomenal properties. There seems little motivation for reducing the unity of the abstract to an indirect chain involving unified mental properties. Furthermore, the existence of an abstract chain—if properly connected to the abstract entities—concedes the possibility of mental/abstract unity. Yet once we have granted that the unity relation can relate an abstract entity to another entity, why not allow that in some cases it can relate only abstract entities?

The objection set out to deny that physical or abstract entities can appear to be unified in anything more than a derivative sense. It aimed to uphold the traditional interpretation of unity. Yet each reading of derivative failed to assist the opponent. It seems that we have little choice but to accept that non-mental entities can be directly unified in precisely the same way that mental entities can: Namely, by appearing to us as together in some yet to be specified sense.
1.6 Conclusion

The expansionist approach to unity is very plausible, then. We need to stretch its job description. The elements in our experience that the unity relation needs to connect include phenomenal properties, physical properties, and abstract entities. The phenomenological similarity across this range of cases provides strong motivation for seeking a single, general account. It is only by holding this full set of possible cases in mind, however, that we can properly assess proposed explanations of unity.

To its credit, Primitivism appears able to handle this range of cases. Minimally described, there is nothing in its nature to rule out the possibility of a primitive unity relation holding between any of the three kinds of elements. This sets the bar high.

I will argue that a range of accounts superficially appear plausible only because the range of cases has been inappropriately restricted. This more rigorous test puts us in a position to make substantial progress in the debate.

Recognising the four kinds of unity cases also has certain other important implications. We examined one mixed case in which physical properties or abstract entities are unified with phenomenal properties. In the next chapter I will argue that this tells us something very significant about the nature of our awareness of phenomenal properties and, indeed, about the nature of our awareness of the unity relation itself.
2. The Nature of Our Awareness

2.1 Overview

In the last chapter I endorsed Weak Translucency: The claim that we are sometimes consciously aware of properties that appear to be experiential in nature. Contrary to popular usage in the literature, I exclusively reserved the term ‘phenomenal properties’ for these properties and noted that I will, for the sake of simplicity, refer to the physical properties that feature in the contents of our experience as ‘physical properties’. In this chapter I want to look at the nature of our awareness of phenomenal properties and what this tells us, in turn, about the nature of our awareness of the unity relation itself.

We might think that when we are aware of a phenomenal property we are directly aware of an objective property of our experience. That is, we need not represent the property. In this case, what this amounts to is this: Just having an experience is sufficient for our being aware of some of its properties. For example: Simply having a pain is sufficient for our being aware of its painfulness. We do not need to represent the properties of that pain. We are directly aware of its painfulness. This rules out the possibility of error – at least at the pre-reflective level of consciousness. Whilst we might mistakenly introspect and form false beliefs about our experiences, at the pre-reflective level there is simply no room for misrepresentation for there is no representation involved at all, at least in its fullest sense.\(^49\)

The most plausible way in which we might be thought to be immune from error at the pre-reflective level is in the sense that it does not appear as if the experience has properties that it does not have. In being directly aware of an experience, we can be ignorant of some of its properties, such as any physical properties, but we cannot erroneously apprehend properties it does not have.

That is one possible picture. Alternatively, we might think we are aware of phenomenal properties but only in virtue of representing our experience as being a certain way. On this

\(^49\) I am happy to accept that there is a minimal sense in which direct awareness might be described as representational: In the sense that it is assessable for truth (It is always accurate). It lacks a capacity for error, however. Whether we reserve the term ‘representational’ for the full-blooded sense or allow for this expansion is merely a terminological issue. I will reserve the term for the full-blooded sense in this thesis.
view, all experience is representational in the sense that all awareness requires a representation but not all of these representations are of external things. Sometimes we represent our experience as having certain properties. Accordingly, although this option is representational in this weaker sense, it should be clearly distinguished from the kind of representationalism that many transparency theorists (such as Tye and Harman) advocate.

Clearly, these notions of ‘direct awareness’ and ‘representation’ demand further investigation. But we can define them in such a way that they are exhaustive of the options. To do this, we just need to define ‘direct awareness’ negatively as a form of conscious awareness that does not involve representation in its fullest sense.

To then define ‘representation’, we need to understand representation as at least minimally involving an intermediary. When we represent \( X \) we are aware of \( X \) via an intermediary representation. This introduces the possibility of error. Whatever else representation amounts to, it must involve the possibility of error. Direct awareness, on the other hand, is an awareness that does not involve an intermediary. In the case of phenomenal properties, what this means is this: Simply having an experience is sufficient for our being aware of its phenomenal properties. This precludes the possibility of error at the pre-reflective level. There is a sense in which we cannot help but be aware of it as it is. If you want to deny that our awareness of phenomenal properties is representational, then, you are committed to ground-level infallibility.\(^{50}\)

The issue of whether we are aware of phenomenal properties is often muddled together with the question of how we might be aware of them. Proponents of phenomenal properties sometimes just assume that our awareness of them must be direct. We can see, though, that two different claims are possible for supporters of Weak Translucency:

A) Certain properties appear to be experiential in nature and our awareness of these properties is direct.

\(^{50}\) I will take infallibility here to mean ‘incapable of error’. I will purposively leave open the possibility that in other kinds of cases this might be read in a way consistent with ‘not assessable for accuracy’. For convenience, I want direct awareness to be a broad umbrella term that also covers the kind of awareness Naive Realists claim we have of external physical objects. Immediate awareness of phenomenal properties, then, is just one possible kind of case of direct awareness. What defines the notion is the lack of a representation and the impossibility of error. In the case of phenomenal properties, this claim most plausibly means that we are necessarily aware of them as they really are. In the Naive Realist case it might be formulated in either way.
B) Certain properties appear to be experiential in nature and our awareness of these properties is representational.

The second position has not received as much attention as it might have, although Pereboom and Rosenthal present accounts that suggest something roughly along these lines.\(^51\) More generally, though, there has been a tendency for philosophers of mind to crowd into two houses on this issue. The first house denies outright that we are aware of anything except what our experiences represent and maintains that our experiences only represent physical or external entities. This is the view that Harman and Tye hold.\(^52\) The second house is happy to admit that we are aware of phenomenal properties but sees it as a problem for representational theories of consciousness and takes it as a given that our awareness of these phenomenal properties is non-representational and direct.\(^53\)

Option B steers a middle-way between these two houses. It suggests there is a grain of truth to what each house says yet there is something not quite right with both. In this chapter I will argue for Option B. I will then go on to show that this entails that we only have representational awareness of the unity relation itself. In the course of the discussion some intriguing implications will emerge. In particular, I will suggest that there is reason to think that we only have form of conscious awareness: Representational awareness. If true, this falsifies a number of popular theories of perception.


\(^{52}\) For two well known expositions see G. Harman, ‘The Intrinsic Quality of Experience’, and Tye, ‘Representationalism and the Transparency of Experience’.

\(^{53}\) The question of what kind of awareness we have of phenomenal properties is rarely addressed explicitly. But we can find a widespread implicit commitment to this picture across the classic literature. For example: Nagel, ‘What Is It Like to Be a Bat?’, and F. Jackson, ‘Epiphenomenal Qualia’, *The Philosophical Quarterly* (32) 127 (1982). Strawson is perhaps the most open in his commitment to the view in *Mental Reality* (Cambridge MA, MIT Press, 1994). In this work he argues that there is a certain sense in which we cannot be wrong about the way that things seem to us in experience. Chalmers also defends a related thesis in which he argues that the phenomenology of certain experiences can enter into the content of our beliefs about our own experiences. This gives rise to a form of incorrigibility. For discussion, see: ‘The content and epistemology of phenomenal belief’, in Q. Smith & A. Jokic, eds., *Consciousness: New Philosophical Perspectives*, (New York: Oxford University Press, 2003).
2.2 Background to the Argument

I will now begin to lay the foundations for the claim that our awareness of phenomenal properties is always representational. During the discussion, I will continue to speak of the unity relation as appearing to hold between properties. This remains shorthand for instantiations of properties, as they feature in the contents of our experience.

My argument takes root in the fact that in normal human experience phenomenal properties appear to be related to external properties. We rarely – if ever – seem to have phases of experience that are purely phenomenal and do not convey anything about the physical or external world. Even when our experience appears to have a certain qualitative character it also seems to convey information about the world. These two aspects of consciousness are normally interwoven into a single stream. My argument will be grounded in these commonplace mixed cases during which we are aware, in some sense, of both phenomenal and physical properties.

For simplicity, in the subsequent argument I will focus on our awareness of just a single pair of properties: One external, one phenomenal. I will argue that it is impossible for these to appear temporally related if we are aware of one property by representing it but are directly aware of the other. For a temporal relation to appear to hold between two entities we must be aware of the entities in the same way, through the same form of awareness. It is impossible for us to experience a relation where we represent one relatum but are directly aware of the other. Let us call such hypothetical relations hybrid relations. I will show how an advocate of direct awareness of phenomenal properties is implicitly committed to hybrid relations. A believer in direct awareness has an obligation to justify their coherence. This obligation has, to date, been overlooked. As noted, in most – if not all – cases where we are aware of phenomenal properties, they appear temporally related to physical properties. We are aware of them together at the same time, or closely following one another.

Consider the claim that we are directly aware of phenomenal properties yet representationally aware of external properties. It may be thought that a hybrid temporal relation can be introduced unproblematically - as a third ingredient ‘R’ - and that the nature of our awareness of the other two ingredients places no constraints on the nature of our awareness of this third additional ingredient, or vice versa. It just slots right in. I will argue against this picture now.
It is important to highlight that when I refer to the relation ‘R’ I am referring to the relation itself – the temporal relation – in its minimal sense: I am not referring to what I will call the complete relation, that is, a relation including its relata. An experience of a complete relation might consist in the experience of X being simultaneous with Y. When I refer to the relation itself, however, I am referring to the relation as it is apart from what it relates. I am zoning in on the pure relation itself: The relation of simultaneity, or succession.

It is worth noting that in distinguishing in this way between the relation and its relata I am not assuming that they are actually separable or independent. On the contrary, I will argue that hybrid relations only appear possible if you accept a deeply implausible atomistic picture of the relational structure. I am only assuming only that we can make a conceptual distinction in order to facilitate a case against the possibility of temporal relations being hybrid relations. An opponent who wished to reject the possibility of any kind of distinction would only be shooting themselves squarely in the foot.

We have three ingredients to consider, then: i) the phenomenal property, ii) the physical property, and iii) the unity relation itself, minimally construed.

In the initial formulation of the argument I will be assuming a theory of perception according to which we represent external physical properties, however I will move on later to consider a group of theories of perception that reject this assumption. I will argue that this bloc challenge fails and that the argument can, in fact, be plausibly expanded in aim to show these theories to be wrong about the nature of perception. In short, I will suggest that the challenge backfires devastatingly on such theories.

2.3 An Argument against Direct Awareness of Phenomenal Properties

Suppose you have the misfortune to stand on an electric plug. It might plausibly be argued that as you experience the excruciating pain, you are aware of what the experience itself is like. You are aware of the irksome phenomenal property of painfulness. Additionally, you might represent the prongs of the plug as being sharp. But you also experience these properties as being instantiated together at the same time.

In this case, there are three elements to consider: a temporal relation ‘R’ and its relata: a phenomenal property, and a represented property. The argument runs as follows:
P1. If we are aware in way \( w \) of \( R \) then we are aware in way \( w \) of all of \( R \)'s relata.

P2. We are representationally aware of \( R \).

C. We are representationally aware of all of \( R \)'s relata.

The argument is clearly valid. I will now spend some time supporting each premise. The first premise claims that whatever kind of awareness we have of \( R \) we must have the same kind of awareness of the entities that it relates. This entails the claim that hybrid relations are impossible.

The reason for this lies in the nature of relational experience. When we experience two entities as standing in a relation to one another, we are not merely aware of a collection of three disconnected components: Two entities, and a bare relation, minimally construed, in a way that does not involve its relata. It is just not like this. They are not indifferent to one another, self-contained and sealed off. Rather, we are aware of the entities as standing in that relation. Correspondingly, we are aware of the relation as relating the two entities. In this way, there is a sense in which we experience the entities as attached to the relation. It is only in virtue of this that it appears to connect them to each other.\(^{54}\)

This is an elementary observation yet its implications are surprising when studied closely, and it will prove important in both this chapter and the coming chapters. For ease of reference I will record it in the following way:

**The Attachment Truism (AT):** In ordinary relational experience we are not merely aware of a collection of disconnected constituents. We are aware of certain entities as standing in the relation and we are aware of the relation as relating the same entities.

Is important to notice, first of all, that this truism seems to hold regardless of the nature of our ordinary awareness. It is intuitively compelling whether our awareness is representational, direct, or a mix. The precise form does not seem to matter.

Secondly, the truism is in no way troubled or diminished by the possibility that awareness of an individual relation \( R \) depends on our awareness of relata. In fact, this

\(^{54}\) For detailed discussion of parallel metaphysical issues concerning the nature of relations see W. F. Vallicella, ‘Relations, Monism, and the Vindication of Bradley’s Regress,’ *Dialectica* (56) 1 (2002).
seems overwhelmingly plausible: It is certainly difficult to conceive of ourselves undergoing an experience of raw simultaneity, for example, without experiencing something as simultaneous. An ontological dependency appears plausible. But this does not affect the matter at hand. Even if our awareness of the temporal relation ontologically depends on our awareness of something else - like two events - this does not change the fact that when we are ordinarily aware of such a relation, it appears to us in experience as attached. Indeed, an interesting metaphysical dependency of this form smiles kindly on the Attachment Truism, although it does not entail it.

Finally, I am not assuming anything controversial about the nature of attachment. I am not assuming, for example, that the experience of a relation as attached to a property requires a further, additional relation.55

AT stands in opposition to an implausible atomistic model of our relational experience. Without AT there would be no obvious problem with hybrid relations, as far as I can see. The relation would just be able to slot in between the relata regardless of the nature of our awareness of each relatum. The kind of awareness we have of each relatum would be irrelevant to our awareness of the relation. It would place no constraints on it. If you intuitively find hybrid relations bizarre, even abhorrent, it may well be because of an implicit understanding of the role of attachment. I want to try and make this role more explicit now and bring its implications out of the shadows.

I will argue that once we fully understand the implications of AT and a second related truism we quickly see the truth of the first premise in our argument: To be aware in way $w$ of an instantiation of $R$ requires an awareness in way $w$ of all of its relata.

In ordinary human experience, if the phenomenal property and the external property appear to be related in time then they will also appear to be attached to the relevant relation $R$. It is also very plausible to think that we are only aware of that token relation $R$ once. Let us suppose that this is correct for the time being – I will consider a possible objection to this point afterwards.

These two seemingly innocent claims have the following implications: In experiencing the temporal relation $R$ we cannot just be aware of the temporal relation, that is, as a

55 As it happens, I think this would be a bad idea. I will argue against such a move in Chapter Six in my examination of the Dependency Question and will present an alternative. This alternative will entail a strongly holistic approach to experience.
disconnected constituent. In experiencing it we must experience it as attached to the two properties. If this were not so, then, given that we only experience R once, we would not be aware of it as attached at all. Consequently, we would not be aware of the two properties as related to each other.

This is not just to say that if we are aware of a relation as attached to two properties then as well as being aware of the relation we must – at the same time - also be aware of two properties. Clearly, this is true – and it is something that will be important shortly – but for now I am making a stronger claim. I am claiming that our experience of the relation itself must be sufficient for our experience of that relation as attached. In experiencing R it must be apparent that the relation is attached to the two properties in question.

Another way to put it is like this: We cannot be aware of R – just in itself – and then add on from the outside the fact of its attachment. In order to be aware of attachment you need to be aware of the relation. Yet we are very plausibly only aware of R once. If it is not apparent from this single manifestation that it is attached then it cannot be apparent at all. If the initial awareness of R does not give us attachment, nothing else can. Yet it is experienced as attached. Therefore, in experiencing R we must experience R as attached.

It is no good thinking that when I speak of ‘our awareness of R’ we really have two sub-states here that are clumsily being bundled together with their fault-lines concealed: An experience of R, and the experience of its attachment. It cannot be broken down in this way. The second state cannot involve awareness of attachment unless it involves awareness of R. Yet the first state, by hypothesis, is the sole state that involves awareness of R. Consequently, the minimal state of awareness necessary for awareness of R must in itself be sufficient for awareness of its attachment to the two properties.

This brings us two small steps away from the crucial first premise. If in experiencing R we experience R as attached to the two properties then it very plausibly follows that in experiencing R we experience the two properties themselves.

This is part of a more general truth concerning our experience of relations and can be marked down for future reference in this manner:

**The Constituent Truism (CT):** In being aware of a relation as attached to an entity we are aware of the entity in question and the relation.
This should be uncontroversial and may be a necessary truth for all experience. It simply notes that in being aware of attachment we must be aware of the constituents that are attached.

To recap: AT dictates that in being aware of the relation \( R \) we must be aware of the relation as attached to the two properties. It now follows from CT that in being aware of the relation \( R \) we must be aware of both of the properties.

To understand the combination of the claims an analogy may be helpful. If you want a photograph of Jeremy holding hands with Sarah you need to have a photograph in which you can see both of them. A photograph of Jimmy on his own and a photograph of Sarah on her own is no good. In the photo of Jeremy you need to see Sarah.

In the same way, if you want to experience a temporal relation as attached to two properties it must be the case that in being aware of the temporal relation you are also aware of the two properties.

Consequently, the nature of your awareness of the temporal relation must be the same as your awareness of whatever it relates. If you are directly aware of the relation, you must be directly aware of the relata. On the other hand, if you are representationally aware of the relation, you must be representationally aware of the relata. This hands us P1: If we are aware in way \( w \) of \( R \) then we are aware in way \( w \) of all of \( R \)'s relata. I will look more closely at the implications of AT and CT in Chapter Five and Chapter Six. For our purposes here, though, we can just conclude that hybrid relations are impossible. The nature of our awareness of each relatum must mirror the nature of our awareness of the relation.

The second premise claims that we are representationally aware of \( R \). Why is this so? Why can we be directly aware of \( R \)? The reason is that to be directly aware of \( R \), we would, for the reasons given in the defence of P1, have to be directly aware of all of its relata. But we clearly cannot be. \( R \), by hypothesis, is being said to relate a phenomenal property and a represented external property. I will look in a minute at possible objections to the assumption that we represent physical properties but, for now, let us accept the assumption to see how the argument goes through. Given that \( R \) relates a represented property our awareness of \( R \) cannot be direct. Furthermore, we defined representational awareness and direct awareness such that they were exhaustive. If a state of awareness is
not direct then it must be representational. This gives us P2 and brings us to our conclusion in the argument:

P1. If we are aware in way w of R then we are aware in way w of all of R’s relata.

P2. We are representationally aware of R.

C. We are representationally aware of all of R’s relata.

This means that our awareness of the phenomenal property is representational. This argument focused, for the sake of simplicity, on just a pair of properties and was formulated in terms of a temporal relation. However, the argument generalises to any phenomenal properties that appear to stand in a relation to a property that is represented. This plausibly includes all phenomenal properties.

I will now consider a series of possible objections to the argument. The first couple are local objections that accept the starting assumption that we represent physical properties but take issue with details of the argument itself. The second couple are global objections that accept the argument but reject this starting assumption. This second group of objections will be forged in the fire of alternative theories of perception. I will argue that all of these objections fail, however.

2.4 Local Objections

It might be objected that we could be directly aware of such phenomenal properties in addition to being representationally aware of them. Indeed, the argument as it stands does not rule this out. The conclusion claims only that we are representationally aware of them. It does not deny the possibility that we are also directly aware of them.

Nevertheless, the argument shows that our awareness must be representational where the phenomenal properties appear to be related in any way to physical properties. The argument is silent only on those that do not enter into such a relationship.

Yet if the phenomenal properties do not appear to be temporally related to the rest of our experience then we have good reason to deny that they would be unified. It is plausible to think that apparent temporal relatedness is necessary for unity in ordinary
human experience. This modest claim does not go as far as to say that unity reduces to experienced temporal relations, however.\(^6\)

This means that any phenomenal properties that we are directly aware of could, at best, form a separate, isolated stream, sealed off from the stream in which we experience the physical world. This stream would be the phenomenological analogue of the idealist’s picture of the world. It would appear within this hidden stream as if everything was experiential in nature. Clearly, there is no motivating for positing such a thing. Direct awareness of such phenomenal properties is no longer required to explain anything and there can be no phenomenological evidence for such a position.

Yet we need not take a stance on whether such experience is possible. Nor do we need to decide whether a single subject can instantiate two disconnected streams in this manner. What is crucial for our purposes is that any such stream would be completely isolated and disunified with respect to the main stream. We are interested in the nature of ordinary human experience. Therefore, we only need to consider experience in which we are aware of phenomenal properties together with physical properties.

The idea of doubling up on our awareness of phenomenal properties is of no help to the opponent, then. But it leads naturally to another option. I began the case for P1 by setting down the assumption that we are only aware of the token temporal relation \(R\) once. This seems very plausible but, nonetheless, it may come under scrutiny.

Those sympathetic towards the claim that our awareness of phenomenal properties is direct may present the following alternative picture. Anticipating my claim in P2 that we have to have representational awareness of the relation \(R\), they might claim that we have both representational awareness of \(R\) and direct awareness of \(R\). Furthermore, they may go on to suggest that in being aware of the relation \(R\) as attached to the physical property we are representationally aware of it, yet in being aware of \(R\) as attached to the phenomenal property we are directly aware of it. This may be thought to block the conclusion that our awareness of the phenomenal properties must be representational. Yet it only does so if the phenomenal property appears to be attached to a relation that is not also attached to the physical property. If there only appears to be one relation that is attached to both then it fails. This commitment is deeply problematic, however. It means that each

\(^{6}\) I will, however, make precisely this claim in Chapter Four when I present Temporalism as an answer to the Unity Question.
property will appear to be attached to a relation – such as simultaneity – that lacks a second relatum. It is not just a matter of whether it is possible to experience dangling, incomplete relations of this kind – although it does indeed seem very doubtful. Rather, the really crippling problem is that neither property will appear to be related to the other. This clearly fails to capture the basic facts of our experience then. It does not offer an alternative non-representational way of understanding their temporal relatedness. It entails that we do not experience such a thing. In doing so, it renders redundant the bizarre posit at the heart of the proposal: Incomplete, dangling relations.

It is no use to introduce a second kind of awareness of the relation R, then. In the interests of closure, we might quickly register the fact that doubling up on the represented property is no help, either. By definition, we cannot also be directly aware of this property and a second representational awareness here is no friend of a defender of direct awareness.

In the discussion above, I acknowledged that the argument gets going by recognising cases where we plausibly experience a mix of phenomenal properties and represented external properties. It may be, then, that an opponent wishes to challenge the assumption that our experience involves such cases. There seem to be two ways to do this. I confidently asserted earlier that we rarely – if ever - undergo passages of experiences that are wholly phenomenal in the sense that the only properties apparent to us appear experiential. An opponent may, firstly, deny this claim. Alternatively, they may accept that we are typically aware of physical properties as physical properties yet deny my claim that this involves representational awareness. Both strategies boil down to the same thing: A denial of the claim that phenomenal properties are mixed in together with represented properties. It is this mix that generates the argument. Yet the two strategies take very different routes and are founded on very different theories of perception. Let us consider them now.

2.5 Global Objections

2.5.1 The Objection from Sense Data Theory

If it could be argued that our experience only involves awareness of phenomenal properties then these phenomenal properties can be safely quarantined from the representational threat. Keep represented properties out of the stream and the rest will not be infected.
There is an old school of thought that argues that our ordinary experience is much like the passage of experience I have just hinted at. Sense data theorists claim that the immediate objects of our conscious awareness are mental entities. These sense data are mind-dependent and it is these that really possess the properties that are immediately apparent to us in experience, such as redness or roundness. Although this view has fallen out of favour in recent years it has a distinguished history and continues to retain support in certain quarters. 

Such a view offers a possible rejoinder to my argument. If a sense data theory is true, when we perceive something we are only immediately aware of mental properties. We are only aware that a wheel is round, for example, by being aware of the roundness of a sense datum. It might be suggested, then, that my starting assumption - that physical properties are part of our immediate experience - is just plain wrong.

I presented a problem with the idea of thinking that we could be directly aware of phenomenal properties but representationally aware of physical properties. I claimed that we should abandon the idea that our awareness of phenomenal properties is direct. But the sense data theorist might urge us to move in the opposite direction. A version of the theory might be formulated in which we abandon the idea that our experience represents physical properties. This promises to resolve the problem in an alternative way. It flips the argument.

Yet closer inspection reveals a fatal flaw in the proposal. To be remotely plausible, the sense data theory must allow that we gain conscious awareness - in some sense - of the physical world and its properties. There are many different ways to tell this story. It might be argued that we are only perceptually aware of the properties of sense data, for example, but that we infer from this experience that there are certain physical entities around us with certain properties and misattribute these properties to external entities.

Whatever the details of the story, though, without a second component of this kind the view cannot capture the phenomenology of conscious awareness. It does not seem to us

---

as if all that exists is mental. The idealist’s metaphysical vision of the world is not how it normally appears to us in experience. We are aware – in some sense – of more than just a stream of apparent experience. It seems – in some way – as if there is a physical world around us. To capture this elementary fact, the sense data theorist must introduce some kind of indirect awareness of the physical world.

As noted, this can come in various forms. It might be held, for example, that we consciously think or consciously judge that a certain physical entity exists and has certain properties. Perhaps we misattribute the properties of sense data. Or perhaps we infer that the best explanation of what we are experiencing is the presence of a physical object of a certain kind.

Let us consider the account in terms of conscious thought. Nothing hinges on this choice. What I say is equally applicable for any state that can fulfil the required representational role.

Clearly, these representations will need to be continual and automatic, regularly updating our awareness of the surrounding world independently of our attention. Whatever the exact details of the process, though, at some point we must represent a physical property of some kind. If no misattribution or further representation was needed to account for the appearance of the physical world there would be little to distinguish the Sense Data Theory from Direct Realism, a view that we will discuss shortly. If direct awareness of sense data was in itself enough to generate the physical appearances we know so well, we would have good reason to identify sense data with physical entities. Furthermore, all plausible accounts must accept that the cognitive representation is conscious. It will simply not do to hold that we have no conscious awareness of physical entities and their properties.

Here lies the fatal problem for the sense data theorist. Whatever we are indirectly aware of cannot merely be conscious, it must also appear temporally related to the sense data and their various properties. In our case, the person must experience the quality of the pain and the apparent sharpness of the plug as simultaneous. Unless they appear temporally related a subject would undergo two isolated streams of experience. In one stream, they would be aware of wholly mental entities and their properties. In another, they would be cognitively aware of a series of wholly physical entities and their properties. Clearly, this is not the case.
Given that they appear to stand in such a relation we cannot be directly aware of the properties of the sense data yet representationally aware of the inferred physical properties. Our defence of P1 displayed the impossibility of hybrid relations. If we are representationally aware of any of the properties manifest in a temporally unified stream, then we are representationally aware of all of them. Alternatively, if we are directly aware of any the properties in a temporally unified stream, we are directly aware of all of them. In requiring a mix, the Sense Data Theory is internally inconsistent.

An interjection is possible at this point:

Wait a second. You’ve overlooked a possible formulation that allows for both direct awareness of phenomenal properties and for representational awareness of them – and their temporal relations to physical properties. We looked earlier at the possibility of doubling up on phenomenal properties but that was within the perceptual realm. It lacked motivation. Now, though, there is real justification. At the perceptual level it might legitimately be claimed that we are directly aware of the phenomenal properties of the sense data and only the phenomenal properties, yet at the cognitive level we represent the same phenomenal properties as standing in temporal relations to the various physical properties.

Let us apply this possible formulation to our case, then. At the perceptual level we are directly aware of the painfulness of a sense datum. Yet at the cognitive level we represent the property as being instantiated at the same time as the sharpness of the plug’s prongs. This doubling up is motivated because we are now dealing with two types of representation: Perceptual and cognitive. Moreover, because it is only the cognitive representations of the phenomenal properties that present them as temporally related to represented physical properties, the perceptually represented phenomenal properties may be thought to be protected from the implications of the Attachment Truism and my attack on hybrid relations.

This is a promising line of response but it admits of two different readings and, I will suggest, it profits unfairly from this ambiguity. It is claimed that at the perceptual level we are directly aware only of the phenomenal properties of the sense data yet at the cognitive level we represent the same phenomenal properties as standing in temporal
relations to the respective physical properties. Much hinges on spelling out what is meant by the italicised words in this passage.

We might think, firstly, that at the cognitive level we represent the same type of properties again and, this time, represent them as standing in certain temporal relations. There is a re-representation, in short. Alternatively, it may be thought that a cognitive state somehow picks out the original properties from the outside, as it were, and makes a claim about them in a way that does not render them vulnerable to the problematic implications of attachment. These two options map neatly on to the distinction between the deployment of demonstrative and non-demonstrative thought. The first option amounts to the claim that we cognitively represent the same type of phenomenal properties again in a non-demonstrative way, yet represent them as temporally related. The second option amounts to the claim that we demonstratively pick out the original properties and represent those properties as standing in temporal relations to some further represented physical properties. This option may be thought to offer a deft way of resisting the case against hybrid relations. A demonstrative thought, for example, may allow the opponent to represent a relation between the phenomenal property and the physical property without the phenomenal property getting too involved in the relationship. My language here is purposively loose as it is difficult to precisely characterise the experience of the relationship between a demonstrative thought and the entity that it seems to ‘pick out’. These issues are subtle.

Let us consider these two options in turn. On the first view, we cognitively represent the same type of properties again and, on this second occasion, represent them as standing in certain temporal relations. This safeguards the original perceptually represented phenomenal properties from the problematic implications of attachment but it does so at a cost. It leaves the original properties entirely disconnected. They will not be unified with the physical properties. Only the cognitively represented phenomenal properties will appear unified. At the perceptual level, it will remain an entirely phenomenal affair. The properties that we are directly aware of can only form a separate, isolated stream, sealed off from the stream in which we experience the physical world. In sum, we are left once more with a stream that reflects the idealist’s metaphysical view of the world. It would appear within this hidden steam as if everything was experiential in nature.
Once again, there is clearly little motivation for postulating such a thing. Furthermore, only phenomenal properties that matter for us are those that are interwoven with physical properties in a single stream. Namely: the cognitively represented phenomenal properties. This reading effectively concedes the case, for all intents and purposes.

The second interpretation claims that cognitive states demonstratively pick out perceptually represented phenomenal properties and represent their temporal relations. For example, a conscious thought may represent the fact that that phenomenal property of painfulness is simultaneous with the plug’s sharpness. This view seems like the best way to challenge the claim that hybrid relations are impossible. Because it is an external, additional state pointing to the phenomenal property, as it were, and making a claim about it from this safe distance, it might be thought that the phenomenal property itself need not be affected by the nature of our awareness of the relation that it is subsequently represented as standing in. Not unreasonably, it may intuitively seem as if these facts can be represented on top without touching the phenomenal property already in place below. Nevertheless, I will argue that the view fails.

The reason for this is that a demonstrative thought of this kind presupposes that the perceptual experience of the phenomenal property is already unified with the rest of our consciousness. We cannot think that that phenomenal property is simultaneous with a certain physical property unless that phenomenal property is already part of our unified consciousness. Successful conscious demonstrative thinking requires that its target is already unified. It is no good saying that the demonstrative thought in question may be unconscious, even assuming such a thing is possible: This would fail to give us the conscious awareness of the temporal relation that we need. Yet it is very plausible to think that in order for the phenomenal property to be unified with the rest of our consciousness, it must appear to be temporally related to the various represented entities that we are aware of. Once again, this is not to make the strong claim that unity reduces to temporal relatedness, but, rather, simply to recognise it as a condition. Consequently, conscious demonstrative thought cannot generate temporal relations from scratch. It can only pick out relations that are already there.

This presents an almost impossible dilemma for the opponent, then. If they claim that the phenomenal property is already temporally unified with the rest of our consciousness they are committed to hybrid relations. Yet if they do not, they are left unable to make the claim that the cognitive level the thought demonstratively picks out the phenomenal
property and represents its temporal relations. The first path leads to internal consistency, whilst the second leaves the phenomenal property disunified and irrelevant to our inquiry. The response fails.

I have examined some ways in which the sense data theorist might respond to the threat posed by the case against hybrid relations yet each has been found wanting. This tells us two things: Firstly, that our provisional conclusion regarding the nature of our awareness of phenomenal properties remains secure. Secondly, that the Sense Data Theory is in serious trouble due to its implicit commitment to hybrid relations. I considered a very particular formulation of the view: The claim that our awareness of the physical world is *cognitive*. This is just one formulation of the view. It might, alternatively, be claimed that we are perceptually aware of sense data yet these sense data represent physical properties. This formulation faces exactly the same kinds of problems, however. The various phenomenal properties must appear to be related in time to the represented physical properties. The hybrid relations are just posited at the perceptual level. If hybrid relations are impossible, we should reject the Sense Data Theory.

### 2.5.2 The Objection from Direct Realism

My argument for the representational nature of our awareness of phenomenal properties is rooted in the claim that our ordinary experience involves a mix of phenomenal properties and represented external properties. We have seen that it is possible to mount a challenge from the position of Sense Data Theory by denying that we are perceptually aware of external properties. Our second challenger accepts that we are perceptually aware of external properties yet claims that we are *directly* aware of them. Once again, though, this boils down to a denial that we are aware of a *mix* of properties, whereby we are directly aware of some and representationally aware of others. Our second global challenge, then, comes from a certain formulation of *Direct Realism*.

In denying that our veridical perceptual experience involves the *representation* of physical entities this form of Direct Realism is in a position to flip the argument in the reverse direction. Mixes were bad. But if you can get rid of the representational component, the force of the argument will push equally strongly in the reverse direction: In favour of an awareness that is entirely non-representational and direct.
This formulation of Direct Realism that I will consider, then, claims that we are immediately aware of physical objects in a non-representational sense. It might be thought, for example, that our experience simply presents physical objects to us.\textsuperscript{58} We are not aware of them via an intermediary representation. The mind-independent objects themselves are constituents of our experience, in some sense. Let us grant for the sake of argument that this kind of immediate awareness dovetails with a direct awareness of phenomenal properties.\textsuperscript{59} In other words, let us allow that the unity of these two kinds of cases generates no incompatibility problems of the sort I have discussed in my rejection of hybrid relations. It might then be thought that we have a way to resist my claim that phenomenal properties must be represented. No mix is required. We can have direct awareness of some broad kind right across the board: We are directly aware of phenomenal properties and external physical properties.

Yet this second global objection faces a problem fundamentally similar to the first. Direct Realism must allow that we consciously represent some things. Even if we think that veridical perception simply involves the presentation of physical things, somewhere in our conscious experience it must be allowed that we can represent certain properties. It is not plausible to think that all — or even, perhaps, most - of the properties that we experience are presentations of objective, mind-independent properties. Many of the properties that we experience are clearly anthropocentric, whilst others reflect even narrower interests, such as the interests of a certain social group, or the interests of the individual. Let us focus our lens as tightly as possible.


\textsuperscript{59} The exact details of the formulation of Direct Realism will matter here. It may be, though, that both our awareness of phenomenal properties and our awareness of external physical objects could be considered direct in the sense of being ‘incapable of error’, even if our awareness of external physical objects is incapable of error because it is not even assessable for accuracy. This is the claim of some formulations of Direct Realism. In other words, direct awareness could be considered an umbrella term defined by its lack of representation and the corresponding impossibility of error. This leaves open whether direct awareness also includes a kind of awareness in which we are necessarily aware of the relevant entities as they really are.
Consider the experience of a health fanatic as they walk down the street, passing a chip-shop and a pizza parlour. As well as being aware of basic physical facts, they might also experience both establishments as having the shared property of ‘Being a place that sells junk food’. They will rush past, quickly categorising them together on the basis of this shared property. Now consider the experience of a rather hungry individual who has somewhat more relaxed dietary standards. As they stroll along, savouring the smells in the air, they may experience them as both as having the property of ‘Being a place that sells food’ but beyond that, they might experience them as very different options on a delicious and diverse potential menu. It would be foolish to think that the health fanatic is being presented with an objective, mind-independent property. Reality is not carved up along the lines of food and non-food, let alone junk-food and healthy-food. However we understand representation, it is clear that some kind of representation is occurring here. They do not have a direct awareness of a junk-food property that is immune from error. Recognising just this will be enough to show why the challenge from Direct Realism fails.

Non-objective properties are clearly very common in our experience, perhaps even forming the bulk of our human experience. It does not matter where we locate them in our conscious stream. Upstream or downstream, it is evident that they must be in there somewhere. We might allow, for example, that the perceptual experience of the health fanatic involves nothing more than the honest presentation of objective properties and that he merely makes a cognitive judgement about junk food, or takes his perceptual experience a certain way. Whatever way the Direct Realist accommodates our experience of non-objective properties, though, it needs to be conscious and it will involve at least some minimal form of representation. Suppose, for example, the Direct Realist argues that in such cases what we are directly aware of is our own brain state. Even if this is so, it does not seem this way. It is the food shops out there in the world that seem to be a certain way. At least some kind of minimal representation is required for this. We only experience the shops as having these properties in virtue of an intermediary entity and the process involves the capacity for error. Indeed, it is plausibly erroneous.

These represented properties will appear temporally unified with any presented properties. The health fanatic does not undergo two separate streams of experience: A stream in which they are presented with basic physical entities, and a stream in which judgements about junk food, and such like, whirl through their mind. The health fanatic
experiences *those buildings there now* as being an awful strain on the National Health Service.

As soon as we recognise that the presented properties appear temporally related to the represented properties, however, the same fundamental problem appears. It requires a hybrid relation. In this case, we may be dealing with a subtly different problem from the one that faced direct awareness of phenomenal properties, depending on the exact formulation of Direct Realism. It may be that the opponent denies that the presentation of a physical entity is – in itself – even *assessable* for accuracy. It is not just that it is immune to error. In such a case, the hybrid temporal relation required and implicitly assumed by such theories would have to connect a represented non-objective property that *is* assessable for error and – furthermore - vulnerable to error, with a presented objective property that is neither. These minor complications are clearly of no help to the account, however. The inconsistency is deeper, if anything. We saw earlier how the nature of our awareness of a relation must be the same as our awareness of its relata. Yet the temporal relation, minimally construed, cannot be both assessable for error and vulnerable to error and neither. This tells us two things: Firstly, that Direct Realism is in serious trouble due to its implicit commitment to hybrid relations. Secondly, that the claim that our awareness of phenomenal properties is representational has emerged unscathed from a number of serious challenges, from a variety of different theoretical perspectives. Each challenge to the claim has backfired, only serving to reveal deep cracks in these non-representational theories of perception.

We might go further: It is difficult to see how a theory of perception *could* seriously challenge the claim. Any plausible theory must allow that our conscious awareness regularly involves *some* kind of conscious representation – in the minimal sense that we have defined. It does not matter whether this representation is pushed right upstream, into the cognitive realm. It just has to be there somewhere. Once this is granted it becomes difficult to resist the conclusion that any unified phenomenal properties are themselves represented. Some accounts involve only a minor role for conscious representation. Yet when you look closely at the details of the small print it generates the same problem: Hybrid relations.

Hybrid relations seem to be incoherent regardless of their exact role. We cannot be aware of a relation where we are representationally aware of one relatum but directly aware of the other. The relation itself is just too deeply embedded in what it relates. It is
stitched into their very fabric. Given that representational awareness and direct awareness are defined exhaustively and negatively in relation to one another, a hybrid relation is torn into two.

The arguable incoherence of hybrid relations is a serious problem for two major theories of perception: The Sense Data Theory, and Direct Realism. What our investigation seems to show is that if you have any kind of representation of a property anywhere in a unified consciousness, all awareness of properties in that unified region must be representational. On our very sparse definition of what it is to be a representation, this amounts to the following: If any part of your unified awareness involves an intermediary state and has the capacity for error, then it all of it does.

It is often the case that those who oppose what I have labelled Weak and Strong Translucency are motivated by representationalist interests. I am referring specifically to the Tye/Harman axis. It may strike the reader as odd that I am defending the claim that we are aware of properties that appear to be experiential in nature and yet maintain that our awareness of them is representational and vulnerable to error. But this peculiarity is nothing more than a dialectical quirk. It is a perfectly consistent position. It is just not one that many have been motivated to pursue due to wider ideological commitments. It would not be unreasonable, however, to ask why we represent phenomenal properties if this emerging picture is correct? If we are directly aware of phenomenal properties as the objective properties of our own experience then it is easy to answer such a question in a deflationary manner: We cannot help but be aware of them when we have the respective experiences.

Two kinds of answers seem possible. Firstly, it might be said that it is advantageous to a person to have information consciously available to them about how they are acquiring the information they have about the world. In representing phenomenal properties, it may be said that I am put in a position to manipulate the flow of information by repositioning my body and sensory organs.

The second kind of answer takes a different tack. It might be argued that there are important necessary connections between different kinds of conscious representations. Perhaps we can only consciously represent certain things by consciously representing certain other things as well. In this case, for example, it may be that we can only
represent physical or external properties \textit{as} physical or external \textit{by} representing our own experience as being a certain way.

Both of these broad answers seem individually sufficient for quelling some of the initial unease that the emerging view generates. A more substantial objection may be presented, nonetheless: If \textit{we} represent phenomenal properties does this not generate an infinite regress? Must we, in turn, represent those representations as having phenomenal properties, and so on? No. The best response to this is to simply plug the regress before it starts. We represent physical properties and we represent ourselves as instantiating certain phenomenal properties. Yet we need not represent \textit{those} representations in turn as involving certain phenomenal properties. This blocks the regress. It should be clearly noted, nonetheless, that I do not wish to pretend that this presents \textit{no} further problems. On the contrary, it is a deep and difficult question what it is that makes such representations conscious. This kind of problem faces many accounts. What I am committed to denying, however, is that to appear to be conscious is \textit{merely} to appear to have phenomenal properties. At this higher-level, then, I may have to abandon the equivalence of \textit{conscious} and \textit{experienced} if experience necessarily involves phenomenal properties. Up to this point it has been useful to simply treat them as equivalent but if it is true that a higher-order representation can be conscious without appearing to have phenomenal properties then such a divorce may be necessary when speaking of this higher level.

The claim that our awareness of phenomenal properties is \textit{representational} has substantial implications for the wider philosophy of mind and these should be recorded before we move on. It has frequently been claimed that the apparent nature of our experience is incompatible in certain ways with certain monistic theories such as physicalism.

For example, in recent years, there has been a surge of interest in the Russellian claim that scientific theory only documents \textit{extrinsic} or \textit{relational} properties.\textsuperscript{60} In contrast, it is commonly suggested that phenomenal properties appear to be \textit{intrinsic} properties of experience and \textit{non-relational}.

If our awareness of phenomenal properties is *direct* then phenomenal properties must be the way that they appear to be in perceptual experience. If these features are subsequently shown to be irreconcilable with physical theory, then physicalism, at least as it stands, is under grave threat. On the other hand, if we merely *represent* phenomenon properties it is possible for monistic theories like physicalism to maintain that we may be in error about their nature.

The idea that we might regularly misrepresent certain entities in the world is not a new one. Suppose you think that a given colour property reduces to a complex of microphysical properties or, alternatively, that colours are *dispositions* to cause certain experiences in perceivers. If you also think that our experience represents colour properties as being *simple*, *non-relational* properties then you are committed to a moderate error-theory concerning colour. The option that I have sketched here for monistic views, then, would lie alongside such projects.\(^{61}\) No doubt, an integral part of any such account would be a story about why such misrepresentation regularly occurs. Clearly, this is all speculative. I take no stance on these possible positions here.

I will now show that if our awareness of phenomenal properties is representational then our awareness of the unity relation itself is representational.

### 2.6 An Argument against Direct Awareness of the Unity Relation

In Chapter One I argued that the unity relation is in play in four different kinds of cases: *i)* When we are aware of two or more phenomenal properties *as together*, *ii)* When we are aware of two or more physical properties *as together*, *iii)* When we are aware of two or more abstract entities *as together*, and *iv)* When we are aware of two or more entities of different apparent ontological kinds *as together*. I have since argued that our awareness of each and every one of these kinds of entities is representational. Consequently, we have good reason to doubt that we have *direct* awareness of the unity relation. As we have seen, the nature of our awareness of a given relation must be the same as our awareness of all of its relata. This means that our awareness of the unity relation can only be *representational*. It is worth emphasising that the case for this claim does not depend on the claim that the unity relation is in play across this range of four cases. On the contrary, I purposively built as little as possible into the initial setup of the

---

\(^{61}\) Pereboom holds a position of this kind in *Consciousness and the Prospects of Physicalism*.  

argument in this chapter in order to secure this conclusion independently of this claim. Even if you subscribe to a traditionalist reading of unity according to which the unity relation only holds between phenomenal properties then it still follows that our awareness of the unity relation is representational.

It is also worth pointing out that the final move I made to demonstrate that the unity relation is represented is a move that might be made to show that any experienced relation is represented. If the relation appears to hold between represented properties of any kind then it is very plausible to think that it must itself be represented. I will argue later that we should reduce the unity relation to temporal relations. But let us suppose that you reject this and take them to be distinct relations. What we can see is that the final move might be made with temporal relations, considered in their own right. These appear in our experience to relate different physical properties, different phenomenal properties, and a mix of the two. Given that all of these entities are very plausibly represented, temporal relations must be represented.

One of the things that this means is that we cannot be directly aware of objective temporal relations between different phenomenal properties. This is an important implication for the debate on the nature of temporal consciousness. To make vivid what the claim amounts to: It is not enough that a subject simply has two experiences at the same time in order that they can be aware of this fact. Rather, they must actively represent the temporal relation. The objective temporal relation is hidden from them. This holds equally of diachronic temporal experience. We can only have a representational awareness of the order of our own experiences. Simply having a series of experiences is not enough to be aware of their order. Consequently, we might be in error – even at a basic pre-reflective, perceptual level – about the sequence that they occur in.

We have seen that it is very plausible to think that our awareness of the key elements and of certain relations is representational. We might generalise this finding to any entity that appears to be either related to a represented entity or is itself a relation that relates represented entities. Given the unified, richly interconnected nature of our conscious stream this suggests the following very general principle:

**The Awareness Claim:** All of ordinary conscious awareness is representational.
By definition, this means that there is no aspect of our ordinary conscious awareness that is not immune from error. The possibility of error pervades even the most basic pre-reflective experience. This may be surprising. It is important to stress, though, that this is very different from claiming that we are in error, or that we are even likely to be in error.

2.7 Conclusion

To summarise our findings in this chapter then:

Our awareness of phenomenal properties is representational. Furthermore, it seems likely that we have representational awareness of all of the various entities we encounter. The idea that we have direct awareness of physical entities, for example, has been shown to be plagued by deep inconsistency. Consequently, our awareness of the unity relation that ties these entities together is very plausibly representational.

This last claim generates a potential problem, nevertheless. Hurley argues that we cannot account for unity in terms of further representations for the question of what unifies these representations simply re-arises. This is the Just-More-Content (JMC) Objection. This is a serious worry and one that must be faced. I will argue that it is part of a broader problem that faces all accounts of unity. We must meet the objection head on. Nobody can dodge it. I will address this problem in Chapter Six, when we have whittled away the theories that fail independently of this. I will suggest that this problem forms what we might really call the Deep Unity Question, in contrast to the Shallow Unity Question that we have set out in these early pages. Having expressed optimism and offered an answer to the Shallow Unity Question I will end on a note of slight trepidation. I will outline the only way that I can see for resolving the problem but will acknowledge that the answer generates many difficult, puzzling questions of its own. Before I do so, however, I must examine three important rival accounts of unity.

---

3. Rival Approaches to Unity

3.2.1 Overview of Chapter Three

In this chapter I will critically assess three rival approaches to the Unity Question: The Self-Unity View, Spatialism, and the Mereological Approach. Advocates of these kinds of views are often inexplicit about whether they are presenting i) a general account, and ii) a reductionist account, or, alternatively, whether they are merely specifying a component in a broader view that may still involve a primitive relation. In drawing on the literature, I will, nevertheless, be examining whether they can work as general reductionist accounts.

I take each of these three approaches to offer serious answers to the Unity Question. What distinguishes them from many other possible views of unity is the way that they naturally harness certain intuitions about the central role of the self, spatial awareness, and part/whole relationships within human experience. This survey of approaches is by no means exhaustive but I hope that it addresses some of the most credible alternatives to the approach that I will develop in the next chapter.\(^6\)

I will argue that although each view can be formulated in such a way so as to meet the Consciousness Constraint, none of them can meet the Scope Constraint: Each view is unable to account for the unity of all of the different kinds of elements involved in every unified stretch of experience. Along the way, I make the case for thinking i) that we have reason to believe in the possibility of experience that is, from a phenomenological perspective, entirely selfless, ii) that a significant proportion of our experience is either non-spatial or spatially disconnected, and iii) that our experience may, at best, only involve a limited form of mereological structure and, at worst, none at all.


77
3.2.2 The Self-Unity View

It is commonly claimed that whenever we have an experience we are necessarily aware of ourselves undergoing the experience. This idea has a distinguished history and is threaded throughout both analytic and continental philosophy. Indeed, it is often thought to tell us something important about the very nature of experience. All subjective experience,” writes Flanagan, “is self-conscious in the weak sense that there is something it is like for the subject to have that experience. This involves a sense that the experience is the subject’s experience, that it happens to her, occurs in her stream”.

For those tempted by the idea that self-awareness is a necessary feature of experience, it is natural to look for a link between this sense of self and the unity of consciousness, another core feature of much, if not all, of our experience. If the self is built right into the heart of experience it may well be that it can provide the singularity that an account of unity desperately needs. It might be thought that – like the hub of a wheel – it connects everything around it. Unsurprisingly, then, a number of theorists have suggested that the two issues are closely tied. Kennedy and Graham defend a position of this kind, arguing that the self is both a common feature of our experience and a necessary condition for unity:

The unity of experience therein presupposes an I for whom the experiences form a unified, simultaneously experienced whole. The presence of such a subject is needed to explain the fact that what is experienced is as of something unified (a world) rather than of separate worlds for each distinct conscious content (a world of tasty chocolate, a world of snapping twigs, a world of understood utterances and so on).

---


65 Flanagan, Consciousness Reconsidered, p. 194.

Although Bayne records a number of substantial doubts about the approach he nevertheless remarks that:

Self-consciousness accounts of the unity of consciousness are, I think, among the more plausible philosophical or personal-level accounts of the unity of consciousness. If self consciousness doesn’t explain – or even constrain – the unity of consciousness, it’s not clear that there is anything to be said at a personal level about the unity of consciousness.\footnote{T. Bayne, ‘Self-consciousness and the unity of consciousness’, The Monist (87) 2 (2004), p. 233.}

In this section I will consider an approach of this kind that aims to offer a general, reductionist answer to the Unity Question. In its provisional formulation, the position claims that two experiences are unified when a single self or subject appears to undergo them. We might refer to this as the Self-Unity View.

This explicitly specifies a \textit{phenomenological} condition. It is neutral on the metaphysical question of whether selves or subjects really exist. It claims only that it must \textit{appear} as if a single self or subject has had the respective experiences. This permits the account to meet the Consciousness Constraint and explain how it is that we are consciously aware of the unity of our experience. Even if it is true that a single self undergoes two given experiences, unless this is evident in some way \textit{within} consciousness it cannot explain our \textit{experience} of unity. Furthermore, even if these objective conditions \textit{necessitate} unity, it may still be that these objective conditions merely necessitate the presence of a \textit{primitive} unity relation. Recognising such a necessitation says nothing about what the experience consists in, then.

This awareness of ourselves is most plausibly understood as a basic, pre-reflective form of awareness. It is infeasible that we continually \textit{attend to} or \textit{reflect on} the fact that the experiences we are undergoing are ours. This is not to say that we never do so. However, we clearly do not do so whenever our experience is unified. On this proposal, self-awareness of at least \textit{some} minimal kind must be ever-present.

Importantly, this requires more than the mere \textit{potential} to self-attribute experiences. This potential is emphasised in Kant’s famous discussion of mental unity where he remarks
that it must be possible for the ‘I think’ to accompany all of our representations.\textsuperscript{68} Our experience of unity cannot consist in the bare possibility of self-ascription. This fails to characterise unity in experiential terms and leaves open the possibility of Primitivism.

In fact, what is needed is something like the following structure:

\begin{itemize}
  \item [i)] Awareness of the self.
  \item [ii)] Awareness of the collection of experiences.
  \item [iii)] Awareness of a set of relations between the self and the various experiences.
\end{itemize}

We might call the relations in question ownership relations. The self or subject appears to stand in an ownership relation to an experience if it appears to undergo, have, or instantiate the experience. It is only by being consciously aware of this full structure that we might plausibly be aware of any kind of unity. The self forms a central hub for the network.

In Chapter Two I argued that hybrid relations are impossible and, consequently, that our awareness of phenomenal properties is only ever representational. If this is correct, then our awareness of the self is, in turn, necessarily representational. The reason for this is that the self is said to stand in a set of relations to the various experiences. If hybrid relations are impossible, then we cannot be directly aware of the self yet representationally aware of the various experiences. Accordingly, we must be representationally aware of the self.

This rules out the view that simply having an experience is enough to be directly aware of ourselves. This may be thought to shift the burden of evidence somewhat in the debate over the necessity of self-awareness. If our awareness of the self is representational, rather than automatic, immediate, and direct, why assume that we must always be aware of the entity? If we represent something, can we not also fail to represent it? I think this is a reasonable question but it does no more than inch the burden of evidence a little closer towards the opponent. It is perfectly legitimate for the opponent to maintain that there is a necessary connection between certain kinds of representations. It may be that

\begin{itemize}
  \item [i)] Kant, B131. The relationship between the kind of unity that Kant was interested in and the phenomenon under consideration here is a thorny question. For detailed discussion of Kant’s view, see: J. Bermudez, ‘The Unity of Apperception in the Critique of Pure Reason’, \textit{Journal of Philosophy}, 2 (2008).
\end{itemize}
in order to represent physical and phenomenal entities, we need to represent ourselves. Nonetheless, necessary connections have to be earned. There is no presumption in favour of such a link.

For the Self-Unity View to work, it need not be the case that the self itself appears the same at all times, either qualitatively or numerically. Whilst diachronic unity plausibly requires the presence of a single, persisting self for a brief period, we might allow that the self varies or is even replaced over longer periods.

It might be thought that it is a trivial truth that when we have a collection of experiences, we are necessarily aware of what it is like for us to undergo all of these different experiences. Flanagan seems sympathetic towards something like this view.\(^69\) There is an innocuous reading of this claim that is certainly true. It is true in the sense that we are aware of what it is like to be objectively undergoing the experiences. There is a certain way that our experience is as we undergo it. This may involve an awareness of the properties of the experiences themselves - in addition to what they represent about the surrounding world. Yet neither of these obviously entail the further claim that we are consciously aware of ourselves as undergoing the various experiences. It seems conceptually possible that there is something it is like to undergo an experience, without that involving a sense of ourselves.\(^70\) The Self-Unity View must make a substantive claim about self-awareness and its co-extensiveness with unity.

It is plausible, however, to think that some kind of self-awareness is extremely common, at the very least, and the view has a certain intuitive pull in seeking to connect the singularity of consciousness to the singularity of ourselves. I will begin my assessment of the view by setting out two possible conceptions of the self and considering a couple of objections that I take to be unsuccessful: The transparency objection, and the absorption objection. I will then move on to build my own case against the account. My attack will be double-pronged. I will take each kind of self-consciousness in turn, describing cases where it is plausible to think that each goes missing. I will then give reasons for taking seriously the possibility that both kinds of self-consciousness are absent at the same time. I will suggest that we have good reason to think that we

\(^{69}\) Loc. cit.

\(^{70}\) Bayne makes a similar point in ‘Self-consciousness and the unity of consciousness’.
regularly undergo complex, unified experience that is, from a phenomenological perspective, entirely selfless. This case forms the first prong of the argument.

I will then go on to argue that even if some kind of self-consciousness is ever-present in experience, the self is not the kind of entity that can unify the full range of elements at a given time. This forms the second prong of the argument. Both of these moves amount to the claim that the Self-Unity View fails the Scope Constraint. It is unable to account for the unity of all of the different kinds of elements involved in every unified stretch of experience. This leaves the door open to Pluralism and, perhaps, Primitivism.

My discussion will draw solely on cases of normal, healthy human experience. I will argue that we do not need to turn to more exotic cases in order to reveal the inadequacy of the account. For the duration of the discussion I will use ‘self’ and ‘subject’ interchangeably, taking the self to be the entity that appears to undergo the experiences in question.

3.2.3 Two Conceptions of the Self

I have so far only referred loosely to a ‘self’. Clearly, to assess its credentials as a unifying entity and decide whether it is a necessary component in experience we must look more closely at its proposed nature. What is it to have a sense of self? What kind of entity are we introducing when we make the claim that the self appears to undergo all of our experiences?

Two conceptions seem possible. On the first conception, our sense of self consists in our being aware of ourselves as a person – a moderately or richly propertied creature with psychological, social, and/or bodily properties. The person as a whole is the subject.

At its richest, we may be aware of ourselves as a person that fulfils certain social roles, has certain character traits, and has a particular kind of body. For example: We might represent ourselves as charming, handsome and witty - and humble to the core. This personal representation may be fluid, continually changing, and expanding and contracting in richness. I will refer to this kind of self-consciousness as the personal conception.

---

71 Bayne examines the implications of depersonalisation, Cotard’s syndrome, and thought insertion for self-consciousness approaches in ‘Self-consciousness and the unity of consciousness’.
The second conception is more minimal. This claims that when we are aware of ourselves we are aware of ourselves as a *bare substance* that *in itself* lacks personal properties such as psychological, social, and bodily properties. Strawson helpfully emphasises precisely this distinction and argues that in addition to being aware of ourselves as a person, we are also aware of ourselves as a *bare subject*, an entity that appears to simply *undergo* experiences. For Strawson, this is a purely mental substance and a basic centre of awareness.\(^2\) This is just one formulation of the bare substance conception, however. It is not a necessary feature of the second conception that the bare substance in question is wholly mental. I will refer to this kind of self-consciousness as the *bare substance conception*.

### 3.2.4 The Transparency Objection

The first feature of the view that may set alarm bells ringing is its clear commitment to systemic violations of transparency. The account claims that we appear to stand in ownership relations to our various *experiences*. Whilst I have argued that it is very plausible to think that we are often aware of phenomenal properties, it is quite another thing to claim that we must *always* be aware of them whenever and wherever our consciousness is unified.

The opponent must show that cognitive states are always translucent in at least *some* sense. Even if there is not always *something it is like* to have a thought, it may be argued that we are still aware of ourselves as instantiating a certain *representational property*. We are aware that we are representing X. In pointing to representational translucency the opponent can tweak the account and claim that the self appears to stand in ownership relations to *either* phenomenal properties or representational properties.

As we have seen, this blanket commitment to mental translucency is far from secure. One way to challenge the Self-Unity View, then, is to deny wholesale mental translucency. If there are any regions of consciousness that are both unified and transparent, then the Self-Unity View fails the Scope Constraint. This will not be my route, however. Whilst the commitment is a clear soft-spot it remains possible for the opponent to maintain that our conscious awareness of this range of mental properties is often – and perhaps even ordinarily – peripheral, in the background of our attention.

---

\(^2\) Strawson, *Selv*, p. 5.
This allows the opponent to minimise the fall-out from this commitment. They can accept that mental properties are not normally central in our consciousness. We are typically focused on the world. Nevertheless, this underlying, peripheral structure accounts for the unity of our conscious awareness. This possibility is difficult to discount.

3.2.5 The Absorption Objection

As well as being committed to a wholesale mental translucency, the Self-Unity View is also clearly committed to the claim that all unified experience involves self-awareness. An intuitive challenge to this claim comes from Absorption Cases. These are cases in which it is arguable that we are so engrossed in an activity that we completely lose awareness of ourselves. Suppose we are gripped by a thrilling horror film, grappling with a deep philosophical problem, or lost in a book. Must we always remain aware of our own personality, social roles, or body? Prinz offers a range of examples along these lines and takes such cases to falsify the claim that self-awareness is necessary.73

The first thing to be said in response to this objection is that it seems unlikely to deter an advocate of the bare substance conception of self-consciousness. It might be held that we continue to be aware of ourselves as a simple experiencer whilst watching the film, or reading the book. The objection is more worrying for the personal conception. Nonetheless, the objection is unpersuasive even in terms of this restricted goal.

The reason that it fails is that it seems entirely possible to hold that we continue to experience our personal properties in Absorption Cases but our attention is directed elsewhere. Clearly, this presupposes the possibility of unattended experience but this is independently plausible. Consider the case of the thrilling film. Suppose we notice that we’ve been sat uncomfortably for some time. It is not uncommon to feel as if we are noticing an experience that was already there, niggling in the periphery of our consciousness. This response to Absorption Cases is well-motivated, then.

It is also possible for the Self-Unity View theorist to complement this move with the concession that our self-awareness slims down in such scenarios. We may only have a rough awareness of a general social role, for example. Perhaps we represent ourselves as

73 Prinz, The Conscious Brain: How Attention Engenders Experience, p. 43. Prinz does not consider the bare substance conception, however.
’Watching a film with another person’. This very general representation does not seem implausible. It seems likely that there would be clear and relevant phenomenological differences between the experiences of watching a thrilling film alone, or with the family dog, and watching it with another person, even if we were completely gripped by the film. Yet this general representation plausibly involves at least a very minimal representation of ourselves as a person.

With these options available, Absorption Cases are of limited threat even to the personal conception of self-consciousness. Nevertheless, I will now describe a range of problems that are not so easily dodged. I will begin by arguing against the personal formulation of the Self-Unity View. I will then move on to reject the bare substance conception, and will conclude by arguing against hybrid views.

3.2.6 Hypnagogic States and the Personal Conception of Self-Consciousness

The personal conception has greater common-sense appeal than the technical notion of a bare substance. It seems overwhelmingly plausible that we commonly represent ourselves as a person. Indeed, this kind of representation may be close to systematic. Yet there is an ordinary, everyday case that has been overlooked in the philosophical literature that strongly suggests that personal representations frequently break down. These involve the transition from waking states and early hypnagogic states, to late hypnagogic states and early dream states. When we look closely at the phenomenology of falling asleep we have good reason to doubt that personal representations are necessary.

Hypnagogic states are common and well documented in psychology. They typically begin sometime after a tired individual shuts their eyes with faint, simple sensory hallucinations and then develop into more vivid, absorbing hallucinations as the individual gradually enters sleep. Upon waking, subjects often report having seen lights, colours, faces, natural scenes, hearing noises, experiencing feelings of temperature, and so on. Subjects also frequently report strange and illogical thinking processes. The recurring features to highlight are these: Hypnagogic states are frequently alien or absurd, rapidly changing, and fragmented. There is good reason to doubt that we remain aware of ourselves as a person throughout the hypnagogic process. As we begin

---

74 For a recent overview of the psychological literature on the subjective aspect of hypnagogic states see Yang et al, ‘What subjective experiences determine the perception of falling asleep during sleep onset period?’, Consciousness and Cognition, (19) 4, (2010).
to fall asleep we very quickly lose our bodily awareness. This is one of the first kinds of personal representation to go. It is not uncommon to awaken from shallow dozing to realise that we had no awareness of our body and where we were yet we were still having thoughts and experiencing visual imagery.

Furthermore, it is quite likely that advanced hypnagogic states are too jumbled and fragmentary to allow for a sense of our personality, or awareness of the different social roles that we fulfil. There is no control over perceptual experience, suggesting an absence of a single coherent landscape or body in our experience. Moreover, our thoughts are typically illogical and undirected. If woken suddenly, we may be entirely unable to even express the thoughts we were having just a moment earlier. They progress independently of our beliefs and interests. Of course, there is no doubt that personal representations resume at a certain stage in sleep: We may behave strangely in many dreams but we typically have some sense of self. Yet the transitional states appear unique in nature and lack the stability and integration of full-blooded dreams.

It might be objected that all sensory experience necessarily involves a certain spatial perspective. There is a sense in which this is true but it is compatible with the claim I am advancing. Consider visual experience. It seems plausible to think that visual experience has to have a perspective. We cannot experience a view from nowhere. In this sense, visual experience is inherently perspectival. Yet this concerns the unique way that the world is presented. We need not think that we must experience ourselves as situated at a certain location in order to undergo that particular visual experience. An analogy may illuminate the point: A camera can only ever take a photo from a certain angle. However, this does not mean that the camera itself shows up in the photo. The perspective can simply be a matter of what is in the photo – the particular content that it has. When we have a certain kind of visual experience in a hypnagogic state, then, it may be qualitatively identical in the way it presents the world to the kind of visual experience we would have if we were stood in a certain spot, but this does not mean we have to experience ourselves as stood there. We can just see the scene.

The phenomenology of falling asleep is a distinctive one. Upon being disturbed we can unproblematically judge that we were about to fall asleep, were dozing, or were completely ‘gone’. We do not need brain scans to tell us. This fact is both mundane and remarkable. There is a clearcut difference of some kind between waking experience and transitional experience. But what does this difference consist in? There are many
tempting answers. We might think that it consists in a loss of awareness of the surrounding environment. We might think that it consists in a loss in coherence or stability in our overall experience. Relatedly, we might think that it consists in a loss of control over our thoughts and perception. Yet all of the initial candidates face a decisive objection. It seems entirely possible to undergo such shifts whilst remaining perfectly alert, engaged, and awake. We might imagine each of these induced by a strong hallucinogenic drug or an intense fever. In such a scenario we would feel far from sleepy! Close examination of the phenomenon suggests a startling but elegantly simple thesis: The phenomenology of falling asleep consists in a loss of personal self-awareness. What it is like to experience ourselves falling asleep just is what it is like to go from representing ourselves as a person into selfless experience. This seems to come closer to capture the sense of slipping away at the core of the experience. It also represents a global change. It is not merely cognitive, or merely perceptual, as some of our other candidates were. It is something wide-ranging and important enough to really reflect the drastic nature of the experience of falling asleep.75

This is a strong claim and unashamedly speculative. A weaker claim will suffice to call into question the necessity of personal representation. It is enough to just note that hypnagogic states give us good reason to doubt that we are always aware of ourselves as a person. An account of unity built on these foundations is not one we should invest in.

Whilst hypnagogic states clearly threaten the personal conception of self-consciousness, it is not obvious that they undermine the bare substance conception. It may be thought that we continue to be aware of ourselves as a simple experiencer even in these strange and turbulent states. The ability to withstand such a challenge is a significant virtue for

75 In one of the only studies that I am aware of that looks directly at this question Yang et al present data suggesting that a loss of control over thought processes and a lack of logic in thinking are the key variables. It seems to me that this can – at best – be a symptom of the real experiential shift, rather than the defining feature. If we understand a loss of control to be akin to the loss of control suffered by those who experience the disruption of intrusive thoughts it seems unlikely to capture the effortless nature of the phenomenon of falling asleep. On the other hand, if we understand the loss of control to consist not in a failed struggle against such intrusions but, rather, in a loss of the very awareness of a capacity for control over thought and perception, it is suggestive of a loss of the sense of personhood. It may be that we have no sense of control over our thoughts or perception, because we’re not aware of ourselves as there at all. There is no driver at the wheel, so to speak. The only question in the survey that addressed self-awareness directly was confusingly formulated and led to results that were inconclusive. Whilst the study makes an important start on the question further research is clearly needed.
this more streamlined self. Nevertheless, I will argue that it is implausible to think that a bare substance can play the role of the self.

3.2.7 Authorship Cases and the Substance Conception

To demonstrate the inadequacy of the bare substance conception I will examine a group of cases in which we plausibly experience ourselves as wholly causing a certain mental state. These experiences of authorship include \(a\) straining to remember something, \(b\) focused thinking, and \(c\) deliberate visualisation. I will argue that the idea of a bare substance operating as the self or subject is just not workable in these cases. To do this, I will first demonstrate that if a bare substance appears to be the subject of the mental state in question, then the bare substance must also appear to be the author. I will then go on to show that the bare substance cannot appear to be the author as - in itself - it lacks the appropriate psychological properties. Accordingly, it cannot be true that we experience the bare substance as the subject in these cases.

To get the argument going I will first introduce a set of cases in which we plausibly experience ourselves as wholly causing a certain mental state – in some broad sense of cause. I will argue that in these cases it seems to us as if we are wholly responsible for bringing about the mental state in question.

To give you an idea of what I mean: Try now to think of the last joke you heard. Do not read on until you have done so. When you attempted to bring one to mind, it may be that a joke popped into your head instantly and effortlessly, in its entirety. Alternatively, though, it may be that you experienced yourself as directing your attention. It may also be that you experienced a feeling of effort. We often actively strain to remember something. This is most vivid when something is on ‘the tip of your tongue’. When you tried to remember the joke you may have initially remembered certain fragments of the joke, or remembered particular details of the situation in which you heard it. From there, it is possible that you purposively focused attention on those details in order to remember the full joke. My claim is that in such cases we experience ourselves as bringing about this state of focus. We experience ourselves as directing our attention in a certain way, either by shifting our attention and initiating a new state of focus, or by sustaining an existing state. This experience stands in stark contrast to cases in which our attention is suddenly drawn by something. For example: By movement in
the corner of your eye. In the case of attempted recall, these attentional states appear wholly self-caused. We appear to bring them about.

This phenomenon can also be seen in focused thinking such as mathematical calculations, and deliberate visualisation: Just try adding up five-hundred and forty six and one-hundred and fifty-seven, or visualising your mother’s face for ten seconds. This final case stands in stark contrast to cases in which an image of somebody pops into our head and, despite noticing it, we let it leave, without interest.

I will refer to this collection of cases involving memory, focused thinking, and deliberate visualisation as *Authorship Cases*. I will take them to be cases where introspection and consideration of contrast cases makes it clear that we sometimes experience ourselves as wholly causing a certain state of focus, either by shifting to a new state or by sustaining an existing state.

The argument will take the form of a modus tollens:

P1. If we experience a bare substance as the subject in Authorship Cases, we must also experience the bare substance as the author.

P2. We cannot experience a bare substance as an author.

Therefore,

C. We do not experience a bare substance as the subject in Authorship Cases.

I will now defend each premise in turn:

**P1. If we experience a bare substance as the subject in Authorship Cases, we must also experience the bare substance as the author.**

What I mean by this is really very simple and – I hope – relatively uncontroversial. When we author an attentional state, it does not seem as if the entity that *brings about* the experience is distinct from the entity that *undergoes* it. For example, when we deliberately visualise our mother’s face it does not seem as if the entity responsible for focusing is distinct from the entity that appears to undergo the attentional experience. Rather, they seem to be one and the same. If I continue to pay attention to the visual image – and hold it in my mind – I sustain the attentional experience for myself. The *author* and the *subject* appear to be identical.
When we strain to recall something on the tip of our tongue it is almost painful to focus so much attention on something without recalling the item. It seems as if we are causing our own suffering by straining to remember. One entity does not appear to be inflicting pain on another!

It is worth noting that this precludes the possibility that the thing that appears to undergo the state appears to be a part of a further entity that itself appears to bring the state about. It does not appear as if the subject partly brings the experience about for itself and is partly the victim of outside influence. On the contrary, it appears to wholly bring it about for itself.

P2. **We cannot experience a bare substance as an author.**

A bare substance is just not the right kind of entity to play the role of an author. We experience authorship as occurring in virtue of personal properties and a bare substance - in itself - cannot facilitate this. The kind of properties that are most prominent in the experience of authorship are complex psychological properties that can only be attributed to the person as a whole, not to a mere substance. Consider our earlier case of focused mathematical thinking. Suppose we need to multiply sixty-three and four. When we focus on the numbers and their relationship we do so in virtue of certain interests. If nothing else, we wish to find out the answer to the sum. This aim is manifest in the experience of authorship. The attentional state appears to occur in virtue of this interest. It seems to us as if we are paying attention in order to work out the answer.

This is a common feature of experiences of authorship. We routinely experience ourselves as bringing about states of focus or shifts in our attention in virtue of particular psychological properties. It is clearly selective in this respect.

It is important to note that it is not simply a matter of the attentional state being rationally consistent with the relevant interests. Rather, the interests are part of what brings about the state. If the state merely appeared consistent with the interests it would not be apparent that the state occurred because of those interests. It would just appear as if it happened to be consistent with them.
I will now argue that bare substance conception cannot account for this crucial feature of Authorship Cases. Therefore, it cannot be the case that we experience the bare substance as the author.

A bare substance does not appear to have complex psychological properties. It is a very minimal entity. It is wafer-thin in nature, almost featureless. If it appeared as if a bare substance caused our attentional states it would be no better than the experience of randomly generated states. We would not experience ourselves as focusing in virtue of particular interests. If we take it that a bare substance appears to cause our conscious attentional states, we completely lose the connection to why we’re focusing. A view that takes the bare substance as the author is unable to capture the sense of direction and purpose in Authorship Cases. A separatism that isolates the author from the wider psychological, social, and bodily properties of a person is a mistake. We experience a person as a whole as the author.

It is important to reiterate that it is no good saying that the substance appears to be part of a wider person that has certain psychological properties and so – therefore – appears to partly cause the attentional state by being part of that wider person. For this proposal to work, it would have to be the case that the bare substance only appears to partly cause the attentional state. Yet as noted earlier, if we are experience the bare substance as the subject in Authorship Cases it must appear to wholly cause the attentional state in question. It does not appear as if anything other than the entity that undergoes the state is in any way causally responsible for the state. There is no hint of outside influence. Furthermore, the bare substance is not the right kind of entity to even play a causal bit-part. It does not seem as if the attentional state is partly caused arbitrarily and partly in virtue of certain interests. Rather, it appears directed and purposeful through and through.

With these two premises in place we reach our conclusion:

**P1.** If we experience a bare substance as the subject in Authorship Cases, we must also experience the bare substance as the author.

**P2.** We cannot experience a bare substance as an author.

Therefore,

**C.** We do not experience a bare substance as the subject in Authorship Cases.
With this in place, we might very reasonably now go further and note that there seems little reason to think that we are typically aware of a bare substance as the subject except in Authorship Cases. It does not appear as if leaving a state of focus suddenly changes the subject of experience. It does not seem to be the case that the moment you cease to visualise a face, a different entity begins to undergo the stream of experience. If the bare substance cannot be the subject in Authorship Cases there is little reason to think that it is a subject in other ordinary everyday cases.

We saw earlier that hypnagogic states can plausibly involve a loss of personal representation. Can we now conclude, in light of the apparent inadequacy of the bare substance conception, that these transitional states may well be wholly selfless? It seems to me that there is a strong case for taking this possibility seriously. Yet there is a way for the opponent to respond that we should first consider.

3.2.8 The Case for Selfless Experience and the Hybrid Conception

The personal conception of self-consciousness admits of two readings. We might think, first of all, that when we are aware of ourselves as a person we are aware of a bundle of interrelated psychological, social, and/or bodily properties. Alternatively, we might think that when we are aware of ourselves as a person we are aware of a substance that instantiates a set of psychological, social, and/or bodily properties.

The second formulation of the personal conception opens up a way of denying selfless experience. It might be claimed that in ordinary everyday experience we are aware of ourselves as a person yet in hypnagogic states these psychological, social, and bodily properties drop off and we are just aware of ourselves as a slimmed down bare substance – something that simply appears to instantiate certain phenomenal properties. Given that it is reasonable to deny that advanced hypnagogic states involve experiences of authorship, there is no obvious obstacle to allowing the bare substance this more limited role. We might think of this view as the hybrid conception of self-consciousness. When I speak of a substance I will be speaking of the substance and only the substance – not the person as a whole, or the substance together with the various personal properties. Whilst the person as a whole might legitimately be described as a certain kind of substance, my use of the term will be more restrictive.

The hybrid conception seems to me to be the best chance for the opponent to resist selfless experience. Yet it leads to a very peculiar picture, when examined closely.
The hybrid conception claims that in ordinary waking cases the substance appears to be a component in a wider person. Yet the person as a whole seems to be the subject. It is committed to this claim because of the problems of Authorship Cases. The mere substance in itself cannot be the subject in ordinary waking life. It is not the right kind of entity. Yet this leads to a bizarre structure in which the entity that appears to instantiate phenomenal properties is different from the entity that appears to instantiate personal properties, such as psychological, physical, and social properties. Authorship Cases show that the person as a whole must appear to instantiate phenomenal properties in waking life yet the substance, if it is anything, is the thing that appears to instantiate the various personal properties. If it does not, then it is difficult to see how it can be a component in the person. This is its one role and the reason we might opt for this conception over a bundle conception of the person.

This is troubling. It seems intuitive to hold that if you are going to have a substance in the mix, the substance should appear to instantiate the phenomenal properties. Indeed, this is the default assumption for conceptions of the self that involve a substance. However, we have seen that the substance cannot do so.

Perhaps most worryingly, this hybrid conception seems unable to capture the relationship between experience, and psychological states such as beliefs. When we have an experience of redness, we normally form the belief that there is something red near us. In such a situation it seems as if the entity that experienced the redness forms the corresponding belief itself. The subject appears identical to the believer. Yet the hybrid conception entails that one entity experiences the redness and another entity forms a belief about it. In particular, the person as a whole instantiates phenomenal red, and the substance then instantiates a conscious belief about red. Once again, if the substance does not appear to instantiate personal properties like psychological properties it is difficult to see what possible reason we have for postulating it as a component in the person. Yet Authorship Cases show that it cannot appear to instantiate phenomenal properties. Accordingly, this view seems to do violence to the connection between experience and belief formation.

There are serious doubts about the tenability of the hybrid conception, then. Given these problems, hypnagogic states suddenly become far more menacing. If we have little reason to believe that we are ordinarily aware of a substance, we have little reason to believe that such an entity will be present when the various personal properties begin to
disappear. When the various personal properties begin to crumble away we have every reason to expect that the self as a whole will break up. Whilst we might have previously allowed for a slimming down of the self during the transition into sleep, it is somewhat less plausible to think that a wholly new kind of self-entity *pops into* experience as we begin to doze off. If no substance is there in any way in waking life, we have little reason to think it is there during hypnagogic states. Consequently, it may well be that hypnagogic states provide cases of entirely selfless experience. Clearly further research and careful argument is needed. But the Self-Unity View is on shaky ground.

I promised a double-pronged case against the Self-Unity View. I have cast doubt on the claim that our experience always involves a sense of self. I will now argue that even if some kind of self-consciousness is an ever-present staple of experience, the self is not the kind of entity to unify the full range of elements. Even if it’s always there, it can’t do what it needs to. Once again, I will I will take each conception of self-consciousness in turn.

### 3.2.9 The Problem of Personal Unity

A Self-Unity View that is formulated in terms of the personal conception must claim that two phenomenal properties are unified when *a single person* appears to own or instantiate them. But this quick and easy formulation glosses over the details of what our awareness of a person consists in. As we have seen, there are two possible readings of what awareness of ourselves as a person involves: A bundle view, and a substance-based view.

On either reading, the Self-Unity View can account for the unity of two phenomenal properties but it says nothing of the unity of the various components that form the person in question. On the contrary, both readings seem to presuppose their unity. It is said that two phenomenal properties are unified when a single person appears to own or instantiate them. Yet this account cannot be generalised to explain the unity of a bundle of personal properties or the unity of a substance and its properties. In both cases we must be aware of the various components *as together* in order to be aware of the person as a whole yet the account offered does nothing to explain that experience of togetherness. It might be claimed that in the case of the bundle, special *co-personal* relations unify the collection of personal properties. Yet given that the various phenomenal properties are said to be unified in virtue of *ownership relations* to a single
self, this entails a form of Pluralism about the unity of consciousness. The account that emerges is unable to offer a general unity relation.

Similarly, on the second reading it might be said that the person as a whole appears to be composed of a substance and its various properties because they appear to be parts of this overall person. Yet, once again, given that the various phenomenal properties are said to be unified only in virtue of ownership relations, this entails a form of Pluralism about unity. The different components that form the person will be unified in virtue of mereological relations, whilst the phenomenal properties will be unified in virtue of ownership relations. Each form of Pluralism fails to respect the phenomenological similarity across different cases of unity. In neither case does it seem as if there is a Magic Bullet available. Furthermore, there are no obvious phenomenal relations that can operate as a determinable in each case, other than a very general primitive unity relation.

This problem cripples the personal formulation of the Self-Unity View. Even if the opponent can demonstrate that personal representation is necessary at all times – even in hypnagogic states – it seems unable to offer a general account of the unity of consciousness.

3.2.10 The Problem of External Unity

It might be thought that the moral of the story is that the Self-Unity View needs a simple entity to play the role of the unifying self. A complex entity is likely to only reintroduce the unity problem at a finer grain, within the self. The bare substance conception might be thought to be more appropriate in this sense. We have seen some of the problems that this conception faces, yet it might be thought to at least have the virtue of being a suitable kind of entity to unify. It is a simple entity that lacks personal properties. No problem of unity arises for the bare substance itself. It is built for purpose. It is designed to confer singularity.

Despite this, the substance is still unable to unify all the elements. We have spoken so far of a single self unifying different experiences by appearing to undergo them. This was spelt out more precisely in terms of a single self appearing to instantiate the various phenomenal properties. This provides an account of the unity of phenomenal properties but it says nothing of the unity of physical properties, or abstract entities, either with other physical properties and abstract entities, or with phenomenal properties. This is a really
serious problem for the Self-Unity View. Two phenomenal properties are said to be unified when they appear to be owned or instantiated by the same self. Clearly, though, we do not appear to instantiate, have, or undergo the vast majority of physical properties and abstract entities that we are aware of. We do not appear to instantiate the greenness of a leaf, for example. At most, we seem to instantiate the phenomenal property that makes us aware of the greenness of the leaf. The Self-Unity View is in stark danger of a widespread hidden Pluralism. The account it offers of our experience of phenomenal properties as together cannot be extended to the other two kinds of elements. As soon as this problem is in full view, the limitations of the account become glaring.

It might be said that what unifies a phenomenal property with a physical property is that the phenomenal property appears to represent the physical property. Yet if this is what the unity of the two properties is taken to consist in then we have a clear case of Pluralism. The unity of two phenomenal properties would consist in something entirely different from the unity of a phenomenal property and a physical property. If this is not the unifying relation, on the other hand, then it is not clear what is on this account and Primitivism threatens. There is no Magic Bullet here. It is difficult to see how the ownership relation and the representational relation might be thought of as determinates of a single familiar determinable relation.

The only room for manoeuvre seems to be with regards to the relation that connects the self to the phenomenal properties. Perhaps it may be suggested that the mistake was to think that the self appears to instantiate phenomenal properties. Instead, we might defuse the danger of Pluralism by claiming that the self appears to represent phenomenal properties, just as it arguably appears to represent physical properties. On this view, unity consists in representational relations holding between a single subject and the various different kinds of properties.

This is both implausible and unhelpful. Whilst I argued in Chapter Two that phenomenal properties are, as a matter of objective fact, represented, this is not how it appears to us in consciousness. Worse still, though, it simply buries the Pluralism at a deeper level. In order for the self to appear to represent phenomenal properties it must appear to have representational properties. Yet it cannot appear to represent these representational properties on pain of regress. We would need to introduce further representational properties in turn. The only plausible reading is that the self appears to
*instantiate* them. If this is taken to be what unifies the self with its various representational properties, then this returns us to Pluralism. If it is not, the threat of Primitivism remains in the absence of an explanation. This move is no good.

In fact, there is no way for the opponent to successfully restructure the Self-Unity View for a very simple reason. Neither the instantiation relation, nor the representational relation can tie together the self, representational properties, phenomenal properties, and physical or abstract entities. The impossibility of doing so can be seen from a bird’s eye viewpoint. You will always need a mix of the two, no matter what their precise arrangement. We need not dive into the details of each possible restructuring.

This delivers the second prong of the case against the Self-Unity View. Even if some kind of self-consciousness is a staple of experience, neither conception of the self is able to unify the full range of elements at a given time. Even if it’s always there, it can’t do what it needs to do.

### 3.3 Spatialism

#### 3.3.1 An Introduction to the View

When we consider our range of experiences there is a kind of unity that seems crucial to human life. Whether we are looking up at a comet in the sky, hearing a voice behind us, or moving our body on a crowded dance floor, we are experiencing these different entities as located in *space*. Spatialism, as I will label the position, attempts to put this common sense observation to work in explaining the unity of consciousness. In rough terms, it looks to understand the unity of our different experiences in terms of our awareness of spatial connections. The account deploys *phenomenal-spatial* relations, then, to answer the Unity Question: Spatial relations that are consciously experienced.

Something like Spatialism prefigures in remarks by Ayers, is developed and discussed in detail by Dainton, and defended by Revonsuo. The view may also be thought to take inspiration from Kant’s famous claim that human sensory experience necessarily involves spatial concepts:

---

The proposition that all things are side by side in space, is valid under the limitation that these things are viewed as objects of our sensible intuition. If, now, I add the condition to the concept, and say that all things, as outer appearances, are side by side in space, the rule is valid universally and without limitation.\textsuperscript{77}

Spatialism, as I will formulate the view, must go further than this, however. It must also account for the unity of non-sensory states such as thoughts and emotions. Despite these daunting demands, the account has many promising features. Much of what we experience is connected in space, providing some hope at least that the view may meet the Scope Constraint. Spatial unity also has a \textit{diachronic} aspect. We might pick one object up and place it down where another object used to be. We are aware of spatial relations \textit{through} time. This opens up the possibility of explaining diachronic unity, as well as synchronic. Furthermore, by pointing to our experience of spatial relations the account is offering a familiar kind of relation that can meet the Consciousness Constraint. This relation is familiar both from our ordinary experience and from other domains of philosophy and science. If true, the account is clearly informative. Moreover, spatial relations can connect different entities \textit{directly}. This captures the intuitive nature of the unity relation.

The account also allows for unification at the \textit{perceptual level}. This means that perceptual experience can be unified in itself, independently of any higher-order cognitive representations. This is intuitive and a point in favour of the view. Moreover, it means that the account can readily accommodate the intuition that there is at least sometimes \textit{something it is like} to experience unity. All of these features bode well for the view. It is a good start.

### 3.3.2 The State of the Debate

A provisional reductionist formulation of Spatialism might make something like the following claim: The unity of two experiences \textit{consists in} the apparent spatial relatedness of their objects. Does Revonsuo endorse a thesis this strong? Whilst I am far from convinced that his arguments are tailored for this thesis, he makes certain remarks that suggest so:

I am inclined to treat phenomeno-spatiality as the basic unifying feature of human consciousness, and also as an explanation of why the relation of co-consciousness holds. [My emphasis].

I will argue that Spatialism fails as a general reductionist account by showing that apparent spatial connectedness is not necessary for unity – even in the case of ordinary, healthy humans.

In his discussion of Spatialism, Dainton sketches a range of scenarios in which he argues that it is plausible to think that the subject might experience a partial breakdown in spatial unity despite unity holding across the disconnected regions. These cases involve a hypothetical perceptual system that is modified in certain respects yet fundamentally like our own. If Dainton’s prediction of the phenomenology is correct, it would suggest that spatial unity is not necessary for unified human consciousness.

In the central scenario, scientists remove a person’s brain from their body and place it in a vat. Artificial sensory organs are then designed to work in much the same way as our own and placed on an artificial ‘head’. Once assembled, the artificial sensory organs are hooked up to the brain via radio transmitters. This allows them to provide sensory input from a distance. Finally, the person’s body is itself hooked up to the brain by radio transmitters, allowing the subject to direct their body from afar, and experience the usual range of bodily sensations.

Dainton’s mischievous scientists then place the ‘head’ on top of a mountain and the body at the bottom of an ocean. When they turn the transmitters on, Dainton theorises, the person will be bombarded by a bewildering blizzard of experiences. Their audiovisual experience will be the same as that of somebody stood on top of a mountain. Yet their bodily experience and sense of touch will be like that of a person swimming around at the bottom of an ocean. Furthermore, the two strands of experience will be completely unrelated spatially. Crucially, though, Dainton goes on to claim, this set of experiences will be unified. This case provides a possible counterexample to the claim that spatial unity is necessary for unified human consciousness.

78 For what it is worth, the subtitle of the paper also supports this interpretation: “One Relation to Rule Them All and in the Unity Bind Them” [My emphasis].
In his defence of Spatialism, Revonsuo notes that the argument is threatened by the well-known fact that our perceptual systems seem to be designed to resist incoherence:

[I]f two different objects or images are presented to the two eyes, either they are merged into one, if coherent enough (binocular fusion), or only one of them will be seen at any one time (binocular rivalry). Thus, a more plausible prediction as to Dainton's thought experiment would be that: 1) Either the two coherent streams of information compete for access to awareness and therefore only one of them is experienced at any one time or 2) They will be merged.\(^79\)

If either of these rival predictions is correct the counterexample is defused. How might the second option go? Revonsuo paints the following picture:

You seem to be on a mountain-top as regards your audiovisual experience, but somehow you also seem to have an invisible body located there; furthermore the whole space around you seems to be filled with a cold, invisible liquid surrounding your body. There are also invisible objects and surfaces all around you. If you move your body, you feel that you can move relative to the fully transparent liquid and its invisible objects, but curiously enough you stay still in relation to the mountain-top. The entire invisible liquid world seems to be moving in relation to the visible world, rather than you moving inside the liquid world.\(^80\)

If this alternative prediction is correct, the experience would be of a single unified space. It would just appear to contain somewhat odd entities that are both dynamic and invisible - perhaps akin to our experience of the wind. There seems little reason to think that the contents of one of the sources of input would be denied entry into consciousness so it seems that either Dainton’s initial reading or Revonsuo's merger scenario is most likely. Yet how do we settle this? As Dainton openly concedes, this is hugely speculative. In a further follow-up paper he allows that the subject’s experience might perhaps initially alternate between spatially disunified phases, and spatially merged phases. Yet he argues that, in many cases, it would settle over time into a spatially disunified structure as the evidence accumulates that the two environments are

\(^{79}\) Ibid.

\(^{80}\) Ibid.
unrelated.\textsuperscript{81} This is not implausible but it is, once again, entirely speculative. It is difficult to know how to settle the issue.

Clearly, it would be preferable - if at all possible - to mount a case against Spatialism that does not depend on such thought experiments, intriguing though they are. I will attempt to do so now. Indeed, I will suggest that we can establish a \textit{stronger} conclusion on \textit{less} speculative foundations. In short, we can get more bang for the buck. I will argue that there are real-life counterexamples to Spatialism even when we restrict ourselves to ordinary, healthy individuals. No mad scientists are required.

3.3.3 Building a Case Against Spatialism

I will not be the first to make this real-life challenge. Bayne and Chalmers write that:

\begin{quote}
An emotional experience such as that of melancholy does not obviously represent anything as located within space. A conscious thought about philosophy might have no spatial content at all.\textsuperscript{82}
\end{quote}

They take these ordinary, everyday cases to demonstrate that we cannot characterise the unity of consciousness in terms of spatial unity. I think that this move is far too quick but, nevertheless, their comments point us in the right direction. I will describe a possible response that the Spatialist may make to their claim yet I will conclude that it fails to block the conclusion that we often experience non-spatial representations. I will also show that we regularly undergo states that involve spatial representations yet what they represent is \textit{disconnected} spatially from the rest of our experience. In both cases, however, it is plausible to think that unity still holds. This upholds the main aim of the argument made by Bayne and Chalmers: The unity of human experience cannot be understood as a spatial unity.

Their case concerns \textit{synchronic} unity. Before I assess their argument in detail I want to briefly set out a problem that is exclusive to \textit{diachronic} unity. Consider the experience of \textit{waking up} from a dream. The experience often involves diachronic unity. We are aware of ourselves as emerging from the dream, \textit{as} waking up. Yet our final dream states are often entirely disconnected spatially from our first waking states. In the last moments of

\textsuperscript{81} B. Dainton, 'Unity in the Void:Reply to Revonsuo', \textit{PSYCHE} (10) 1 (2004).

\textsuperscript{82} Bayne and Chalmers, ‘What is the Unity of Consciousness?’, p. 26.
our dream we might be running desperately, trying to escape from a giant malicious ice cream, yet wake to find our body horizontal and still. In such a case we need not represent any spatial relations between the position of our body before we wake and the position of our body afterwards. Nor do we need to represent spatial relations between the various objects in the surrounding environments around us, either. The giant malicious ice cream does not appear to be under the bed, or behind the wardrobe. They are just different spatial worlds. It is important to stress that I do not want to deny that it is possible to maintain spatial connectedness as you wake up. Indeed, it seems plausible that we do sometimes represent some spatial relations between these phases. We might, for example, sometimes experience a slight rising sensation as we slowly wake up. Whether such an experience is entirely free from spatial disconnections is not clear but it does not matter for our purposes. All I want to claim is that many cases are not like this. Many cases involve no representation of spatial relations at all between the final dream state and the initial waking state.

Consider a case in which you are woken abruptly. Maybe your bus jolts or the postman hammers on your door at 5.37 a.m. In such a case you often just suddenly find yourself in a different, unrelated spatial environment. There is no experienced transition – no gradual rising feeling. Nevertheless, you experience yourself waking up, albeit suddenly. You experience the transition. Given the plausible presence of diachronic unity, this spatial disconnectedness suggests that Spatialism fails as a general account of all forms of unity.

I will now argue that the approach fails to adequately explain synchronic unity. As Bayne and Chalmers have shown, certain emotional states or moods offer one kind of potential counterexample to Spatialism. Is a feeling of depression or euphoria spatial in any sense? It is not obvious, to say the least. It is certainly clear, though, that we can experience the feeling of depression, for example, alongside the sound of a Leonard Cohen album. We can be aware of them both together, all at once.

There is a lively debate about whether these general emotional and mood states represent anything at all. Those who deny that all experiences have representational content often invoke such states. Yet the standard dialectic of this debate offers a lifeline to the Spatialist. In such quarrels, it is quite routine for advocates of representational content to argue that – far from representing nothing – such states represent almost everything around us as being a certain way, whether the evaluation is
positive or negative. In a state of depression, for example, it can be maintained that everything we encounter appears to lack value. Whilst elaboration is clearly required, this broad line of response is not wildly implausible. Furthermore, it seems to extend naturally into our own domain of inquiry. A proponent of Spatialism might well argue that these kinds of general emotional and mood states are just less discriminate in their spatial focus. Whereas a feeling of anger might be sharply focused on a particularly annoying individual, stood a few yards away, a feeling of euphoria might be loosely targeted at everything we encounter around us. As we stroll down the road, carefree, on a glorious sunny day, our euphoria might take in a series of different things. We might delight in the sounds of the birds above us in the trees, the shades of the leaves in the sunlight, the smile of a passing stranger. The euphoria may be indiscriminate yet, crucially, still spatial. Insofar as we allow the standard response to supposed cases of non-representational experiences, we should allow this extended response to putative cases of non-spatial emotional and mood states.

The remarks of Bayne and Chalmers, though brief, point us in the right direction, however. They also highlight the problem of abstract thought. Let us see if we can develop this insight into a conclusive objection to Spatialism.

Suppose we are sat puffing on a pipe and we think to ourselves that “Democracy is the worst form of government except all the others that have been tried”. When we have this thought we do not normally think of 'democracy' or 'government' as occupying locations in space, or any of the other constituents of the thought, for that matter. Whilst the thought may occasionally be accompanied by visual imagery that is spatial – a flash of the Houses of Parliament, say – this does not seem central to the cognitive state itself, or necessary, and often spatial imagery does not figure in the process at all.

Consider one such case where spatial imagery is entirely absent. It still seems as if the thought will be unified with surrounding perceptual elements, such as the smell of the pipe smoke. This provides a potential counterexample to Spatialism.

Furthermore, it seems possible to have disconnected spatial experience. More precisely, it seems that we can remember and imagine places without experiencing them as standing in

---


84 This statement is attributed to Winston Churchill.
any particular spatial relation to us or any of the things around us. Suppose an image pops into your head of a hotel room you once stayed in but you can’t remember where it was. Although the image is *internally* spatial, it is arguably spatially disconnected from everything else in your experience. The different parts of the room appear spatially related to one another but the room as a whole could be anywhere. Similarly, you may imagine a staggeringly high mountain without placing it anywhere in particular in the real world. Once again, the visual image is internally spatial yet disconnected externally. It does not appear to stand in any spatial relations to anything outside of itself. In both cases, however, the states are unified with surrounding perceptual experience. We might remember the hotel room as we pass another hotel on the bus, or imagine the mountain while reading about the terrain on a distant planet. In such scenarios we are jointly aware of the disconnected spatial experience and our wider experience.

We have before us, then, two sets of potential counterexamples to Spatialism. In the case of abstract thought the content may be entirely non-spatial. In the case of sensory memory and sensory imagination the content may be internally spatial yet externally unrelated.

Game over? No. The Spatialist has a move available to them and it is one that I think has been unfairly overlooked by those who emphasise states with non-spatial content. Let us take the possible case of non-spatial awareness first - abstract thought. Even if what the thought is *about* is non-spatial, it may well be that the *thinking* itself appears to be going on somewhere in space. Most compellingly: It might be argued that it appears to be going on in your head. Located in this way, the mental process can then appear spatially related to other entities in the world. Significantly, this line of response applies equally well to remembering or imagining something. Even if *what* we are remembering or imagining is not spatially related to anything around, it may be that our remembering or our imagining appears to be. When we remember the room we once stayed in it might seem to us as if the memory has popped *into our head* and is something internal. Similarly, when we imagine the mountain, it may seem as if we are bringing something into our mind. It may appear as if the visual image is generated *internally*. Indeed, the language we use to describe such states seems very conducive to such an analysis. Dainton notes something very much like this line of argument with respect to conscious
thoughts, deliberations, desires, and intentions, and it is this that leads him to construct a range of imagined scenarios in order to test the Spatialist thesis.\textsuperscript{85}

This revision to the project is not an outrageous move. Suppose you're at a funeral and something funny happens to pop into your head. Assuming you've acquired certain basic social skills over the years, you'll probably keep it to yourself. But while you're thinking about whatever it is – and looking at the grim faces around– it's quite likely that your thinking will very much seem like an \textit{inner} process, a private, internal affair: something that you’re struggling to \textit{hold in}. The converse of this example is, of course, being miserable at a Christmas party. Suppose you think “I want to kill myself” as Cliff Richard comes on the stereo for a third time. As the party poppers explode around you and champagne glasses chink, the suicidal thought is likely to seem hidden \textit{inside} you, something that you can only betray by a slip in your facial expression.

Needless to say, to make the case as charitably as possible I have cherry-picked certain examples that (hopefully) give the idea some force. But does all thinking have this apparent spatiality? Or is it only in certain cases like these that it appears internal – where there is some striking discord between the \textit{content} of the state and the \textit{context}? It is difficult to say conclusively and it seems legitimate for the Spatialist to argue that it is always there in some \textit{subtle} form. It is merely more vivid in the cases I have described. It comes to the foreground of our attention.

The Spatialist has the resources, then, to defuse many possible counterexamples as they stand in their present form. Nonetheless, I want to argue that these particular cases provide the seeds for a more successful challenge. I will argue now that even if we accept that our mental processes sometimes appear spatial, Spatialism still fails as a general account of unity. A second unifying relation of some kind will still be required.

The reason for this is that the manoeuvre above recognises that there are cases in which the objects of our experience are non-spatial or spatially disconnected. It simply points to the apparent spatiality of the mental process itself to keep the view alive. But the question remains how it is that we can have awareness of the process \textit{and} its contents \textit{as together} within our consciousness. Even if it is true that the thinking itself appears to be unfolding \textit{within} us, we cannot experience a spatial relation between this mental process

\textsuperscript{85} Dainton, ‘Stream of Consciousness’, p. 63.
and its objects, such as democracy, government, or a thousand-mile high mountain. These have been granted to be either entirely non-spatial, or, in the final case, spatially disconnected. Yet if we are consciously aware of the thinking process we are aware of the thinking process and its objects as together. They are unified. Our experience of thinking does not occur in isolation from what we are thinking. We are aware that we are thinking of these things. In cases where the contents are non-spatial or spatially disconnected, then, Spatialism cannot account for the unity of phenomenal properties (or non-phenomenal representational properties) with represented physical or abstract entities. Furthermore, if it cannot account for their unity, it is unable to explain how the represented entities are unified with the rest of our experience, such as surrounding perceptual experience. Given that the represented entities could not be spatially unified directly, the only hope was that they could be unified indirectly via the mental processes involved in their representation. With this not possible, Spatialism leaves these represented abstract and physical entities adrift, completely disunified.

It might be claimed that the fact that our mental properties are involved in the representation of the various physical and abstract entities is sufficient for the unity of our mental properties with these represented entities. Yet this would mean that some elements were unified in virtue of representational relations whilst others were unified in virtue of apparent spatial relations. This revised form of Spatialism quickly slips into Pluralism. Alternatively, it might be said that their relationship is so intimate that we cannot say anything more about it. However, this amounts to a partial Primitivism. Certain elements will be unified spatially whilst others will be unified in virtue of primitive unity relations.

Both these paths should be rejected. There is a single, very simple, shared relation across all these cases. Moreover, no Magic Bullet is forthcoming. It is difficult to see how a spatial relation and a representational relation might generate a recognisable determinable relation in experience.

The problem laid out above concerns the unity of the contents of these states with both the mental process involved in representing them, and the wider experience of the individual. However, there is a further problem concerning the internal unity in some of these cases. Whilst remembered or imagined places may be internally spatially related, completely abstract thoughts need not be. In these cases there is a further question of how the various constituents of the abstract thought are unified with one another. It
might be said that they are unified in virtue of being constituents of the same thought. But what this really amounts to is claiming either that they are unified in virtue of being represented by the same mental state or process, or in virtue of being parts of a single state. Spatial relations play no role in either unity claim. Consequently, this loops back once again to a form of Pluralism. Spatialism cannot account for the unity of the constituents of an abstract thought even if we allow that the thinking process itself appears spatial.

3.3.4 Learning from the Failure of Spatialism

Having fleshed out these counterexamples from ordinary human experience, we can clearly see that Spatialism fails to meet the Scope Constraint, even restricting its role to synchronic unity. It is worth emphasising that it is only by recognising the full range of unity cases that the depth of the failure of Spatialism becomes apparent. Those who only recognise the unity of experiences or phenomenal properties are unable to mount decisive objections to Spatialism.

Despite its failure, Spatialism offers the right kind of answer. In pointing to a familiar phenomenal relation it meets the Consciousness Constraint and offers an informative account. It also offers a phenomenal relation that can hold directly between many of the unified entities. Whilst we have seen that there are various limitations to its scope, Spatialism sets the bar high and its failure makes clear what we must aspire to.

3.4 The Mereological Approach

The final view that I will consider is the Mereological Approach to the unity of consciousness. In its most common formulation, the view claims that two experiences are unified if they are parts of a single, more complex, composite experience. This is arguably the orthodox view of unity, though many proponents are inexplicit about whether they take it to merely provide a necessary condition for unity, or, more ambitiously, whether they think that unity reduces to certain mereological relations in our experience.86

If it is understood as a non-reductionist doctrine it may, on the face of it, be considered compatible with a range of different views, including both Primitivism and Temporalism, the view that I will argue for in the next chapter. If, on the other hand, it is treated as a reductionist doctrine it will be incompatible with Primitivism. Furthermore, if it wishes to avoid Pluralism it will need to reduce unity to a single kind of relation. This suggests that a reductionist Mereological Approach will also be incompatible with Temporalism and other reductionist views, as they will offer competing unifying relations. In its broadest form, the Mereological Approach dominates the literature. Indeed, in his treatment of the phenomenological aspect of the unity, Prinz speaks as if it is true by definition.\(^87\) Evidently, this is not the case. It is a substantive thesis that requires defence.

On the face of it, though, the account is attractive and has a number of virtues. Firstly, it may be thought to lend itself naturally to the explanation of both synchronic and diachronic unity: We might think, for example, that brief or instantaneous experiences are unified over time by entering as parts into more complex, extended experiences. Secondly, the approach allows for unification at the perceptual level. If we can make sense of mereological experience anywhere, it will surely be at the perceptual level. This means that perceptual experience can be unified in itself, independently of any higher-order cognitive representations. This is a highly desirable feature of an adequate account. It also means that the account can unproblematically accommodate the intuition that there is at least sometimes something it is like to experience unity. Finally, it may be thought that the account will have a healthy scope. The part/whole relation is very minimal and, for that reason, more likely to be resistant to counterexamples. Indeed, although it is familiar from other domains, in the experiential domain it has been built for purpose. It is specifically introduced to describe unified, complex states – unlike, say, phenomenal-spatial relations, where real work is needed to closely link them to the unity of consciousness. These features are all promising signs. In this section I will consider the prospects of the Mereological Approach as a reductionist account of unity. I will say more, however, in coming chapters about whether we should accept that a mereological structure is a necessary condition of unified experience.

3.4.1 Assessing the Mereological Approach

In order to meet the Consciousness Constraint we must be consciously aware of the relevant parthood relation. It must be evident to us in experience. But are we really aware of such relations? It seems unclear whether this is really an appropriate relation for experience. Is it true that one’s “overall phenomenal field is an experience that contains within itself other experiences, nestled like Russian dolls within each other”? Undoubtedly, we certainly seem able to distinguish between different physical things and between different phenomenal properties but are we also aware of certain chunks of experience as parts of bigger chunks? Does it really seem that way to us? It seems likely that intuitions will be divided on this question.

As the quote above suggests, the common formulation of the Mereological Approach claims that experiences enter as parts into other experiences. This formulation leaves the view vulnerable to inconvenient developments in the understanding of the Counting Question. In short, it assumes a very particular answer to the Counting Question: That our unified experience consists in a multitude of simpler experiences. Suppose, though, that we establish that there is good reason to believe in a One-Experience View. This blocks the common formulation of the Mereological Approach. It seems to me that it is preferable to formulate the view in terms that are neutral on the Counting Question.

The most natural step is to claim that token phenomenal properties appear to be parts of more complex phenomenal properties. This takes no stance on whether phenomenal properties correspond to experiences in a one-to-one manner. Nevertheless, it is not a wholly innocent move. In the metaphysical domain there is debate over whether properties can really be parts of other properties. If it is not possible for us to experience properties as parts of other properties, then the view is in trouble. But it is not wildly implausible to think that we can. Let us grant the assumption, then.

I will now record a couple of initial worries about the view but moving on to spell out what I take to be its deepest problem. The first worry concerns its commitment to wholesale translucency. On this model, unity consists in different experiences or phenomenal properties standing in mereological relations to one another. Yet these

---

88 Bayne, The Unity of Consciousness, p. 21

relations must be evident in consciousness if the view is to meet the Consciousness Constraint. Therefore, we must be aware of the related entities: The experiences or phenomenal properties. As it stands, the view has no way to explain unity in transparent regions.

The second worry concerns the exact relation that is being offered as the unity relation. Take two phenomenal properties. The account says they are unified when they appear to be parts of a more complex phenomenal property. In other words, they are unified when each stands in a parthood relation to the more complex phenomenal property. \( A \) stands in a parthood relation to \( B \) when \( A \) is a part of \( B \). We might think that this parthood relation is the unity relation. But this is not a particularly attractive position. On the face of it, the unity relation appears to be a symmetric relation that holds directly between unified properties. Yet according to this picture, two properties are unified when each stands in a parthood relation to a third, more complex properties. This means that they are only unified indirectly, via a further entity, and that the relations responsible are not symmetric.

If the opponent wishes to capture the intuitive profile of the unity relation they must claim that the presence of these parthood relations generates a further symmetric relation that can hold directly between the simple properties. We might call this a joint-parthood relation. We might characterise the nature of this phenomenal relation by saying that when two properties appear to stand in the joint-parthood relation to one another the two properties are ‘parts of the same whole’. On this view this is the real unity relation.

Once again, this is far from innocuous. Is this really a regular feature of our experience – above and beyond any parthood relations that we might experience? It is certainly not obvious. At the very least, this is something to be aware of.

The deepest problem, though, concerns the account’s ability to explain the unity of represented entities, such as physical and abstract entities. The picture that we have presented so far says nothing of these elements. Phenomenal properties are unified by being parts of more complex phenomenal properties. But physical properties do not appear to be parts of complex phenomenal properties. Therefore, they cannot be connected in the same way.

It might be thought that phenomenal properties are unified with physical properties because they appear to represent them. Yet this just reveals a hidden Pluralism in the
account. On this view, unity is achieved in some cases by a joint-parthood relation and in other cases by the representational relation. Such a view fails to respect the generality of the unity relation and the phenomenological similarity at the heart of all cases. Left in this state, the account may yet require a primitive unity relation. Certainly, no Magic Bullet is at hand: It is hard to envisage a plausible non-primitive determinable that takes joint-parthood and the representational relation as its determinates. As it stands, then, the Mereological Approach fails the Scope Constraint and is danger of slipping into Primitivism.

A different structure is needed. Whilst it is implausible to claim that physical properties appear to be parts of phenomenal properties, it might be the case that they appear to be parts of something. In some cases, it might be thought that simple physical properties appear to be parts of more complex physical properties. For example, it might be said that when we see a chess board the token property of blackness and the token property of whiteness may appear to enter as parts into the more complex physical property of being chequered. Could such physical mereological structures provide the unity we need?

Unfortunately, physical nesting of this kind is severely limited, at best. Some physical properties may arguably appear to be parts of certain other physical properties but this appears to be restricted to properties of the same things. It may make sense to say that our experience of a cloud in the sky subsumes what it is like to see white and what it is like to see blue, yet it does not seem plausible to say that we have a corresponding awareness of a complex physical property that has physical blueness and physical whiteness as parts. In sum, it is more intuitive to posit an abundant mereological structure for phenomenal properties, than it is for physical properties. There are limited resources with which to build upwards towards any kind of significant physical unity.

There is another route available, however, to establishing a general mereological structure. It is possible to push for a more radical, wide-ranging Mereological Approach in which both phenomenal and physical properties appear to be parts of further abstract entities such as propositions, facts, or states of affairs. These abstract entities may then be thought to be structured mereologically themselves. By limiting the proposed mereological relations to phenomenal properties or even physical properties, the Mereological Approach will be unable to provide a general account of unity. In opening the door, though, to all kinds of entities and bringing everything within a single mereological structure, the account is in a stronger position to avoid Pluralism.
Let us call this view the Progressive Mereological Approach: Any two entities are unified if they appear to be parts of a further entity. It should be emphasised again that the need for revision of more traditional formulations only becomes clear when we hold in view the full range of cases of unity.

In the Progressive formulation, we see the mereological intuition expressed in its full-blown, unrestricted form. Let us consider the Progressive formulation in terms of facts. What I say should apply to any abstract entity that fulfils the desired role, nonetheless.

It is worth noting that this view may mean that we do not need to think of properties as being parts of other properties. The simple properties may enter directly into a fact, alongside certain relations. Solely physical or solely phenomenal nesting is not needed to explain unity. The various properties and relations might appear to be unified simply by appearing to be parts of a single fact. This fact may then appear to be part of a further, more complex fact, alongside other simpler facts. At the top of this structure, we must be consciously aware of a single, very complex fact that concerns the overall state of the world at that time. If the set of simpler facts did not enter into a single, complex fact, the structure would only be partially unified.

In this way, all the different elements can potentially be connected using only mereological relations. You can build up a single unified structure using only parthood and joint-parthood relations. It leaves no element disconnected and stranded. This seems to be the only way to save the Mereological Approach. Either go big or abandon the project.

This view should not be dismissed. It harnesses the driving intuitions behind the traditional formulation yet steers clear of its most obvious problems. Insofar as we have any reason to believe in mereological structure within our experience, it seems to safely carry over from the nesting of experiences to the nesting of entities in general. There is arguably an equally intuitive sense in which physical and phenomenal properties appear to be constituents of facts, propositions, or states of affairs. This view simply globalises the phenomenon.

Nevertheless, although the Progressive Mereological Approach provides the best hope of keeping the mereological intuition alive, it is thrown into severe doubt by a problem that faces every reductionist mereological answer to the Unity Question. Framing the problem in traditional terms first, the issue is this: If two experiences are unified by
appearing to be parts of a further experience, how is the overall, global experience unified with its parts? Alternatively, we can frame the problem in progressive terms: If two entities are unified by appearing to be parts of a further entity, how is the overall, global fact unified with its constituent facts?

This kind of problem has been discussed with regards to whether joint-parthood is a necessary objective condition for unity. In that context, the standard response is to say that the whole is an improper part of itself. Accordingly, it can be unified with its proper parts. They are all parts of the same whole: The whole is simply an improper part of itself.\footnote{This response is endorsed, for example, by Dainton in \textit{Stream of Consciousness}, Bayne, in \textit{The Unity of Consciousness}, and B. W. Kobes in ‘The “One-Experience” Account of Phenomenal Unity: A Review of Michael Tye’s “Consciousness and Persons”’, \textit{PSYCHE} (11) 5 (2005).}

The problem gets new teeth, however, in our context. This technical manoeuvre may perhaps be defensible when addressing the objective conditions necessary for unity. But we are considering the Mereological Approach as a reductionist account. We need to know what our experience of unity consists in. Accordingly, for the response to work here it must appear to us in experience as if the whole is an improper part of itself.

This is deeply implausible. It is one thing to say that the formal principles of mereology permit improper parts, and quite another to say that we routinely experience such relations. When we are aware of a global fact, does it really seem as if the fact stands in an improper parthood relation to itself? I do not want to deny that we can represent it this way upon reflection. We might judge that it is. Yet it is not ordinarily a feature of our experience. Alternatively, suppose we are undergoing a very complex global experience. Does it really seem to us as if the experience stands in an improper parthood relation to itself, prior to contemplation on such theoretical matters? I would suggest that it does not. Insofar as there is a certain intuitive force to the mereological interpretation of experience, it seems to be exhausted by the intuitive force of proper-parthood. We have little reason to believe in anything more than this.

Yet without this relation the account is incomplete. It fails to explain how it is that the global entity is unified with its constituents. Worse still, it is plausible to think that in order to unify the various parts, the whole must be unified with its parts. How could it appear to make any difference to the way they appear otherwise? If we are not aware of
the whole *alongside* its parts, the different parts cannot appear to be parts *of* the same whole. Consequently, none of the parts will be unified with each other.

This is disastrous. The only way to salvage something is by accepting that a different unifying relation is in play here. Something else unifies the global entity with its constituents. Yet this resorts to Pluralism and betrays the simple, shared character of all cases of unity. Furthermore, if the whole appears to be an experience in its own right – or appears to be a fact in its own right – it should be subject to the same rules as all the others of its kind. There is no reason to think that mere complexity would make a difference. By failing to specify the relation that holds it all together at the top of the pile, the Pluralism that follows also opens the door to partial Primitivism once more.

In conclusion, it seems unlikely that even the Progressive Mereological Approach can work as a general reductionist account. Nevertheless, it seems that this would be the best shot for any opponent who wishes to look for a way round these problems.

In Chapter Five I will argue that the Traditional Mereological Approach fails to even offer a *necessary condition* for unity and will defend a One-Experience View, according to which our unified experience only consists in a single state. Furthermore, I will go on to argue in Chapter Six that our experience just does not seem to break up into *proper parts* in *any* comprehensible sense. Close inspection reveals experience to be stubbornly resistant to informative mereological analysis. This casts further doubt on the Progressive Mereological Approach.
4 Temporalism: A New Account of Unity

In this chapter I will present my own answer to the Unity Question: Temporalism. Setting the view against Spatialism and Primitivism, I will highlight its unique selling points and its comfortable handling of the Consciousness Constraint before moving on to consider three sets of objections. The first set will concern the structural profiles of the relations it introduces. The second set will concern the account’s ability to meet the Scope Constraint. The third set will challenge the claim that apparent temporal relatedness is sufficient for unity. I will argue that Temporalism can be robustly defended against all of these challenges. Having shown that Temporalism very plausibly mirrors the intuitive structural profile of the phenomenon, meets the Scope Constraint, and fully explains unity I will go on to argue for the reduction of the primitive unity relation. I will then close by demonstrating how Temporalism satisfies the Power Constraint. This blocks Pluralism and establishes Temporalism as a general, reductionist account of ordinary unified human consciousness.

4.1 The Case for Temporalism

Spatialism pinpointed a relation that was already familiar from everyday experience, and empirical psychology, and that had a counterpart in the natural sciences. As we saw, the ordering relation it picked out was able to clearly meet the Consciousness Constraint and account for our experience of unity. Moreover, it allowed for unity to hold directly between many elements. Although it failed to meet the Scope Constraint, Spatialism provided a commendable model in these important respects.

Temporalism takes inspiration from Spatialism and is similar in holding these virtues. Yet it offers an account that is more resistant to counterexamples due to the pervasiveness of temporal experience. Brook and Raymont make vivid the heavy demands made of any general account.

I can have unified consciousness of a siren that I am hearing, an average grade that I am calculating, and a fictitious landscape that I am visualizing. In what possible way would items as diverse as these have to be connected to one another?\(^9^1\)

---

91 Brook and Raymont, ‘The Unity of Consciousness’.
Temporalism has a very simple answer: We experience them all as connected in time. In particular, I will argue for the reduction of experience of unity to the representation of B-series temporal relations. The apparent unity of two elements consists in their apparent temporal relatedness. When we hear a knock at the door as the phone begins to ring, our experience of their togetherness consists in the representation of their simultaneity. When we hear a big crash shortly followed by a loud swear-word, our experience of their togetherness consists in the representation of their succession. For Temporalism, everything that is unified is connected within a single temporal framework.

We might set the account out in full as follows:

**TEMPORALISM:** Two elements are unified if and only if they are represented as temporally related.

The elements in question may be phenomenal properties, physical properties, or abstract entities. It is worth emphasising once more, nonetheless, that the view only makes a claim about the way that these entities appear in experience. In other words, they are unified as elements in the representational content of our experience.

It may be wondered why the account is formulated in terms of B-series relations, rather than A-series properties. There are two reasons for this choice. Firstly, we seem to have a much firmer grip on B-series relations. Whilst it is not implausible to think that we experience events as coming into being, being present, and, finally, slipping away into the past, it is difficult to pin down what this really amounts to. The phenomenon is introspectively evasive. The structural profile of B-series relations is somewhat clearer, in my view. Furthermore, B-series relations offer the clearest way of directly relating different elements to one another. In short, they closely capture the structural profile of unity. I will say more on this shortly.

Spatialism has been roundly condemned for its failure to account for all cases of unity. Although these objections needed work, I have argued that the thrust of them was right. Yet implicit in this chorus of objections was an acknowledgement that Spatialism
offered the right kind of answer. Criticism has centred almost entirely on its inability to meet the Scope Constraint.\footnote{See, for example, Dainton in Stream of Consciousness, Bayne and Chalmers in ‘What is the Unity of Consciousness?’, Brook and Raymont in ‘The Unity of Consciousness’, and Tye in Consciousness and Persons.}

Temporalism promises an account that is also simple and elegant. But I will argue that compelling counterexamples are harder to find. What drives the account is an appealing intuition about the central role of time in consciousness.

For such a simple and intuitive account, it is surprising to note that it has, to my knowledge, only ever been hinted at or gestured towards in passing. It was Kant that perhaps came closest to capturing the core intuition at the heart of Temporalism when he argued that time is a necessary condition for all human experience and “the form of inner sense.”\footnote{Kant, The Critique of Pure Reason, A33/B50.} Nevertheless, his metaphysical and epistemological project was a very different one to the one here and the details most crucial for us are missing from his account of temporal unity.

In the contemporary debate, Tye makes a few brief remarks that suggest that temporal relations should be part of an account of unity yet it is deeply unclear how this component plugs in to the wider package of views that Tye sketches. He does not mention temporal relations in his discussion of synchronic unity yet makes the following comments in his discussion of diachronic cases:

> What, then, is phenomenal unity through time? Let us distinguish between direct and indirect unity. Direct phenomenal unity through time is a relation between experientially represented qualities. It obtains if and only if the qualities experienced in one specious present are experienced as succeeding or continuing on from the qualities experienced in the immediately prior specious present. Indirect phenomenal unity through time is also a relation that obtains if and only if the qualities experienced in nonadjacent specious presents are linked by chains of direct phenomenal unity.\footnote{Tye, Consciousness and Persons, p. 100.}
It is not made entirely clear what the relationship is between this claim and his claim that “[u]nity through time, both direct and indirect, comes with the closure of experience under conjunction just as unity at a time does.” The role of conjunction relations is more prominent in Tye’s work. He argues that two contents are unified when their conjunction is represented and made available for a certain kind of cognitive access.

Yet the possible role of conjunction relations is very different from the possible role of temporal relations. It is most natural to take them to connect propositions. However, conjunction relations seem unable to wholly account for unity within propositions. Yet any account that posits awareness of propositions has this obligation. They must explain the unity of the various constituents in the proposition, with each other and the proposition as a whole. For more complex propositions, part of this explanation may involve awareness of a conjunction relation. But this relation can only connect complete propositions that have truth values. It cannot account for the unity of the physical and phenomenal entities that enter into simple propositions. The reason for this is very simple: Entities like physical properties and phenomenal properties do not – in themselves – have truth values. Temporal relations can connect individual entities like physical and phenomenal properties, however. In short, these two kinds of relations are very different kettles of fish.

Tye appears to take both claims as spelling out a necessary condition for diachronic unity yet he is not explicit about whether he is presenting a general, reductionist account of unity. Accordingly, he fails to state whether a temporal relation or a conjunction relation is to be understood as the unity relation. Nor does he offer an account of the nature of the temporal relations in question, or of our awareness of them.

Temporalism has been largely unexplored, then. This may be nothing more than an innocent oversight. Perhaps, though, it stems from a feeling that such a view is, in some way, merely trivial and barely advances the debate. There are two reasons that I can see for such a view. The first may be rooted in the common assumption that our awareness of temporal properties is direct. In other words, that in simply having experiences we are directly aware of their objective durations and temporal relations to one another. I argued in Chapter Two that such awareness is impossible due to the implausibility of hybrid relations. Yet suppose that you hold such a direct awareness view. It might then be thought that temporal connections, though common, are completely impotent to
actually unify experience. The mere fact that two experiences are objectively simultaneous is clearly insufficient to account for their unity. Your experiences right now are objectively simultaneous with millions of other experiences around the planet yet they remain vaulted off. Furthermore, it might be thought that direct awareness of the temporal relatedness of your own experience presupposes its unity. It is only when you understand apparent temporal relatedness in representational terms that it becomes clearer how it might play a real, active unifying role. On the assumption of direct awareness, though, this potential is obscured. Hill unwittingly brushes past Temporalism on his journey to Pluralism. Confiding in the reader and confessing to feeling the phenomenological pull of a single, general unity relation, he writes:

I have sometimes felt that it is possible to discriminate introspectively a form of co-consciousness that is different from all the forms that we have considered up to now. Thus, it has sometimes seemed, when I have been focusing on a pair of auditory sensations, or a pair of sensations associated with different sense modalities, that I was directly aware of the sensations as co-conscious even though I was not aware of them as owned by the same subject, nor as objects of a single state of awareness, nor as standing in any causal or counterfactual relations to one another to something else, nor as parts of some third sensation, nor as linked by some $p$-spatial relation. I have never felt that I was aware of this new form of co-consciousness as having positive differentiae that distinguish it from the other forms. Rather I was aware only that it lacks the positive differentiae that belong respectively to the other forms. Accordingly, it has seemed to me that this form of co-consciousness is pure – that it has no distinguishing characteristics other than its ability to unite sensations.

Although at one point in my reflections on unity of consciousness I was strongly inclined to think that there must be a ghostly form of co-consciousness that answers to this description, I now feel that this view is wrong. It isn’t possible to find this ghostly form of co-consciousness within one’s experience. Hence, there is no good reason to believe that it exists. As I now see it, when it seems to me that I am aware of a fact involving two auditory sensations, or two sensations associated with different sense modalities, and a ghostly unity relation, I am only aware of a fact that consists of the simultaneous existence of the two sensations. This is the only fact involving the sensations that is given. If it were
otherwise, I would be able to distinguish introspectively between the fact consisting of the simultaneous existence of the two sensations and the fact consisting of the two sensations and the putative ghostly unity relation. There would be a detectable difference between these two facts. However, as can be seen from the very ghostliness of the putative unity relation, there is no such difference [My emphasis].

If you switch the background assumption of direct awareness for representational awareness, you suddenly have the seeds of a case for the reduction of unity to represented temporal relations. It may be, then, that this background assumption has played an unfortunate role in obscuring the prospects of Temporalism to date. When our temporal awareness is understood in representational terms, the account has a clear affinity with Spatialism. They are fundamentally similar in nature, albeit different in scope. Tellingly, though, Spatialism has not been challenged on its basic nature.

A second explanation is possible, however. It may be that there has been a failure to fully appreciate the distance between Temporalism and Primitivism. In some ways, Temporalism may have been a victim of its own intuitive force. In provisional characterisations of the phenomenon of unity theorists often slip into temporal terminology. It is often said, for example, that we are aware of two experiences all at once. With this built in from the start, it can cloud the distinction between Primitivism and Temporalism and the latter may not appear to represent much of an advance. Yet there are a number of important ways in which Temporalism is distinct from Primitivism and offers real progress.

Firstly, it deploys an existing relation, rather than introducing a new primitive unity relation. In this respect, the account is simpler. Secondly, the relation it earmarks is familiar from everyday experience and common-sense knowledge. It is intuitively less obscure and more informative. You will hear discussion of the succession and simultaneity of certain events in ordinary daily contexts yet you will not hear talk of co-consciousness outside of an academic department. Thirdly, temporal experience has been studied empirically in psychology for many years. If Temporalism is true, this body of knowledge provides directions for many more years of future research into unity. If Primitivism is true, we need to start virtually from scratch. Finally, B-series

---

95 Hill, Sensations, pp. 239-40.
relations have clear correlates in physical theory. They present no new challenges to monistic approaches such as naturalism. Whilst it is possible to hold that we represent primitive unity relations yet these representations have no corresponding physical reality, it requires a far more complicated story and an explanation of how and why this representation occurs.

This is not to deny, of course, that temporal experience generates many puzzling questions. Yet we at least have a rough grip on what we’re talking about when we ask these questions. For these reasons I will take it that if Temporalism is true it represents clear progress and is more than a trivial rebranding of Primitivism.

As noted, Temporalism comfortably meets the Consciousness Constraint. It points to something in consciousness that explains how it is that we are consciously aware of unity. It picks out a well-known kind of relation in our experience. For this reason I will refer to them as phenomenal-temporal (P-temporal) relations. It is worth stressing that I do not mean to suggest that these temporal relations appear to us in consciousness to be experiential in nature. I simply mean to refer to our experience of temporal relations, rather than objective temporal relations.

On the face of it, the position also seems to have a very promising scope. Crucially, it provides a relation that can appear to hold between both phenomenal entities and physical entities. This grants the view a substantial advantage over the Traditional Mereological Approach. When we are aware of our own experience it seems to unfold in time, alongside the evolution of the physical world. They fall under one temporal framework. The view also seems well-positioned to account for a significant range of these entities: Properties, events, and objects all appear to be related in time.

As well as being able to unify many different kinds of things, P-temporal relations are, as a matter of fact, highly common. Our ordinary perceptual experience is temporal through and through. What we see, hear, smell, touch, and taste clearly appears to be located in time, related to everything around. Phenomenal properties also appear to be instantiated at particular times. We are aware of what it is like to smell freshly cut grass at the same time as we see the ice-cream van turn round the corner. Temporalism also seems to effortlessly capture the nature of bodily experience. When we are aware of where our body is or the way in which we are moving it, we seem to be aware of our body as being located in both space and time. We feel ourselves occupying different positions at
different times. Furthermore, when we undergo emotional experience we are aware of how it seems at particular times, and its objects typically appear temporal: We feel irritation at the moment that Cameron’s synthetic face appears on the television. We feel relief when there’s a sudden power-cut. Finally, Temporalism naturally handles many memory experiences and experiences of anticipation. In experiencing a memory of an event, the event appears to be in the past in relation to what we are experiencing at that time, whilst the act of remembering itself appears to be in the present. Conversely, when we anticipate an event, the event appears to be in the future in relation to the rest of our experience, and the act of anticipation.

In these respects, Temporalism has an unprecedented scope that far outstrips any existing view. It should be taken seriously. Nevertheless, there are certain question marks over whether even Temporalism can meet the Scope Constraint. If you will recall, this states that:

The form of unity in question must hold between all the different kinds of elements involved in every unified stretch of experience.96

This is necessary if we are to build a convincing case for reducing unity relation to P-temporal relations. The doubts in question concern abstract unity. Many abstract entities are understood to be atemporal in some sense. This might be thought to jeopardise the Temporalist project. How can it explain their unity? In our experience of the world, for example, we are not only aware of individual physical entities, we are also aware of what our experience is conveying. If perceptual content is abstract it may be thought that Temporalism is unable to account for our awareness of individual physical entities as together with what our experience is conveying about them.

I stated a moment ago that Temporalism is in a position to explain the unity of many memories and emotions. Yet it is sometimes the case that their objects are abstract. We might remember an interesting fact, or feel sorrow at the nature of mortality. If these abstract entities are atemporal they may present a problem for Temporalism. I will consider a set of objections based on this line of argument shortly. I will also consider the threat posed by certain states of imagination, and unusual states such as déjà vu, and time agnosia. Before I assess these objections, however, I will conclude my general

---

96 It is worth stressing once again that I am restricting my study to ordinary human experience.
review of the position and assess a few initial worries about the structural profile of P-temporal relations.

As with spatial relations, temporal relations often appear to hold between the physical entities that we represent. This means that Temporalism does not depend on blanket translucency as some accounts of unity do, such as the Self-Unity View, and the Traditional Mereological Approach. Even if certain regions of our experience are transparent and we are only aware of physical entities, Temporalism can still account for their unity in a way that that these other views cannot. This is a useful feature as blanket translucency is far from established, to put it mildly.

Temporal relations are also very plausibly part of our perceptual experience. This means that Temporalism can unproblematically account for there being something it is like to experience unity. It is plausible to think that we can, at least sometimes, turn our attention to this. Temporalism can account for this in virtue of the fact that there is something it is like to experience two things as related in time. In offering a relation that is very plausibly part of our perceptual experience, Temporalism does not have to take a stance on cognitive phenomenology. Certain accounts of unity are not so lucky. If they claim that the unity relation can only be cognitively represented - such as with a conjunction relation, perhaps – they may need to either demonstrate the prevalence of some kind of cognitive phenomenology or abandon the assumption that we can sometimes attend to what what it is like to undergo a unified state.

Temporalism is happy to accept that we sometimes cognitively represent temporal relations. For example, we may occasionally judge that two events are exactly simultaneous. Yet it does not claim that this is the only way we represent them. Indeed, it is most reasonable to think that we routinely represent temporal relations at the most basic perceptual level. It is implausible to think that the very simple aspects of our experience – such as colours – are conscious if they are not both temporally related and bound to other certain features – such as shapes. In short, we need temporal relations at the most basic perceptual level. This carries the additional advantage that Temporalism is able to account for unity at the perceptual level, prior to any higher-order states. Unlike cognitive accounts of unity, the Temporalist does not face the uncomfortable choice of claiming either that perceptual states are not conscious in themselves or that perceptual states are conscious yet not unified at the perceptual level. For the
Temporalist, perceptual experience can be both conscious and unified independently of what goes on upstream.

In denying that our temporal experience is merely cognitive, the Temporalist need not claim that unconscious inferences do not causally determine our perceived temporal order. On the contrary, they may well do so. Given that our awareness of temporal properties is representational in nature, it is prone to error. We do not have a direct awareness of objective temporal properties, either of our own experiences or physical objects. This means that there is no obvious bar to unconscious inferences influencing this representational process.

On first glance, Temporalism is compatible with various answers to the Counting Question. It might be formulated in terms of a multitude of experiences, or in terms of a One-Experience View. On this reading, Temporalism claims that a single very rich experience represents each element as related in time.

Finally, Temporalism puts forward a relation that has certain attractive structural features. Firstly, it seems able to directly connect many elements without much strain. No reference to a third entity is needed in specifying its character – as is the case with some formulations of the Self-Unity View, and the Mereological Approach. This captures the unmediated way in which certain entities appear to be together in our consciousness. For example: The togetherness of an object’s colour with its shape. There is not a crack of light between them. They appear to wholly interpenetrate in the most intimate way possible. Temporalism provides for this common feature.

Secondly, there are two kinds of B-series P-temporal relations: Relations of simultaneity and relations of succession. On the surface at least, this seems to closely shadow the phenomenon of unity which may be thought to break down into two cases: Synchronic, and diachronic. Finally, the position is well placed to capture our intuitions about the possibility of non-transitive unity. One of the strongest possible cases lies with the nature of diachronic unity. Neighbouring stages of experience clearly seem unified with one

---

97 I will, however, argue that a fully fleshed out Temporalism entails a One-Experience View in the next chapter.

98 I am not claiming that temporal relatedness is sufficient for physical object-unity. I am simply claiming that unmediated unity is very plausibly necessary for such experience. It is a precondition.
another, yet when a certain duration of time separates two stages this is no longer the case. This raises the possibility of non-transitive unity. It may be possible to have a case where phenomenal property A at t1 is unified with phenomenal property B at t2, and phenomenal property B is unified with phenomenal property C at t3 yet phenomenal property A is not unified with phenomenal property C.

I do not wish to take a stance on this issue here. What I will say, however, is that whatever the merits of the case for non-transitive unity, similar considerations seem to apply to non-transitive temporal unity. The intuitive force of the first is exactly proportional to the intuitive force of the second. If you believe in the possibility of the scenario above you should believe in the possibility of a scenario in which phenomenal property A at t1 appears temporally related to phenomenal property B at t2, and phenomenal property B appears temporally related to phenomenal property C at t3 yet phenomenal property A does not appear temporally related to phenomenal property C. In all of these respects, then, Temporalism mirrors the intuitive structural profile of the unity relation.

I have set out what I take to be the most attractive features of the view. I will now move on to consider what I take to be its biggest challenges. The deepest problem is one that is common to every answer to the Unity Question and concerns the very idea of introducing a phenomenal-relation to unify our experience. How, Hurley asked, glimpsing its danger, “can anything internal to content determine unity, given that content presupposes unity? What prevents the problem of unity from applying all over again to it?” This is the Just-More-Content objection (JMC). This problem abstracts away from the particular character of the proposed phenomenal-relation. I must postpone discussion of regress problems until the final two chapters due to their intricacy. I will argue that all accounts face a version of this problem. It is not unique to views that, for example, claim that the unifying relation is represented or that it involves an additional experience. The problem, in a nutshell, is how to unify the unifying relation with the elements that it relates. In this chapter, then, I will restrict my discussion to the unity of the elements alone. I will aim to establish only a provisional conclusion about the necessity and sufficiency of temporal relatedness for unity. This conclusion is provisional in the sense that the ultimate success of the account should be read as

---

contingent on a subsequent resolution of the JMC objection. I record this now as an ‘I owe you’.

In this chapter I will discuss three sets of possible problems. The first set will concern the general structural properties of P-temporal relations. The second will concern the Scope Constraint. The final set will challenge the claim that apparent temporal relatedness is sufficient for unity. After defending the view from these objections, I will go on to make my final argument for the reduction of primitive unity to P-temporal relations. Having eliminated the primitive I conclude by showing how Temporalism meets the Power Constraint: I will argue that P-temporal relatedness is necessary for the instantiation of all other phenomenal relations and their power to unify depends on it. This closes the case against Pluralism. With the Consciousness Constraint, the Scope Constraint, and the Power Constraint all satisfied, I will conclude, on a provisional basis, that Temporalism succeeds as a general, reductionist account of ordinary human unified consciousness.

4.2 Structural Objections

4.2.1 The Symmetry Objection

Although Temporalism appears well placed to match the logical profile of unity, certain details may be thought to cause trouble for the view, when inspected more closely. The first problem we will consider is the Symmetry Objection. There are two broad kinds of cases of unity: Synchronic and diachronic. On the face of it, Temporalism snugly fits this profile. It offers a synchronic P-temporal relation and a diachronic P-temporal relation. If you think that there are two unity relations – a synchronic relation that is symmetric and a diachronic relation that is not – then Temporalism gracefully captures the logical profile of the phenomenon.

But suppose that you think that cases of synchronic and diachronic unity involve a single, shared element. In particular, that they both involve a basic togetherness and this basic togetherness is symmetric. You may either think that this is the only real unity relation or, alternatively, you might think that it is the determinable of two further determinate unity relations: Synchronic unity, and diachronic unity. On this latter view there are actually three unity relations. Let us consider these in turn.
If you think that simple togetherness is the only real unity relation then to speak of synchronic and diachronic cases is just to speak of cases in which the relata differ. The unity relation itself is the same. The relata differ in that in synchronic cases they also appear to stand in a simultaneity relation, whereas in diachronic cases they also appear to stand in a relation of succession. Yet these P-temporal relations are just layered over on top. They do not change the fact that only one unity relation is in play: A simple, symmetric togetherness. They just happen to also be temporally related in certain ways.

If you think, on the other hand, that this basic togetherness is accompanied by two further determinate unity relations, then to speak of synchronic and diachronic cases of unity is to speak of cases in which the determinate unity relation itself differs. The symmetric determinable remains the same, however.

On either of these two alternative models of the diachronic/synchronic structure, there is a potential problem for Temporalism. If Temporalism only deploys the relations of succession and simultaneity it seems unable to provide anything that can fulfil the role of the basic togetherness relation. Simultaneity can offer a symmetric relation – but only for cases of synchronic unity. Succession, however, is not symmetric. If a flash appears to succeed the bang, the bang does not typically appear to succeed the flash. If there is a basic togetherness relation then Temporalism is unable to explain it with these resources alone. It could, of course, recognise basic togetherness in addition to each temporal relation. Yet this would be to cave in to the ever-present threat of Primitivism.

It seems that if the phenomenological description is right, Temporalism has to wheel out another familiar relation that is symmetric but can work in both synchronic and diachronic cases of unity.

It is not completely clear that it is right. I explicitly rejected Pluralism for synchronic cases but remained cautious on unity in general. Perhaps, strictly speaking, there are actually just two closely related kinds of unity relations. In support of this, it may be thought that there is a unique elusiveness to the way that entities appear to be together through time. There is no doubt that when we hear the successive notes of a song we do not experience them in complete isolation from one another. Yet there is a sense in which previous notes do seem to be gone, and the further back in time they are, the more they

---

100 I will consider possible cases of temporal inconsistency later. Even if outright inconsistency is possible, however, such cases are not the norm.
seem to slip away, almost seamlessly, until they are suddenly no longer there at all. This ethereal phenomenon is certainly different in some ways, then, from synchronic cases of unity. In synchronic cases the two unified elements seem to be with us in an equally immediate way. Their togetherness is blunt and unequivocal. There is also no doubt that notes that are a significant distance apart in time are completely disunified. We no longer experience them as together. Yet notes in between are somehow there but not there in the same way. It might be thought, then, that the only way to understand this spectrum of immediacy is in terms of an asymmetric unity relation: We are jointly aware of X and Y in a way in which Y appears more immediate than X. This may or may not be equivalent to the claim that we are jointly aware of X and Y but more aware of Y. Regardless of the exact formulation, though, this view takes diachronic and synchronic unity to be different kinds of unity. It denies that there is a single, shared element.

This issue is a difficult one. We have seen three possible models of the synchronic/diachronic structure. Each has some force. We might reasonably think that there are one, two, or three unity relations. Two of these models postulate a single shared basic togetherness yet one does not. It is far from clear how we should proceed. Each seems like a live candidate.

I wish to remain neutral on this question in this work. Temporalism can survive any verdict. Suppose the gallery decides that there is a single core phenomenon in both these cases. Temporalism simply needs to introduce a determinable relation of its own that has simultaneity and succession as its determinates. We might think of this as *temporal relatedness*. This determinable P-temporal relation is symmetric and can work in both kinds of cases. On this reading, Temporalism amounts to this: Basic togetherness is just temporal relatedness. The view can still differentiate between synchronic and diachronic unity cases by pointing to relations of simultaneity and succession, yet they can account for the singularity of the phenomenon by layering this determinable over the top. Moreover, this dodges the danger of Primitivism. This is one way in which the Magic Bullet may actually work. The view has the further option of either taking simultaneity and succession to be real unity relations themselves or holding that there is only one: Temporal relatedness.

Perhaps the main concern about this reading is whether we really experience this general temporal relatedness relation over and above simply experiencing simultaneity or
succession. Nevertheless, the determinates in question are clearly closely related to one another and the determinable is a familiar notion and fairly intuitive.

What is revealing, though, is that the case for thinking that there is a perfectly general unity relation is exactly proportional to the case for thinking that there is a perfectly general P-temporal relation. If you believe the first, you should probably believe the second. It is only on the assumption that the first is true, however, that you need the second. Whilst the symmetry issue is a puzzle, it only cements Temporalism in place. Wherever there is ambiguity over the nature of unity you find corresponding ambiguity over the nature of our temporal experience. The Symmetry Objection poses little danger for Temporalism.

4.2.2 The Indeterminacy Objection

The second problem that I will consider is the Indeterminacy Objection. Many of the large-scale events that we experience appear clearly distinguished and ordered in time but events on a smaller temporal scale might be thought to be more troublesome. If we experience a number of different things in rapid succession it is often difficult to establish the order in which the events occurred. Nevertheless, we are still jointly aware of them all as together. Our experience appears to be a confusing blur because the different events are unified. It may be said that this kind of case is a counterexample to Temporalism: We are arguably jointly aware of a collection of elements as together without being aware of their respective temporal relations. Therefore, unity cannot consist in apparent temporal relatedness.

A quick and easy demonstration of this idea is possible: Place both your hands on a table then quickly drum all your fingers in a random order and in an erratic rhythm. It might be claimed that at a certain speed we are no longer aware of the order in which the different tapping-noises occur yet we continue to be jointly aware of them all as together.

The most obvious response to this is to observe that even if the jumble of events are difficult to order, they still appear to happen around the same time as each other. They are roughly simultaneous. On this view, there are still P-temporal relations in play. They are just not wholly determinate. Yet it might be argued that they are sufficient to account for unity. The precise level of determinacy is irrelevant.
This is a tempting line of response but it prompts a further possible objection: Unity is not indeterminate in this case. We are arguably jointly aware of the jumble of events in much the same way as in clearly ordered cases. Even though they are jumbled, we experience them together in some sense. If unity is wholly determinate, however, it cannot be reduced to indeterminate P-temporal relations.

There seem to be at least two healthy options available to Temporalism, however. The first is very simple. It accepts that our experience of the temporal order is indeterminate and does not deny that unity remains entirely determinate. It resolves the tension, however, by endorsing the general P-temporal relation: Temporal relatedness. It may then be argued that although the events appear connected by only rough relations of simultaneity, they remain unequivocally related in time to one another. This permits the subsequent identification of the unity relation and the general temporal relatedness relation.

The second option challenges the idea that such experience involves any significant kind of indeterminacy at the perceptual level. This response might take a weak and a strong form. In its weak form, it claims that we have no evidence for indeterminacy in our experience. We only have evidence that we find it hard to remember, introspect, and report the order of such events. It may be that the lack of clarity stems from limitations on our introspection and memory. This can lead to coarse beliefs that fail to capture the original microstructure.

A stronger claim is possible, though. It may be argued that the notion of temporal indeterminacy at the perceptual level is deeply problematic, perhaps even incoherent. To see why, let us consider a simplified case. Suppose you experience two different noises in rapid succession (N1 and N2). You might consider any two neighbouring taps whilst drumming your fingers, for example. Let us also suppose that the indeterminacy involves a region involving only two different times (t1 and t2).

The first thing to note is that it is not the case that we experience no temporal relation at all between them. We know they occur at or around the same time. We just do not know their exact order. Suppose you think that we can represent colour determinables without representing a determinate. For example, that we can represent something as red without representing it as a particular shade of red – such as scarlet. You might think that we can do something similar with temporal locations and represent a locational
determinable without representing a locational determinate. Let us consider this idea by saying that \( t1 \) and \( t2 \) are determinates of the determinable \( t^* \) in the same way that scarlet and rose are determinates of redness. It might be suggested that we represent each noise as occurring at \( t^* \) without representing its determinate location.

The problem with this is that if all we represent is that N1 occurs at \( t^* \) and N2 occurs at \( t^* \), there seems no way in which we would experience any uncertainty or indeterminacy in their relationship to one another. They will both appear to exist at the only time that is represented. In short, they will both seem to be determinately simultaneous. It seems, then, that to experience indeterminacy in order you need to represent something more. An analogy: If you represent two physical objects and merely represent each as red but do not represent any determinate shades, it will not appear as if there is any indeterminacy in their relationship. They will both just appear to be the same colour. The room for difference is not evident.

You might think you need to also represent the different phases of \( t^* \). Namely: \( t1 \) and \( t2 \). It is not clear that in such a scenario you can represent the two noises as occurring at \( t^* \) without representing any relation to \( t1 \) or \( t2 \) but let us suppose that it is possible. The problem is that N1 and N2 still appear determinately related to each other. They both appear to be located at \( t^* \) - the only time that they have anything to do with, as it were. If N1 and N2 do not appear to stand in any relations at all to the particular phases \( t1 \) and \( t2 \), then we cannot experience indeterminacy in their relationship. To update the analogy: If you represent two physical objects as merely red but – at the same time – also represent two other objects as scarlet and rose respectively, this in no way introduces the appearance of indeterminacy in the relationship of the two red objects. This scenario is not a far-fetched one. It is not implausible to think that our colour representations may vary in grain even at a single moment in time, depending on our particular interests and whether we are paying attention to the things in question.

To have a hope of understanding temporal indeterminacy in this case, you need to propose that the two noises appear related in some way to the different phases \( t1 \) and \( t2 \). The problem with this is that no possible arrangement of relations appears satisfactory. If N1 and N2 both appear to be located at \( t1 \) and \( t2 \) then there is no advance. They will continue to appear determinately simultaneous. This is also the case if both appear to occupy either \( t1 \) or \( t2 \). Yet any other arrangement means that one will
determinately appear to succeed the other. Each combinatorial arrangement between N1, N2, and t1 and t2 fails to generate an experience of indeterminacy.

There are only two other options as far as I can see. It may be suggested that the previous attempt fails because it tries to locate indeterminacy in a single combinatorial arrangement. Instead, it may be thought that when we experience temporal indeterminacy we represent a complex disjunction. Our experience conveys that either N1 is located at t1 and N2 is located at t1, or N1 is located at t1 and N2 is located at t2, or…etc. On this view every possible permutation is represented at once and this is what the perceptual experience of indeterminacy consists in. The problem with this, though, is that it seems deeply implausible to think that our perceptual experience can positively represent disjunctions. How can you hear a disjunction? It just does not seem to be the kind of thing that perceptual experience can represent.

The only other option is to claim that we represent each and every scenario at once without representing the disjunction. In other words, our experience conveys a bunch of mixed messages without any attempt at resolution. It represents that N1 is located at t1 and N2 is located at t1, and it represents that N1 is located at t1 and N2 is located at t2,…etc.101

The problem with this is that it is dubious whether it really amounts to indeterminacy. Arguably, it is entirely determinate. It is just inconsistent. It is also questionable whether this really reflects the phenomenology of the experience. Drum rapidly on a table once more and consider any two of the noises (My apologies to anyone in the vicinity of the reader). Does it seem as if those two taps (N1 and N2) appear to stand in a multitude of different temporal relations to one another? Does their relationship really appear that complex?

There is also a big question mark over the coherence of the idea. It is not wildly implausible to think that apparent temporal location is involved in the individuation of such events within experience. Can a single noise appear to stand in inconsistent temporal relations? Or will it simply appear as if there is more than one noise?

101 Strictly speaking, there is a difference between representing this, and representing these contents as parts of a complex conjunction which conjunction relations are part of the contents. Nevertheless, both formulations will face the problem that I set out below.
Regardless of these concerns, though, what is most crucial for our purposes is that this interpretation of the experience does not permit the opponent to claim that we represent even a single indeterminate temporal relation. Consequently, they have no immediate grounds on which to block the reduction of unity to P-temporal relations. On this reading, each and every individual P-temporal relation is entirely determinate. There is just more of them than usual. Temporalism takes no stance on whether temporal experience is necessarily consistent in every respect.

Is Temporalism off the hook? Not quite. If this is what is going on in the cases of rapid succession then Temporalism may entail that N1 and N2 stand in many unity relations to one another: If unity relations and P-temporal relations are one and the same, then a multitude of P-temporal relations will entail a multitude of unity relations. But is it plausible to think that N1 and N2 appear to be unified more than once? There is no easy answer to this – particularly given the tangled nature of such rapid experience.

In fact, how we approach the issue should be shaped by how we model the synchronic/diachronic structure of unity. Two of the models surveyed claim that there are synchronic and diachronic unity relations: Diachronic unity is not just a matter of a single symmetric unity relation relating entities that also happen to be located at different times. If you endorse one of these two models, then inconsistency in P-temporal relations will entail that a single entity will appear to be unified multiple times. If N1 appears to both succeed and precede N2, as well as the noises appearing to be simultaneous, then N1 and N2 will be unified several times over. This is not just a possible implication of Temporalism, then. This is something that would follow from two credible models of the synchronic/diachronic structure of unity - regardless of the truth of Temporalism. The Temporalist has friends here, then, and may receive a sympathetic hearing if they wish to avoid this implication by arguing that indeterminacy is really just a failure of memory and introspection.

The only model of the synchronic/diachronic structure that does not have this implication here is the model that claims that there is only one unity relation. This is a symmetric basic togetherness. Yet if this model is right, then it may be thought that the proliferation of unity relations in a certain case is an innocent redundancy. Given that they are simple and qualitatively identical in nature, it may be that they are not noticeable to introspection. The noises really are tied together using several knots. It just looks like one knot.
This implication would not be fatal for the Temporalist, then. They might bite the bullet. Alternatively, they may highlight the many question marks over this interpretation of indeterminacy and maintain that our failure to report a precise order stems only from limitations in our introspective power and memory.

I leave these options open for consideration and further development. What is clear is that Temporalism has a number of very plausible responses to the Indeterminacy Objection. More generally, it should be apparent that Temporalism has the resources to respond robustly to many potential objections over the logical and structural properties of P-temporal relations. For this reason, I will turn to the next set of objections.

### 4.4 Scope Objections

The Scope Constraint states that: The form of unity in question must hold between all the different kinds of elements involved in every unified stretch of experience. We have seen that Temporalism works in a number of cases that other views do not. Nevertheless, we noted that it faces possible problems in accounting for abstract unity. In this section, I will assess the scale of this threat and also consider the problems posed by some states of imagination, and certain unusual states such as déjà vu, time agnosia, and schizophrenia.

Before I begin my defence of Temporalism’s scope, I should state my position as precisely as possible. First of all, I am not claiming that Temporalism is an analytic truth. It is far from obvious that it is true simply from the meaning of the terms ‘unified’ or ‘co-conscious’ and ‘temporally related’. If you believe that we can coherently conceive of a God as having a mind that is unified yet strictly atemporal, then you may have reason to reject the idea that it is an analytic truth. Many people claim to have conceived of such a thing so we should be cautious about formulating Temporalism in excessively strong terms. The doctrine of absolute idealism, widely accepted in the late 19th and early 20th century, typically invoked the existence of a universal mind, a mind that subsumed that of every individual throughout time and space. Once again, this mind was often thought to be unified yet atemporal in some sense, transcending individual perspectives. Even if you think that such doctrines are incorrect, it may well be that the proponents formed coherent conceptions of the scenario in question.

---

102For a particularly peculiar variant see: J. E. McTaggart, ‘The Relation of Time and Eternity’, Mind (18) 71 (1907).
Furthermore, if you think that there is an important connection between conceivability and possibility, then it may be that the ability of such theorists to conceive of these minds demonstrated their metaphysical possibility. If this is true, then it would be wrong to formulate Temporalism in terms of metaphysical necessity.

In fact, I will not even claim that Temporalism is true by natural or nomic necessity. Nothing that I say rules out the possibility of a mind in our own universe, operating under our own natural laws, that is unified yet atemporal or temporally disunified. What I will claim, however, is that *prima facie* ordinary human unity is necessarily temporally unified. This is compatible with this temporal unity simply being a contingent feature of our own perceptual systems. In essence, I am saying that there is a common unity relation in all normal human experience and that *this* unity relation is necessarily P-temporal. This is does not rule out the possibility that the consciousness of other creatures, or even the consciousness of certain humans under extreme abnormal conditions, involves other kinds of unity. This is a very soft necessity claim, then. For what it is worth, I take stronger variants of Temporalism to have substantial appeal yet nothing that I say here should be read as supporting such views. From this point on, then, my claims should be read in this restricted sense.

4.4.1 The Problem of Abnormal Experience

I will begin by considering a group of unusual states of consciousness that may be thought to present obstacles for Temporalism. These are cases where injuries, psychological disorders, or unusual life events have induced significant distortions in an individual's temporal experience. We may think of this class of cases as forming the Problem of Abnormal Experience. My claims pertain to ordinary human experience yet I cannot disregard such cases. If we have reason to think that the consciousness of an individual in one of these unusual cases is sufficiently similar to ours that it is likely to be unified in the same way, then the absence of temporal relatedness may falsify Temporalism as a general, reductionist doctrine. Equally, if we have reason to think that the consciousness of an individual involves many of the same phenomenal relations, then the absence of P-temporal relations may falsify the claim that all of our ordinary phenomenal-relations depend on P-temporal relations for their power to unify. This is particularly true if the individual has a distortion in temporal experience that is largely unaccompanied by any other changes. If ordinary temporal awareness drops out of
consciousness independently of other phenomenal features, then this should be cause for alarm for the Temporalist.

Cutting and Silzer helpfully distinguish six types of disorders in temporal experience that are recognised in the neuropsychiatric literature. These are:

1) Abnormal tempo to events
2) Déjà vu
3) Disordered sense of duration of past events
4) Reduplication of time
5) Incorrect sequencing of current events
6) Disordered sense of the passage of ongoing time

The first thing to note is that 1, 3, and 6 relate to our awareness of duration and the rate at which things appear to change. Whilst these can involve highly unusual experiences they present no threat to the Temporalist claim that unified elements appear to be connected by B-series relations. With respect to 1, it is worth emphasising that even if an individual experiences time as completely freezing, this in no way challenges Temporalism. The various elements that they experience at that time will still plausibly be experienced as simultaneous and the freeze will appear to succeed and precede other dynamic phases of consciousness. Let us pause to consider 2, 4, and 5 in turn, however.

Déjà vu is a well-known phenomenon that briefly affects many ordinary people however it can also come in more severe and persistent forms. It involves the sense that what we are experiencing is familiar and has occurred before. The phenomenon admits of two distinct readings, although this distinction is routinely glossed over.

Firstly, it may be that it seems as if a qualitatively identical type of event has occurred before. This means that we are experiencing a certain event as being located in time with respect to previous events whilst also having a recollective experience of a qualitatively identical event as having occurred in the past. On this reading there seems

---

to be no problem for Temporalism. Each event appears coherently related to everything around. It just so happens that the two events are *qualitatively* identical.

Alternatively, it may be that it seems as if the same *token* event has occurred before. This means that one and the same event appears to be both present *and* past. In this sense, it will appear to stand in inconsistent temporal relations to the event that objectively preceded the déjà vu experience. It will appear to both succeed and precede that event.

This is not a clear-cut problem for Temporalism but it does raise a worry. If P-temporal relations and unity relations are one and the same, this may mean that the déjà vu event appears to be unified *more than once* with the preceding event. This is strange but it is not obviously wrong. As I remarked earlier, how we approach this question depends on what view we have of the synchronic/diachronic structure of unity. Two of the three most credible models entail that inconsistent P-temporal relations will lead to a proliferation of unity relations – regardless of the truth of Temporalism. In this case, the déjà vu event would appear to stand in *two* different non-symmetric diachronic unity relations to the event that objectively preceded it. On the other model, it may be thought of as nothing more than an innocent redundancy – not noticeable because these relations of basic togetherness are simple and qualitatively identical.

Furthermore, given how peculiar the experience is, if we are to expect such strangeness we should expect it here. But Temporalism has another option. Once again, we need only introduce a general P-temporal relation as the unity relation. Even if the two events are connected in inconsistent ways, it may reasonably be thought that this general temporal relation appears to only hold once.

This may not be necessary, of course. It may well be that the *type*-reading of deja-vu is the correct one. If this is so, then there is no inconsistency in P-temporal relations. Yet either way, the Temporalist has options available.

Reduplication of time is much less well-known. In this disorder the individual has the belief that they simultaneously exist not only in the present but also in a duplicate time that may be qualitatively identical or very similar. The first thing to note about this is that the standard definition presents no problem for Temporalism. They believe themselves to be *simultaneously* located at two different times. They remain related. Yet even in certain deviant cases in which the individual believes themselves to also be occupying an alternate time in a different, unrelated realm it is far from clear that the
scenario undermines Temporalism. The disorder most plausibly involves a delusional belief that they occupy this other time. There is no reason to think that they are jointly experiencing two streams of events. Nevertheless, if they can cognitively represent a temporally disconnected realm this may still present a case where the represented entities of a certain thought cannot be unified temporally with surrounding events or experiences. Because this falls under a broader category of objections that I will consider at the end, I will set such deviant cases of aside for the time being.

Incorrect sequencing of current events poses a potential problem for Temporalism but it is one that we have already discussed in detail. This refers to an individual’s inability to discern the precise order of two events or more events that occur in rapid succession. As we saw earlier, the Temporalist has a range of options available. They may argue i) that indeterminate P-temporal relations still appear to hold and that unity is itself indeterminate in such cases, ii) that there is a general temporal-connectedness relation in play that is the real unity relation, or iii) that we have no reason to believe that these reports reflect an indeterminacy at the perceptual level. These points hold here. The chief difference is just that the inability is more pronounced in pathological cases.

Cutting and Silzer consider limitations in the ability to correctly order past events in their discussion of but we might record this possibility here. There is no reason to think, however, that these cases of time agnosia involve a complete loss of temporal relatedness. An individual may be unable to order many events from their past but it is very plausible to think that they remain aware of some connections — if only insofar as they recognise that it is a memory of an event in the past. There has simply been a pruning of relations. If an event comes into the mind of an individual without it seeming as if it is a memory, we have no reason to think it will seem any different temporally to occurrent perception or acts of fantasy or imagination. I will say a little about imaginative acts shortly.

4.4.2 The Problem of Abstract Unity

The second objection that I will consider is the Problem of Abstract Unity. This is once again a very broad objection that might be crafted in many different ways but it has this general form: It claims that we are have unified awareness of certain abstract entities yet these abstract entities appear to be atemporal. Accordingly, Temporalism cannot account for their unity and the view fails to meet the Scope Constraint.
It might be thought, for example, that the *contents* of our perception are abstract and atemporal. In addition to being aware of individual physical entities, we are also aware of *what* our experience conveys about these entities. This might involve awareness of certain propositions, facts, or states of affairs. Each of these might be argued to be atemporal in some sense. Equally, it may be argued that the objects of certain kinds of *thoughts* are abstract entities. For example, we may think about universals, numbers, abstract artefacts, classes, possibilities, and necessities. Once more, each of these may be argued to be atemporal in some sense.

If these perceptual experiences and thoughts are *translucent* then we may well be aware of the temporal properties of the experience itself, yet this is not enough. One of the reasons that Spatialism failed is that although it could defend the claim that abstract thinking and imagining sometimes appears to be going on in *space*, it could not explain our awareness of these mental states or acts *as together* with their non-spatial or spatially disconnected contents. It left the contents adrift. This is not good enough. When we engage in mathematical thinking, for example, we are often aware of our own mental state *as together* with the numbers. We do not experience them in isolation from one another. We are aware that we are thinking *about* the numbers in question. In order to be aware of this relation, we must experience ourselves, our mental state, and the numbers *all at once*, alongside one another in some basic sense. This unity cannot be understood in terms of the apparent unity of mental states. Temporalism must do better than Spatialism. Accordingly, it must somehow show that when we are aware of these abstract entities they appear to be related in time to everything around.

This is a significant challenge but I think it can be met. To do so, we need to draw on a distinction from the theological literature regarding the nature of God. In this debate, it is common to distinguish between the claim that God is atemporal in the strict sense of having no temporal properties *at all*, and the claim that God is atemporal in the sense of having only the trivial temporal property of existing at *every* time. The first conception takes God to be *eternal* whilst the second takes him to be *sempiternal.*

We can carve out a parallel distinction in our domain, albeit in somewhat more complex terms. We might say that an abstract entity appears to be *eternal* if we either actively

---

represent it as having no temporal properties at all or if we fail to represent it as having any temporal properties at all. In both cases it will appear to us as atemporal in the strictest sense. On the other hand, we might say that an abstract entity appears to be *sempiternal* if it is the case that whenever we are consciously aware of it we are aware of it as existing *at that time* or if we represent it as existing *at all times* – past, present, and future. In both cases it is plausible that it will appear to us as atemporal only in the loose sense of appearing to have the trivial temporal property of appearing to exist at *every* time. In the first of the two sempiternal options, it appears to exist at every time simply because we are never aware of it without being aware of it as existing *at that time*. For example: Whenever we think about the number nine it appears to exist at that particular time. There is a certain affinity between this claim and the now well-known idea of the refrigerator light illusion – deployed to discredit the assumption of unattended experience - however the claim that I am considering here is on a much firmer footing. This reading might be considered the weaker sense of sempiternal as it posits a much simpler, less committed representation. Needless to say, neither sempiternal claim should be confused for the claim that an abstract entity appears to be sempiternal if it is the case that at all *objective* times we represent it as existing at that time. Neither makes a claim about how often we represent the abstract entity in question. It simply specifies what happens when we do.

I will argue that we typically experience abstract entities as *sempiternal* in *at least* the weaker sense. This move has the power to save Temporalism. In being aware of the entities we will still be aware of them as related in time. I take no official stance on whether the stronger sempiternal formulation is true. Nevertheless, I will argue that the weaker sense is typically true and that whenever we are normally aware of abstract entities we are aware of them as existing *at that time*. It remains unclear to me that we usually represent a richer temporal structure in which the entity appears to exist in the past, present, and future.

It might be thought that the weaker formulation cannot account for the apparent timelessness of abstract entities. On this view, will they not simply appear to flicker in and out of existence whenever we happen to think about them? This concern is unfounded, however. There is no way in which we are aware of them as being absent *before* we think about them. Furthermore, we do not represent them as *coming into being*. They simply appear to be there at that moment whenever we think about them.
Finally, they do not seem to depart. An experience of something flickering into being and out again requires an awareness of its initial absence, an awareness of it coming into being, and an awareness of its disappearance. It is implausible to think that we represent any of these things. It is just there when we look, so to speak.

A few preliminary remarks are in order: Phenomenologically, this is not as peculiar as it may first seem, although its appeal may need drawing out. Suppose we are thinking about redness. It certainly does not seem to be located in any particular location in space. Moreover its intrinsic properties do not seem to change. But we should not throw the baby out with the bathwater. We can happily acknowledge all of this whilst still recognising that the entity in question appears to exist at the time we are thinking about it.

It is often the case that when we are aware of abstract entities they appear to be parts of certain states of affairs. When we think that a certain state of affairs holds we must, very plausibly, represent the state of affairs as holding at that time. When we have the thought we seem to assert the truth at that moment, as it were. When we have an insight, we implicitly realise that it is true now. This is the case even if the fact in question concerns the way something was in the past that has since changed. It still seems to be a fact now that it was that way. If we represent states of affairs as holding – and, therefore, existing – at certain times, it is not implausible to think that we must represent their parts as existing at the same times.

Consider mathematical thinking. Suppose we think to ourselves that nine is half of eighteen. It does not just appear to us as if it is the case now that nine is half of eighteen. This merely asserts the temporality of the state of affairs. It also appears that nine has the property at this very time of being half of eighteen. Yet if nine appears to instantiate that property at this time, then it is natural to conclude that it appears to exist at this time.

I present these points for consideration but they do not clinch the case for the sempiternity of abstract entities. To do this we need to look at our experience of change. Suppose that you’re camping and you’re watching a piece of wood on a fire growing hotter and hotter, and slowly glowing orange. You suddenly realise that the ember is exactly the same colour as the orange that you are eating. After a few seconds, though, the fire begins to burn out and you realise that the ember is no longer the same colour as your orange. It is now black.
Let us simplify this case for the purposes of discussion and say that at $t_1$ the wood appears brown, at $t_2$ the wood appears orange, and at $t_3$ the wood appears black. As far as I can see, the only way of understanding this thought process is by saying that we represent the universal property orange as having the relational property of being instantiated in the wood before representing the universal as losing that relational property: At $t_2$ orange appears to be instantiated in the wood. At $t_3$, it no longer appears to be instantiated in the wood. It only appears to be instantiated in your fruit. If this picture is right, then we represent the universal as changing, albeit in its relational properties. Yet if this is so, it is very natural to think that it must appear to exist at the different times that it gains and loses the different properties. Indeed, if this is not sufficient for temporal existence, it is not clear what would be.

Furthermore, this kind of argument generalises. Consider numbers. Suppose a person is worrying about the lack of people at their party. They realise that there is only six people in the room. Suddenly there is a knock at the door, though. A crowd of people flood in. The person feels relief that there are no longer six people in the room. In such a scenario the individual represents a number as losing a relational property. When the group enter, it appears as if the number is no longer instantiated.

Possibilities and necessities can be treated in a slightly different way. Suppose we apply for a job. We may hear that somebody else has got it and realise that it is no longer possible that we will. Alternatively, we may get good news and discover that the possibility has become actual. In both scenarios we represent the possibility as going out of existence. Clearly, for it to seem this way, it must appear to be temporal.

Even necessities appear to change in their relational properties. We may see a necessity embodied in an event at one moment, yet merely be thinking about it the next: Imagine testing the mathematical laws of addition using a collection of objects. We might put two books next to two other books and see the embodiment of ‘2+2=4’. Having reassured ourselves, we might then put the different books on different sides of the room, while continuing to think about the mathematical necessity. As we dismantle the arrangement we may represent the necessity as no longer having the relational property of being embodied in the books.
To deny such relational changes is to deny the appearance of any connection between our ever-changing physical and phenomenal world – and the abstract domain. Yet separatism is impossible. Our conscious awareness of each is meshed tightly together.

Finally, we can imagine a similar argument regarding our awareness of abstract artefacts. We may be reading the newspaper and learn that the English language has changed in a certain way over the last decade. This example involves an apparent intrinsic change, rather than a relational change, yet the upshot is the same. The abstract entity must be represented as existing at the times at which the change occurred.

It seems reasonable to generalise our finding to all cases in which we are aware of abstract entities. There is no phenomenological motivation for believing that when we think about abstract entities without representing changes, they appear fundamentally different in nature. The sempiternal interpretation provides an appealing way of understanding the apparent status of abstract entities in our experience. Consequently, the Problem of Abstract Unity can be resolved within the framework of Temporalism.

4.4.3 The Problem of Flights of Fancy

The next problem that I will consider concerns acts of imagination or flights of fancy. In many cases what we are imagining is clearly temporally located. Some acts of imagination are backwards-looking. We might imagine making a devastatingly witty comeback in an argument – four days after the event. Other acts are forward-looking. We might imagine a future in which space-travel is as mundane as getting the 42 bus into town. But it is possible to argue that we also sometimes imagine things that are not located in time at all. If true, this presents a real problem for Temporalism. Whilst the imaginative act itself may appear to be temporally related to our wider experience, what it is about may not be. This would mean that Temporalism would be unable to account for our awareness of both as together and alongside our wider experience. The content of the state would be isolated. We would be aware that we were imagining something yet not aware what it was that we were imagining.

Suppose, for example, that you’re daydreaming and you visually imagine an elevator door opening and a full brass band marching out in full pomp. It might be said that this imagined event appears to have no temporal connection to anything else. Internally, it is temporally ordered and has a short duration, yet externally it may be said to be entirely
disconnected: A free-floating snippet. A mere flight of fancy. We are not representing the event as part of the actual temporal world.

This is a serious objection. Yet there is an attractive solution. As Byrne emphasises, when we imagine something we do not imagine a possibility. We imagine that it is actually the case. We may then infer from our ability to imagine the thing that it is possible.\textsuperscript{105} Of course, we do not believe that it is actually the case. We are aware of the fact that we are imagining this actuality.

This picture of imagination seems right. Phenomenologically, of course, there are various differences between an act of imagination, and both ordinary perceptual states, and illusory perceptual states where we hold the belief that it is illusory (For example: Seeing a visual illusion that we are familiar with, such as the Müller-Lyer.) When we imagine something it may appear less vivid and detailed. It may appear to have different spatial properties. Furthermore, we may represent ourselves as bringing about the experience. There are many ways, then, to account for our ability to distinguish between such acts of imagination and perceptual experience whilst still maintaining that we represent the relevant entities as actual in both.

Suppose you’ve heard a shocking rumour about a friend. In wondering whether it could possibly be true you might find yourself trying to imagine the event. If you succeed in doing so you may conclude that the rumour could possibly be true. On the other hand, if you fail to imagine the event, you might conclude that it must be false. But either way, you are trying to imagine the event as actual. Whether you can do so then grounds your judgement about possibility.

Suppose you are wondering what you would do in a hypothetical situation. Imagining a possibility would do little to help. It is only by imagining it as actual that you are able to see what your feelings would be like. Your emotional response to its possibility is likely to be different from your emotional response to its actuality. Equally, it is only by imagining it as actual that you can draw certain inferences about what kinds of behaviour are appropriate. Its mere possibility is likely to have different implications than its actuality. Indeed, it is deeply dubious whether we can even sensorially imagine a possibility. What would this look like? Would it look different to it actually occurring?

\textsuperscript{105} A. Byrne, ‘Possibility and Imagination’, \textit{Philosophical Perspectives}, (21) 1 (2007).
If imagination involves the representation of something as actual, then this naturally invites a small elaboration on this picture. The Temporalist can quite reasonably maintain that we represent it as actually the case now. This is very plausible and puts the view in a position to account for the unity of the imagined entity with our wider experience.

Nevertheless, there is a certain kind of imaginative act that is more troubling for Temporalism. The example discussed was a case of sensory imagination. It might be thought that certain non-sensory conceptions are more problematic. Worryingly, it seems possible to cognitively conceive of entities as explicitly atemporal or temporally disconnected in some sense. I will describe these in turn.

I claimed earlier that we typically experience abstract entities as sempiternal. The account I gave seems to hold of most cases. Yet there is a kind of case that is somewhat more complicated. These are cases where we explicitly conceive of an abstract entity as atemporal in some sense.

When I introduced the sempiternal/eternal distinction the opponent would have been forgiven for wryly observing that it comes from a debate in theology about the nature of God in which some argue that God is eternal. Does the very existence of this debate not clearly demonstrate that people can – and indeed, do – conceive of eternal entities? This may be a cognitive representation but it still threatens to undermine Temporalism if what the thought is about does not appear temporally located. A similar objection may be formulated in terms of an eternal conception of numbers.

The other kind of troubling case does not involve abstract entities. Rather, it involves the explicit conception of temporally disconnected physical entities in some sense. Suppose somebody has been devouring the work of David Lewis and they begin to contemplate the notion of spatiotemporally disconnected universes. Musing on this possibility, they begin to conceive of a universe in which philosophers are millionaire icons, rather than penniless hermits. Worryingly for Temporalism, there is a sense in which they explicitly conceive of this universe as isolated and sealed off in space and time.

This is once more a serious issue. The first thing to be said, though, is this: We saw that when we imagine something, we imagine that it is actually the case now. We do not imagine that it is merely possible. I wish to argue that in exactly the same way, when we conceive of a universe like this we conceive of it as actually existing now. There is a
loose sense in which we conceive of it as not being temporally related yet the nature of this representation is perfectly compatible with Temporalism. I will say more on this in a moment. Firstly, though, we should recognise that cognitive conceptions are similar in many ways to sensory imagination. It is only by conceiving of something as actually the case that we can do what we want to do with the representation.

If we merely represented the state of affairs as possible then we would be unable to draw the appropriate inferences, or discover our own emotional responses to the state of affairs. Our emotional response to its mere possibility will be different than to its actuality, and both have different implications. Equally, if we are trying to establish whether the state of affairs in question is possible, then we do so by seeing if we can conceive of it being actual. The procedure for sensory imagination was this: ‘Can you experience the situation? If so, then it may be possible’. The procedure for cognitive conception is this: ‘Can you think it? If so, then it may be possible’.

Nevertheless, there is a loose sense in which we can still explicitly conceive of the entity as atemporal or temporally disconnected. To see whether these cases falsify Temporalism we need to look more closely at the way in which a person can and cannot conceive of such things.

Consider how we might try and visualise an infinitely sized universe. We might imagine a vast universe and then, add on, as it were, the additional thought that the universe in question is even bigger than this. In other words we imagine the universe a particular way then negate a certain feature of the visualisation – in this case, its finitude. It may even be that we repeat this operation a few times in quick succession and perhaps represent the fact that we could continue to do so indefinitely.

I do not want to claim that this is always how we do it. I present this only for the purposes of illustration. It shows us a way in which we can indirectly conceive of something via negation. Furthermore, it seems plausible to think that something similar goes on when we conceive of atemporal or temporally disconnected entities. To see how this might go, let us consider the example of the disconnected philosopher-friendly universe.

What seems to happen is that we conceive of the universe as being actual now and then add on the additional thought that it is not really as we have conceived of it. We conceive of it indirectly via negation. We have a higher-order thought about the content of the
lower-order thought. It may be that we repeat this kind of operation in different ways. For example, in grappling with the notion we might conceive of the universe as being in the past, negate that property attribution, then repeat the procedure with the present and future in turn. Through this series of negations we may feel that we have adequately conceived of its temporal disconnectedness. The exact details will vary from case to case and person to person but it seems plausible to think that each will be a variant on this procedure. To test this, simply try and form a conception of the universe that does not hinge on a negation of this kind.

It may be said that this is trivial: Of course, you cannot form an entirely positive conception of something as not being temporally related. I am demanding the impossible. But this is wrong. If Temporalism is not true, then there is no reason why it should not be possible to simply fail to represent the universe as temporally related to anything else.

What I am claiming, then, is that we cannot do this. In order to form any kind of conception we must positively represent a negation. The challenge, then, is to conceive of the entity without it involving this active representation. On the face of it, it seems unlikely that such a conception is possible.

The view that I have sketched captures the similarity between sensorily imagining something and conceiving of something. Whilst they differ in some ways, there is a core phenomenon in both. We have seen that it is plausible to think that we sensorily imagine entities as existing now. In a similar way, we conceive of entities as existing now. The difference in these unusual cases is that we also form a higher-order thought about the initial conception.

This view is perfectly compatible with Temporalism. There is a clear sense in which each represented entity appears to be temporally related to our wider experience. They appear to be simultaneous with our wider perceptual, bodily, and emotional experience. We also represent a negation. Yet the negation operator is just another temporally related constituent. It appears to exist at the same time as the content that it negates.

We can apply this view to eternal conceptions of God or numbers, or the absolute idealist’s conception of the universal mind. There is a sense in which they conceive of these entities as strictly atemporal yet it is a loose sense that it is entirely compatible with Temporalism. They conceive of atemporality indirectly via negation.
This issue has a bearing on whether it is possible to conceive of a non-human mind that is unified in some way yet not P-temporally related. It hinges on whether conception via negation qualifies as an adequate and successful conception. Is it a possibility-supporting conception?

If you think that my psychological description is approximately correct but that such a procedure is inadequate, or even that it involves outright incoherence, then you have reason to think that it may be impossible to conceive of atemporal unity. If this is so, then Temporalism might be a metaphysical truth. Of course, it is also an option to hold that we cannot conceive of atemporal unity yet this is no guide to its possibility. We may just be cognitively constrained, unable to think outside of our temporal framework. I take no stance here on these issues.

I have assessed a number of possible objections to the claim that Temporalism meets the Scope Constraint. I examined the challenged posed by unusual states such as déjà vu, and time agnosia, but argued that they provided little evidence against the view. I then went on to consider the Problem of Abstract Unity and outlined the sempiternal defence. I showed how Temporalism can respond to these kinds of cases in a way that Spatialism is unable to do so. I concluded by assessing the Problem of Flights of Fancy in both sensory and non-sensory forms. Highlighting the sense of actuality at the core of such conceptions I showed how they pose no serious problem for Temporalism. We can tentatively conclude that Temporalism meets the Scope Constraint: It pinpoints a form of unity that plausibly holds between all the different kinds of elements involved in every unified stretch of experience. It seems that the ontologically neutral nature of a temporal relation is the view’s most precious asset. It connects indiscriminately.

4.5 Objections to the Sufficiency Claim

I will now consider a family of objections to the claim that apparent temporal relatedness is sufficient for the unity of two or more elements. Each of these objections describes a scenario in which it might be thought that two or more phenomenal properties – or experiences - are represented as temporally related yet are disunified. The first scenario involves two individuals at a single moment in time:

Suppose you are watching a football match with somebody else. You may represent the other person as experiencing the match at the same time as you are.
Yet it is implausible to think that your experiences are unified with their experiences. Therefore, apparent temporal relatedness is not sufficient for unity.

The second scenario involves a single individual at two different times:

Suppose you *remember* falling off the roof of your shed when you were ten. In remembering the pain you may represent the experience as *being in the past* with respect to your current experience. Yet it is implausible to think that your present experience is unified with your past experience as a ten year old child. Therefore, apparent temporal relatedness is not sufficient for unity.

We can imagine a host of variants on this theme. Each looks to describe a scenario in which an individual represents two experiences as temporally related yet where it is arguably implausibly to think that the two experiences can be unified.

My response to each member of this family of objections is the same: In the sense of unity that I have specified, the relevant phenomenal properties are unified. Therefore, apparent temporal relatedness plausibly remains sufficient for unity. It is only if you are working with a mistaken conception of what unity involves that these objections seem compelling. In particular: The old assumption that a case of unity is one in which we *have* two or more experiences together. In *this* sense, it is indeed implausible to think that the scenarios involve unified experience. In the first scenario you do not *have* the other individual’s experience of the football match so you clearly cannot *have the two experiences together*. In the second scenario it is true that you did once *have* the experience of falling off the shed but you have long ceased having it and now only recall it. Consequently, you clearly cannot *have* the original experience *together with* your present experience.

However, I have argued that this old, narrow conception of unity is wrong. I have argued that the only sense in which we experience unity is in the following sense: We experience two entities as together. In some cases, these entities may be phenomenal but in many they are not. The apparent ontological kind of each relatum is a further fact, nevertheless, irrelevant to the nature of the unity relation itself. Furthermore, in *this* new sense of unity it is indeed very plausible to think that the relevant phenomenal properties are unified in the two scenarios. In the first scenario you are aware of the other person’s experience of the match *as together with* your experience of the match. You do not seem to *have or undergo* their experience yet there is still an important sense
in which you are aware of it as together with yours. Both experiences seem to be part of
a single objective world. Similarly, in the second scenario you are aware of the past
experience as together with your present experience. You do not seem to be having or
undergoing the past experience yet there is still an important sense in which you are aware
of it as together with your current experience. The two experiences seem to be part of a
single objective world. They are simply distant in time from one another. If these
descriptions are right, then it remains very plausible to think that apparent temporal
relatedness is sufficient for unity.

It may be thought, though, that even if these phenomenological descriptions accurately
pick something out, there is still a form of unity and disunity that my conception misses
out. On this view, it may be correct to say that there is some sense in which the relevant
experiences in these scenarios are unified yet there is still an important sense in which
they are not and, as a consequence, Temporalism, as formulated, is inadequate.

Consider the first case. It may be argued that in this scenario the other individual
actually has their experience of the football and they have it together with their other
experiences, whereas you merely represent their experience and you have this further
experience together with your own experiences. There is a crucial sense in which they
have their experience together with their other experiences in a way that we do not. If
Temporalism cannot account for this difference, then the position fails.

I am happy to acknowledge that there is an important difference here yet it is perfectly
consistent with Temporalism. To see why, we must be very clear about the aims of the
present project. Temporalism purports to describe necessary and sufficient conditions
for the experience of unity. It does not purport to offer necessary and sufficient conditions
for all forms of mental unity. As noted earlier, there are very plausibly many forms of
sub-experiential unity. Moreover, these account, in part, for the difference between the
way that the other individual has their experience together with their other experiences,
and the way that we are aware of it. It is also important to recognise that Temporalism
is not obliged to offer a full description of the experiential difference between the way in
which I am aware of my own experiences and the way that I am aware of another
person’s experiences. There will be many experiential differences that do not involve
unifying relations. Yet Temporalism is only in the business of specifying our experience
of unity. When we recognise the real aim of Temporalism, it can be seen that these
differences in sub-experiential unity and non-unifying experiential features in no way threaten the project.

Let us look more closely at the first scenario, then. There are undoubtedly many differences in the way that the other individual is aware of their own experience and the way that you are. Most notably, they represent it as their own experience, whereas you represent it as somebody else’s. In association with this, the content of their visual experience will be perspectival. Your representation of their experience will fail to fully capture this aspect. More generally, your representation of their experience will fail to capture the richness and complexity of what their experience is actually like. It will be a drastically simplified portrayal. These are all experiential difference between the way that they are aware of their own experience and the way that you are, yet they are not unifying features. Apparent temporal relatedness exhausts the basic togetherness of the various entities that a subject is aware of. Indeed, some of these experiential features presuppose temporal relatedness. In order for it to appear as if an experience is mine, the relevant phenomenal properties must appear to exist at the same time as I do. These experiential features make for a difference between the way that somebody has their own experience, and the way that you might be aware of it but they add nothing to the basic unity that temporal relatedness establishes.

This is not to deny that these experiential features are closely tied to some kind of unity. Indeed, they are plausibly understood as the product of sub-experiential unities. These other forms of mental unity also allow us to understand the difference between the way that the other individual has their own experience, and the way that you are aware of it. There are various objective features that are relevant. Most simply, they actually have the experience, as a matter of objective fact. Whatever this amounts to, it is an objective fact that allows them first-person access to their own experiences. We have only indirect access and, consequently, our representation of what their experience is like is naturally impoverished. Other neural and functional unities underpin these differences between the way that they have their own experiences, and the way that we are aware of them. What must be stressed again, though, is that insofar as unity is experienced it is exhausted by the apparent temporal relatedness of different entities. This is how we experience things as together, regardless of the underlying objective conditions.

It may be thought that this view leads to a possible contradiction. Suppose somebody does not realise that you are watching the football with them, from behind their back.
They do not represent their experience as temporally related to your experience of the football. In this sense, their experience is disunified from your experience. Yet you do represent their experience as temporally related to your experience. In this sense, their experience is unified with your experience. How can the experience be both unified with and disunified from your experiences?

The problem is only superficial, nonetheless. It is both unified and disunified in the sense that it is true that somebody represents the experience as being together with certain other experiences and it is true that somebody does not represent the experience as being together with certain other experiences. These different representations no more generate a real contradiction than the claim that a coloured shirt may appear dark blue to one individual but black to another. In short, it is an inconsistency at the level of appearances, across individuals.

When we consider this range of sub-experiential unities and non-unifying experiential factors we see that it is perfectly possible for Temporalism to allow that there are significant differences between the way that another individual has their own experience – and has it together with their other experiences – from the way that we might be aware of their experience – and the sense in which we are aware of it together with our other experiences. These differences do not affect the crucial claim that the experience of unity is exhausted by the apparent temporal relatedness of different entities. Temporalism does what it needs to. We can conclude that Temporalism very plausibly offers a sufficient condition for unity.

4.6 Reduction and the Power Constraint

Having mirrored the intuitive structural profile of the unity of consciousness, met the Scope Constraint, and resisted challenges to the claim that apparent temporal relatedness is sufficient for unity, Temporalism is now in a position to propose the reduction of the primitive unity relation. This move from co-extensiveness to reduction can be motivated on two grounds. The first is methodological. Reductionism is simpler and more elegant. You might claim that P-temporal relations merely shadow unity relations but this account is more complex than it needs to be. You may also need to posit a further linking law or some objective necessitation relation to explain this peculiar pattern of co-instantiation. Even if you resist this, the account postulates two
relations when one will do. There is no good reason to retain the primitive. Furthermore, abolishing the primitive decreases the obscurity of the account. B-series temporal relations are familiar from both common parlance and empirical psychology, and have counterparts in the natural sciences. They pose no additional problem to monistic approaches such as naturalism. The primitive unity relation has none of these virtues.

The second basis for reduction is phenomenological. Once temporal relations are in place it is difficult to discern anything over and above them. They have the same logical profile and hold between the same entities. Suppose we experience a flash as simultaneous with a bang. Is there anything more to the sense of unity than this apparent simultaneity? It seems plausible to think that it exhausts the experience. On these two grounds we can legitimately reduce the primitive unity relation to represented temporal relatedness.

This leaves just one final task. Even if there is no reason to believe in a primitive unity relation and every region of unified experience involves P-temporal relations, it may still be argued that there are other unifying relations as well. This is Hill’s Pluralism challenge. On this view, P-temporal relations would be special only in their scope. Responding directly to Hill’s concerns, we formulated the Power Constraint: The proposed unity relation must be necessary for the instantiation of all other phenomenal relations and their power to unify must depend upon it. It is only by meeting these two conditions that we can wholly block Pluralism. Without the second condition, it will still be possible for the Pluralist to maintain that although P-temporal relations might be necessary for other kinds of unity, this does not mean that they are the only unity relations. If it can somehow be shown that these other phenomenal relations have no power to unify in themselves, however, then Temporalism can legitimately claim to explain all forms of unity. In short, it will succeed as a general, reductionist account.

I have argued that when we experience things together this can be understood in terms of an apparent temporal connectedness of some kind. This kind of unity is not increased by adding further phenomenal relations to the mix. Once P-temporal relations are in place, this experience of togetherness is as complete as can be. Nevertheless, it would beg the question against the Pluralist to deny that two temporally related entities could be more unified in any sense. It may be thought, for example, that this is the case if more phenomenal relations are layered on top. If each is responsible for unifying in a
different way, then the more relations that there are, the more unity there will be. This is
the pile-up picture that Hill pushes. I will now close the chapter by arguing against it.

On the face of it, it is plausible to think that the full range of elements must appear
temporally related in order to be unified. We have surveyed a wide range of cases and
found no reason to doubt this claim. These relations seem to permeate every part of
our experience. I will now argue that they are necessary for the various other
phenomenal relations that we experience and that insofar as these other relations have
power to unify they do so only in virtue of P-temporal relations. Let us begin by
considering P-spatial relations as they are perhaps the simplest and most intuitive of the
alternative relations. In Chapter Three I argued that some entities are unified without
appearing to stand in spatial relations. Yet even when we consider a legitimate P-spatial
structure, we see that P-temporal relations are at its core. Suppose you can see a person
to the left of a shop. This P-spatial relation is a real part of our experience. It might be
thought that it introduces a richer degree of unity, over and above their apparent
temporal relatedness. Yet the two relations are not really distinct. In order to experience
the spatial relation as relating the person and the shop, we must be aware of the spatial
relation as existing at the same time as the person and at the same time as the shop. In other
words, two P-temporal relations are built into the brickwork of the P-spatial structure.
Without these two crucial links in the chain, the spatial relation will not appear to relate
anything. We can see, then, that both conditions of the Power Constraint are met.

Firstly, P-temporal relations are necessary for P-spatial relations. Secondly, the power of
P-spatial relations to unify depends on P-temporal relations. They unify in virtue of these
links in the chain. P-temporal relations make up the very structure. Tellingly, the reverse
does not hold. A P-temporal relation can unify two entities without having to be P-
spatially connected to them. For example: The apparent simultaneity of the contents of
an abstract thought, with wider perceptual experience. In this case, one relatum does
not appear to be located in space at all. In fact, even if the two entities are both P-
spatial, it is far from clear that the P-temporal relation between them must appear to be
spatially related itself. Yet a P-spatial relation must clearly be P-temporally related to its
relata. P-temporal relations seem privileged in a remarkable respect.

By satisfying the Power-Constraint in the case of P-spatial relations, it can be shown
that it is false to say that two distinct unifying relations are in play here. The P-spatial
relation adds nothing by itself. There is no increase in unity. No gradual pile-up.
Parallel points hold for our experience of the ownership relation. When we consider the structure of ownership, we find P-temporal relations at its core. Suppose you experience yourself as a person undergoing an auditory experience and a gustatory experience. The ownership relation holds between you and the two experiences. Yet in order to experience yourself as undergoing the experiences, you must be aware of the ownership relation as existing at the same time as you and at the same time as the two experiences. P-temporal relations form crucial links in the chain again. Without them, the ownership relation will not appear to relate anything. Insofar as it has power to unify it owes it to the P-temporal relations that hold the structure together internally. They are its glue.

In fact, these points hold for every single kind of phenomenal relation in ordinary human experience. We have seen that Temporalism very plausibly meets the Scope Constraint. This means that all of the elements appear located in time. Furthermore, a relation very plausibly cannot appear to relate two temporally located entities unless it is itself temporally located with respect to them. Consequently, every familiar phenomenal relation will need to be P-temporally related to whatever it relates.

The original Scope Constraint left this issue aside. Our investigation focused on the unity of non-relational entities. One way of understanding the Power Constraint is to think of it as a further radicalising of scope. If something satisfies the Power Constraint it is necessary even for relating the rest of the relations to their relata.

What is important for our present purposes, though, is that each and every familiar phenomenal relation will owe any power it has to unify to the P-temporal relations that bind the structure together. They are impotent in themselves. We saw earlier that we had good reason to think that abstract entities such as propositions appear to be sempiternal. This means that even abstract relations such as the conjunction relation must appear to be located in time if they are to successfully relate the propositions. Moreover, not a single one of these alternative relations is necessary for P-temporal relatedness. If nothing else, this follows from the fact that each relation failed to meet the Scope Constraint. As such, there will be cases where an entity is P-temporally related yet not related at all in the other relevant way.

It may be that if you think that it is a general principle that all phenomenal relations must appear to be simultaneous with whatever they appear to relate, then you may have
reason to think that Temporalism succeeds as a general account of *all* forms of unity, human or otherwise. I will not defend such a claim here, however. I wish to conclude only that all of the *familiar* phenomenal relations from ordinary human experience owe their power to unify to P-temporal relations. This satisfies the Power Constraint and blocks Pluralism. Temporalism promises to offer a perfectly general, reductionist account of unity in ordinary human experience. Whether it can hold good on this promise, however, depends on whether it can resolve the various potential regress problems that face such views. I will consider this issue in the final two chapters.

4.7 Summary

Our discussion in this chapter has covered a lot of ground. Along the way we have looked at the experience of indeterminacy, sensory imagination, and *déjà vu*. We have considered the way that we think about abstract entities, Gods, and possible worlds, and have explored a range of pathological cases such as time agnosia. Wherever we have looked, we have found the same thing. Our experience of time remains a stubborn nucleus at the centre of it all. Temporalism is microstructurally powerful in the sense that it can work at the finest grain. Certain views appear plausible at a coarse grain yet collapse on closer inspection. Temporalism has the resources to reach right down into the details, connecting the simplest of properties or individuals, yet works equally well at the macrostructural level, connecting complex entities such as persons, propositions, or physical objects. Furthermore, B-series relations are ontologically neutral. They connect indiscriminately, regardless of the ontological nature of the relata. It is becoming increasingly plausible to think that the internal structure of consciousness is temporal down to the last nut, bolt, and screw.
5 The Counting Question: The Case for the One-Experience View

Having put in place the skeleton of an answer to the Unity Question, we are now in a position to address the Counting Question and the Dependency Question. In this chapter and the next I will record a number of implications that Temporalism has for our these questions and, in turn, show how our answers to them allows for a fuller, more rounded explanation of unity. I will argue that we have very good reason to endorse two quite startling answers. In this chapter, I will argue that a unified region of experience consists in just one very rich experience. In the final chapter I will then argue that we have no choice but to accept a form of structuralism about experience. This view is strongly holistic in that it entails that the content and character of our unified experience is heavily interdependent. Furthermore, this position allows us to resolve the JMC objection that faces views like Temporalism. Taking Temporalism as a component, my final package of views will form a unified system that resolves each of the three core questions.

5.1 The Counting Question

The second core question is the Counting Question: How many experiences does a unified region of consciousness consist in? Should we think of our experience at a certain time as consisting in one very rich experience, in just a handful of sense-specific experiences, or in many sense-specific experiences? Or could we perhaps carve experience into chunks that straddle more than one sense? Entangled with this issue is the question of individuation. How should we go about counting experiences? What method should we use to carve up our complex experience? Is there any principled way to do so?

Suppose you’re walking through a food market at night. As you push through the crowds you feel a number of people bump past you, hear snippets of conversation, and smell a blend of different foods and drinks. As well as this sensory experience, you might also experience a variety of different emotional feelings and engage in conscious thinking. This rich passage of experience might be sliced up in many different ways. Does the sight of the brightly lit pizza stall, the smell of the dough, and the feel of our own legs as we stride towards it form one single experience? Or is the sight of the pizza stall part of the same experience as the view of the stall next to it and the council building in the background? Does the brief conversation with the man on the stall
consist in a series of experiences or just one? How many experiences are we having during this short passage?

The reason for this uncertainty is that it is not obvious how we should go about counting experiences. There seem to be a number of different possible approaches. We might think, for example, that wherever there is a representation of an object, there is a distinct experience. There is an experience of the pizza stall, an experience of the council building, and so on. Experiences are individuated in terms of represented objects. In order to count experiences, we need to count the objects. This approach would result in a view according to which we typically have a great number of experiences at a given time.

Alternatively, it might be thought that whenever a phenomenal property is instantiated, there is a distinct experience. In order to count experiences, we need to count phenomenal properties. Given that what it is like to experience the smell of pizza is qualitatively different from what it is like to see the lights on the stall, this region of experience must be carved up into more than one experience. Again, this generates a view according to which there is ordinarily an enormous multitude of experiences.

But we might adopt a more restrictive approach. It may be suggested that we count experiences by counting certain clusters of phenomenal properties. How we decide which phenomenal properties form a cluster is, of course, a big question for any such account.

An even more restrictive method might make appeal to the natural ‘fault-lines’ that are sometimes thought to segregate the different modalities. It might be argued that we have one experience per modality. In order to count experiences, we just need to count modalities.

We might even reject this kind of approach all together. It might be thought that we need to look outside of experience for the identity conditions of experiences. Perhaps we need to carve experiences up in terms of their underlying physical states. Where a distinct physical state exists in the brain, a distinct experience exists. Alternatively, we might turn to a functionalist criterion. A distinct experience exists when a distinct functional role is fulfilled.

A number of different counting methods are possible. Yet what prompts debate about the correct method of individuation is the intriguing fact that it is impossible to
introspectively read off the number of experiences that we are having. To have any chance of counting, we must first decide on a method of individuation. The Counting Question cannot be answered solely by direct introspection. We can capture this fact in the following principle:

**The Inscrutability Principle:** It is ordinarily impossible to establish through introspection alone how many experiences we are having during a given phase of experience.

This is uncontroversial. It is uniformly assumed that we must first choose our method of individuation. This then allows us to infer the number of experiences from certain markers – such as phenomenal properties or physical objects. The difficulty of non-arbitrarily deciding on a method has led some to flirt with a tolerant view according to which there is no single, privileged way to carve up a given stretch of experience. Accordingly, there may be no deep fact of the matter how many experiences we are having at a given time. Different methods might be legitimately adopted in different theoretical contexts.

I don’t want to claim that we can’t answer the Counting Question, however. I think that there is a single correct answer and we can find it out. But we cannot do this through introspection alone. You need arguments.

This is the route Tye pursues in his regress arguments against the orthodox mereological view of experience.\(^\text{106}\) Although Bayne shows both to be unconvincing in their present formulation, I will argue that it is the right kind of approach.\(^\text{107}\) Before we assess the evidence, let’s set out the positions available.

On the question of individuation you may adopt a tolerant view or an intolerant view. An intolerant view insists that there is a single correct method for the individuation of experiences. A tolerant view denies this. A tolerant view is often packaged together with the claim that there is no single correct answer to the Counting Question. However, it does not entail this answer. You might think that regardless of which method of individuation you endorse, a particular answer follows.

\(^\text{106}\) Tye, *Consciousness and Persons*, pp. 21-22.

\(^\text{107}\) Bayne, *The Unity of Consciousness*, pp. 29-32.
In broad terms, there are two possible answers to the Counting Question. Firstly, you may think that a unified region consists in \textit{multiple} experiences. Clearly, there are many different ways to specify this claim. You may carve experience up into just a few thick slices – perhaps tracking the senses – or you might dice it into many very simple experiences, finer than dust. There are lots of options. Equally, you may choose a \textit{mereological} formulation, or a \textit{non-mereological} formulation. As noted earlier, the mereological formulation is the orthodox view of experience and widely endorsed. On this view, our unified experience typically consists in a multitude of relatively simple experiences entering into more complex experiences as \textit{parts}. It is worth noting that this only amounts to a claim about an \textit{objective} condition of unity. You might hold this view yet concede that the Mereological Approach fails to adequately account for our \textit{experience} of unity. I will bring all of these formulations under one banner: This is the \textit{Multiple-Experiences View}.

This view is entrenched. It is often routinely assumed without so much as a passing comment. Yet there is an alternative: \textit{The One Experience View}. Defended by Tye, this view claims that a unified region of experience consists in only a \textit{single} experience.\footnote{Strictly speaking, Tye defends a more radical \textit{diachronic} version of the thesis in which it is claimed that we only have a single experience in the spell between periods of unconsciousness. This thesis entails - but is not entailed by - the (more plausible) form of the One-Experience View that I am interested in here: The claim that a unified region consists in only a single experience.} It need not deny, however, that this single experience is very rich in content and phenomenal character. As Tye puts it:

\begin{quote}
On this view, there really are no such entities as purely visual experiences or purely auditory experiences or purely olfactory experiences in normal, everyday consciousness. Where there is phenomenological unity across sense modalities, sense-specific experiences do not exist. They are the figments of philosophers’ and psychologists’ imaginations… There is a single multi-modal experience, describable in more or less rich ways.\footnote{\textit{Consciousness and Persons}, p. 28.}
\end{quote}

Tye presents this view in his discussion of the Unity Question. He argues that it is a virtue of the account that it \textit{dissolves} the question of how it is that different \textit{experiences} are unified. Yet he openly recognises that questions of unity remain. As we have seen, Tye
offers a positive account of the unity of the different contents of this single experience. He argues that the different contents are unified when their conjunction is represented and made available for a certain kind of cognitive access. We have seen the limitations of this account. Setting this issue aside, though, what is uncontroversial is that the One-Experience View fails to dissolve the Unity Question generally. It simply constrains its formulation. Nonetheless, I will argue that the One-Experience View provides the best answer to the Counting Question even though it does little to quell the problem of the unity of consciousness.

Searle nods towards a similar position:

The urge to think of consciousness… as made up of smaller building blocks is overwhelming. But I think it may be wrong for consciousness… Indeed, maybe it is wrong to think of consciousness as made up of parts at all… Instead of thinking of my current state of consciousness as made up of the various bits – the perception of the computer screen, the sound of the brook outside, the shadows cast by the evening sun falling on the wall – we should think of all these as modifications, forms that the underlying basal conscious field takes after my peripheral nerve endings have been assaulted by the various external stimuli.

Historically, the view goes back to James. Scathing of the mereological ‘mind-stuff theory’, James argued that “we cannot mix feelings as such, though we may mix the objects we feel, and from their mixture get new feelings.” In fact, “we cannot even … have two feelings in mind at once.” Carnap also endorsed a view of this kind, although his project was somewhat different in nature. For Carnap, what we are primarily presented with epistemologically is a single, undivided experience. It is only through subsequent abstraction that we carve up this rich experience. Seeking to reflect these epistemological claims in his general system, he took ‘total experiences’ as basic and non-composite.

---


The formulation that I am interested in might be laid out as follows:

**ONE-EXPERIENCE VIEW:** A unified region of consciousness consists in only one single experience.

If the One-Experience View is true, the Traditional Mereological Approach fails to even offer an objective condition for unity. I will argue for this position now. My argument is consistent with the tolerant view of the Counting Question, however: I will argue that no matter which method of individuation we adopt, the One-Experience View must be true. No matter how we count, the answer is always the same.

5.2.1 An Argument for the One-Experience View

In the subsequent discussion I will consider a simplified case that only involves two events: A flash and a bang. I will argue that there is no plausible way of understanding this case as consisting in two distinct experiences. Only a One-Experience View can work. I will then show how nothing hinges on the simplicity of our contrived case and generalise the finding to much more complex cases.

According to Temporalism, for two elements to be unified it is necessary that they are represented as standing in a temporal relation to one another. We have seen that this is extremely plausible. I will show that the Multiple-Experiences View is unable to accommodate this very compelling claim.

Suppose we experience a flash and a bang as simultaneous. How should we understand our awareness of this temporal relation? There are two general options for the Multiple-Experiences View: A mereological interpretation, and a non-mereological interpretation. The latter is far less intuitive, however, and I will not consider it here. Because it aims to unify the simpler elements simply by duplicating them within more complex unifying experiences, it leads very quickly to a vicious regress, either in contents or experiences. Furthermore, the driving intuition for a Multiple-Experiences View stems from the intuition that simple experiences seem to be parts of more complex experiences. For these reasons, I will focus only on the mereological formulation.
5.2.2 The Mereological Formulation of the Multiple Experiences View

In the following scenario, ‘E1’, ‘E2’, and ‘E3’ are experiences with their respective contents displayed to their right. On the mereological formulation E1 and E2 are literally parts of E3. E3 does not simply duplicate their content:

E1: FLASH
E2: BANG
E3: FLASH SIMULTANEOUS WITH BANG

To understand the discussion that follows, it is important to first note that we can – at least conceptually – distinguish between different experiences in this scenario and different representations. On the model above, there are three experiences. Yet the content of E3 is complex. On some views, it could be described as involving at least three representations: A representation of a flash, a representation of a simultaneity relation, and a representation of a bang. Just as it is not entirely clear how we should individuate experiences, it is not entirely clear how we should individuate representations. But it is a substantive thesis to claim that one experience always involves one representation. We should not assume this from the start. At the very least, we can conceptually distinguish between the two in order to think about the different aspects of E3 and their relationships to those of E1 and E2.

If E1 and E2 are parts of E3, it is reasonable to assume that the simple representations involved in E1 and E2 are parts of the complex representation in E3. Indeed, if this were not so, the account would be unable to explain their unity. These simple representations, then, are numerically identical to the relevant constituents in E3’s complex representation. To put it another way: The flash is only represented once and the bang is only represented once. I am primarily identifying the representations as objective states. Nevertheless, this also plausibly entails that we only experience one flash and one bang.

These token identity claims are definitive of the mereological formulation. It is what gives the opponent hope that they might escape the regress problems that plague any non-mereological version. But this commitment has surprising implications. In the structure above, we can see that the mereological formulation takes each individual experience to have different overall content from every other. My argument against the view will be this: I will argue that you cannot claim that the three experiences have different overall
content and that the representations in E1 and E2 are *token identical* to the relevant constituents in E3. I will show that the identity claims entail that each of the three experiences has the same overall content:

E1: FLASH SIMULTANEOUS WITH BANG

E2: FLASH SIMULTANEOUS WITH BANG

E3: FLASH SIMULTANEOUS WITH BANG

Moreover, these overall representations are *token identical* to one another. I will show that each experience involves a shared, numerically identical complex representation. This is the first step of my case. In the second step I will argue that this gives us very good reason to deny that there are really three experiences there at all. Very plausibly, there is only one.

Consider the view once more:

E1: FLASH

E2: BANG

E3: FLASH SIMULTANEOUS WITH BANG

Let us assume for the purposes of a reductio that this scenario is possible and the simple representations in E1 and E2 are *numerically identical* to the relevant constituents in E3. Given that there is only one representation of a flash and only one representation of a bang, we can also safely conclude that there is only one representation of a simultaneity relation.

E3 might be thought to involve three representations, then: A flash, a bang, and a simultaneity relation. Yet these representations are not experienced in isolation from one another. Recall the Attachment Truism (AT):

In ordinary relational experience we are not merely aware of a collection of disconnected constituents. We are aware of certain entities as *standing* in the relation and we are aware of the relation as *relating* the same entities.

In short, we must experience the flash, the bang, and the simultaneity relation as *attached*. A failure to accommodate this would be a failure to capture the
phenomenology of the experience. It is only in virtue of the experience of attachment that the flash and the bang appear to have anything to do with one another. A relation that does not relate is no help to anyone.

In fact, what is needed is this: In being aware of the flash we must be aware that it stands in a certain relation to the bang. Crucially, though, this is not just to say that if we are aware of the flash as being related to the bang, then as well as being aware of the flash we must be aware of the bang. This is obviously true but I am making a stronger claim. I am claiming that the representation of the flash must be sufficient for the representation of that flash as attached to the relation to the bang. If it is not sufficient then we cannot be aware of it as attached at all. The reasons for this are as follows:

We only represent the flash once. Furthermore, to represent a flash as attached to a relation you need to represent a flash. Consequently, if the one representation of the flash involves no representation of the relation, then there will be no way to represent the flash as attached to the relation. We cannot just add on attachment from the outside, as it were. There is just no way to represent attachment without representing the entities that are attached. We do experience them as attached, however. It must, therefore, be the case that in representing the flash we represent the flash as attached to the relation. The representation of the flash must, in itself, be sufficient. This claim is metaphysical in nature: Our awareness of their attachment consists in our representation of the flash. It is built right in, not just tacked on.

In representing an entity as attached to a relation, it is clearly the case that we must represent the relation. This should be uncontroversial. However, this small step delivers the following conclusion: In representing the flash we must represent its simultaneity relation to the bang. This must also be built in to that single representation.

It might be thought that this is not necessary. It may be suggested that in representing the flash we only represent it as attached to some simultaneity relation yet do not represent what lies at the other end. This is simply not viable, however. Even if it was possible to represent dangling relations like this, it would not capture the experience in question. In our case, there is only one representation of a relation and this one, single relation appears to relate a flash to a bang. If it was only the case that we represented the flash as standing in a relation to something, the bang would have to be added on somehow, from outside. Yet this would require a second, additional representation of a
relation. This is not only implausible, it is unhelpful. The opponent would either have to concede that in representing the bang, we represent the simultaneity relation to a flash, or be left with nothing more than a second dangling relation. The first would give me enough for the next step of my argument, whilst the second would fail to explain anything. I will continue on the assumption that in representing the flash we must represent the relation it stands in to the bang. But those tempted by the response above can simply reformulate my claims into claims about the representation of the bang: In representing the bang we must represent the simultaneity relation to the flash. The scenarios mirror one another exactly.

What defines the mereological formulation of the Multiple-Experiences View is the claim that the simple representations in E1 and E2 are numerically identical to the relevant constituents in the complex representation of E3. They are one and the same. Therefore, if it is true of E3 that its representation of the flash is – in itself – sufficient for the representation of its relation to the bang, then it is also true of the numerically identical representation in E1. This gives us the following structure:

E1: FLASH SIMULTANEOUS WITH BANG
E2: BANG
E3: FLASH SIMULTANEOUS WITH BANG

E1 shares a single complex representation with E3. What should be apparent now, though, is that every point that I have made applies with equal force to E3’s representation of the bang. The two situations are structurally identical. We only represent the bang once. In order to represent the bang as attached, the representation of the bang must be sufficient for the representation of its attachment. In turn, this entails that it is sufficient for the representation of the bang’s relation to the flash. Finally, given that the simple representation of the bang in E2 is numerically identical with the representation of the bang in E3, it follows E2’s representation of the bang must also be sufficient for the representation of its relation to the flash. This updates the picture further:

E1: FLASH SIMULTANEOUS WITH BANG
E2: FLASH SIMULTANEOUS WITH BANG
E3: FLASH SIMULTANEOUS WITH BANG

Each experience now shares the very same complex representation. This is the implication of taking the Attachment Truism seriously, as we surely must. Furthermore, it is clear that the argument generalises to cases involving any number of simple experiences. If each enters as a part into the whole, then that experience will take on the representational content of that whole. Numbers do not matter here.

There are two ways in which we might argue for a One-Experience View from here. The first involves a relatively weak claim. This is the claim that we just have no motivation for believing in more than one experience if this is the only way that it is possible. What motivated the Multiple-Experiences View originally was the feeling that there was significant phenomenological support for the idea. Experience just seems to consist in a collection of different, simpler experiences. Yet our argument blocks this possibility.

In fact, the opponent reaches a painful dilemma here. They might, first of all, claim that this mereological structure is apparent in experience. Yet this is implausible. There is no sign of duplicate experiences anywhere. Alternatively, they may argue that we should not expect to notice this duplicate structure in experience: The duplicates cannot be distinguished. They blend into one, as it were. Yet this option faces a problem of motivation. Why should we believe the view now? If presented with two introspectively equivalent situations, the simplicity of the One-Experience View would surely be preferable to an account that involves the unmotivated, somewhat bizarre redundancy of shared token representations.

These considerations cast serious doubt on the Multiple-Experiences View and suggest that the default view should actually be the One-Experience View.

A stronger claim is possible, however, and quite compelling. It may be argued that the Multiple-Experiences View is inconsistent. If every plausible method of individuation led to the conclusion that E1, E2, and E3 were, in fact, numerically identical this would suggest that the view is committed to incompatible claims right at its centre. In particular: The claim that E1 and E2 are parts of E3, and the claim that this forms a multitude of experiences.
Suppose you accept the following claim:

**Individuation Principle 1**: If a token experience E1 involves all of the same token representations as E2, E1 is token identical to E2.

This claim would deliver the conclusion that the scenario above only involves one experience. It would serve as a reductio of the Mereological account. But the opponent may reject the principle.

They might argue that certain experiences may share the same token representations but it is only a subset of these that individuates each experience. Namely, the representations that are *essential* to that experience being the experience that it is. E1, E2, and E3 differ in which they represent *necessarily*. E1 is a distinct experience from E2 as E1 *need not* have represented the flash as *simultaneous with the bang*. That very same token experience might have existed on its own or in some other combination. It is only due to the contingent fact that it enters as a part into a more complex experience (E3) that it has this relational content. Given this difference in necessary representational properties, the experiences are numerically distinct from one another.

To accommodate this concern, we may redraft the principle as follows:

**Individuation Principle 2**: If a token experience E1 has all of the same *necessary* representations as E2, then E1 is token identical to E2.

I will close my case for the One-Experience View by arguing that even if we accept this revision, it still leads to the conclusion that there is only one experience in play.

The reason for this is that each experience involves the representation of an *irreducibly singular* representation. There is only one representation there. It does not break down into simpler token representations. The representation of the flash, for example, is *sufficient* for the representation of the simultaneity relation to the bang. If you think the representation of [FLASH] is a necessary representation for E1, then it follows that the representation of [FLASH SIMULTANEOUS WITH BANG] is too. The same is true of each experience. Accordingly, they will all come out having the same *necessary* representation in their individuation conditions. The second individuation principle entails the One-Experience View, then.
Moreover, it is very plausible to think that if the experiences involve the same single token representation, then they will also involve the same physical basis and functional role. It is difficult to see how the opponent can tease them apart. What this means is that however you choose to individuate experiences, you will be left with the same answer to the Counting Question: A One-Experience View. Even if the tolerant view of individuation is correct, this will fail to block this conclusion.

I have set out two ways to clinch the argument for the One-Experience View. I do not wish to insist on the strong claim. Nevertheless, it seems very plausible to take the One-Experience View as the default position, if nothing else.

This delivers a clear answer to the Counting Question. What it also does, though, is challenge the common idea that experiences enter as parts into more complex experiences. We saw earlier that the Traditional Mereological Approach was unable to satisfactorily explain the experience of unity. Yet we can now see that it may not even provide a necessary objective condition for the phenomenon.

Finally, we saw that the Attachment Truism leads to the view that when we represent an entity as related to certain other entities, this can only consist in a single irreducible representation. There is just no way of breaking them down into distinct, individual representational states. This point holds good for our One-Experience View. Even though this single experience is rich in the sense of representing many different things, it can only involve a single representational state. This fails out of the nature of attachment and the unity of the different elements. It does not just follow from a stipulation that experiences and representational states must always correspond in a one-to-one manner. No such assumption is required.
6. The Dependency Question: The Holographic Conception

“All the king’s horses and all the king’s men couldn’t put Humpty together again”

6.1 An Introduction to the Dependency Question

The third and final core question that I will examine is the **Dependency Question**. This concerns the degree of **autonomy** of the various different aspects of our unified experience. For example, would one’s auditory experience be the same if one’s visual experience differed? In what respects might they affect one another? Could the apparent **pitch** of a musical note be affected by the **colour** of the surrounding room? If such a thing occurs, **how** does it affect it? What kind of dependency is in play? This cluster of issues forms the Dependency Question.

In rough terms, a **holistic** approach claims that certain aspects of our unified experience are interdependent in some way. Conversely, an **atomistic** approach maintains that the different aspects of our unified experience retain their independence, despite entering into consciousness together. Dainton provides one of the only comprehensive explorations of this issue, charting a number of possible formulations of the holistic approach, and assessing their strength.\(^\text{113}\)

The first decision that must be made regards the precise target of the claim. What *is it* that is being said to be interdependent? What is the target of the holistic claim? As Dainton notes, several writers sympathetic to a holistic approach have suggested that the **character** of our experiences is interdependent in some way. This might be spelt out *solely* in terms of the **phenomenal properties** of our own experience or in terms of the **representational content** of the relevant experiences as well. Of course, if you hold that phenomenal properties *supervene* on representational content then an interdependency at the phenomenal level will plausibly entail an interdependency at the level of representational content.

A subsequent move is then commonly made in which it is claimed that the *experiences themselves* depend on one another. This requires a claim about the individuation of the respective experiences. In short: A certain difference in the phenomenal properties or content of an experience entails a difference in the *type* of experience or a *numerical* difference.

This generates a case for thinking that different experiences are dependent on one another in some way. Several decision points remain for this formulation. One of the most crucial concerns the nature of the dependency. Is it to be understood in causal terms or ontological terms? Just how is it that one experience *depends on* a wider region of experience?

The next decision point concerns the prevalence of such dependencies. How *common* is it that an experience depends on a wider region? Furthermore, does it depend *solely* on that particular region or is there more than one possible supporting region? We might also ask whether the supporting region is just a larger region within the overall unified block or whether it is the entire unified network or overall whole. Finally, is the dependency a *contingent* fact of our perceptual system? Does it reflect a nomic necessity? Or is it a deep metaphysical truth? A holistic approach must specify a particular path through these different options.

I will not bore the reader by setting out every possible permutation. I will, however, register two other important possible stances. It is possible to restrict the holistic claim to *token* experiences or representations. It may be argued that some or all individual experiences depend, for their existence, on a number of other particular individual experiences. This broad position might harbour the possible claim that a given state depends for its existence *as a conscious experience* on other certain experiences, or the claim that different experiences are *made conscious together*. This token dependency is a significant one in some respects yet more moderate in others. It allows that an experience of the same *type* may enter into a completely different type of unified whole. In this respect, it is less likely to startle us. Yet it maintains that individual experiences are dependent for their existence on very particular experiences. In this sense, it is a significant form of holism. Bayne is sympathetic towards something like this view.\(^\text{114}\)

\(^\text{114}\) Bayne, *The Unity of Consciousness*, pp. 225-249.
It is also possible to maintain that our unified experience is holistic with respect to the relational properties of the different representations. It might be thought that the whole necessarily affects each part but only in terms of their relational aspects. Its intrinsic nature remains untouched. If you adopt a view according to which relational properties are part of what individuates a given experience, whether as a type or token, then an interdependency of experiences may follow. Yet once again, this clearly remains more moderate in a certain sense. It promises a formal holism but it is premised only on the acceptance of a particular scheme of individuation. It makes no claims about the intrinsic nature of each experience. Both Dainton and Watzl pursue this path.\textsuperscript{115}

Type-dependencies are perhaps the most interesting, at least from a common sense point of view. It may shock a person on the street to find out that they can only hear their daughter’s tone of voice that way whilst stood perceiving that particular place, in that lighting, in that emotional state, and so on. Yet it is unlikely to shake them to the core to find out that – on a somewhat unorthodox view of how you define experiences – they cannot, strictly speaking, have that same experience again. For this reason, type-dependencies will form the focus of my inquiry.

My discussion so far has uncritically carried over the common assumption that it is different experiences that are either dependent or interdependent. As should be clear by now, I reject this assumption. We have seen that we have good reason to think that our unified experience only consists in one experience. There is no way to claim that our experiences within a given unified region are independent of one another. The most basic experience is the unified region as a whole. Furthermore, it is plausible to think that there is a sense in which unified experience only involves one representation. This blocks another possible formulation of the atomistic approach: In terms of the independence of representations.

Nevertheless, it might legitimately be pointed out that both of these concern an objective singularity of some kind, behind the appearances. It may be argued that any distinctions within experience are enough to feed a formulation of atomism.

Even if it is true that objectively our unified consciousness only involves one experience or one representational state, this does not mean that we are only aware of one entity

within our experience. If it is possible to distinguish and pick out distinct entities in some way then we may still be able to make plausible claims about their combinatorial freedom within our experience. We can say that we can be aware of a particular represented entity without being aware of various other represented entities. On this kind of atomistic view, the possibility that our unified experience only consists in one experience and one representation is of no particular concern.

Gestalt psychology represented perhaps the biggest organised rebellion against the atomistic way of thinking in contemporary Western thought. Despite its period of success, however, this school of thought was quite often limited in its ambitions. Many advocates of Gestalt psychology restricted their claims to small-scale interdependencies often within a single modality.

Far more striking effects are commonly recognised today, either operating across a much wider region, or even across entire modalities. In one of the most startling contemporary visual illusions Lotto and Purves demonstrate the way in which our experience of colour is drastically affected by the wider visual context.\footnote{R. B. Lotto, and D. Purves, ‘The empirical basis of colour perception’, \textit{Consciousness and Cognition} 11 (2002). Other visual illusions are available on their website: \url{http://www.purveslab.net/seeforyourself/} Accessed on 30/09/2014.} In Fig. 2 we see the apparent illumination in the wider surrounding area modify our perception of certain coloured squares on the two cubes. Astonishingly, what individuals typically perceive as blue squares on the left cube are physically identical to what they typically perceive as yellow squares on the right cube. Physically, they are both, in fact, patches of plain grey. When the wider context is masked off, as shown below, this can clearly be seen. The sceptical are invited to mask it off themselves.

Conversely, in Fig. 3 individuals typically perceive orange and purple regions of ink as similar shades of red. The effect of the wider visual context could not be much more surprising. It seems that different colours may appear to be the same whilst the same colours may appear to be different.
Although these illustrations are quite breathtaking in their design the basic phenomenon that brings them to life has long been recognised, and routinely manipulated, by artists whose implicit knowledge of the principles behind colour relations represents the source of their success. The 19th century French painter Delacroix was most graphic. “Give me the mud of the streets,” he wrote, “and I will turn it into the luscious flesh of a woman, if you will allow me to surround it as I please”.  

There is now also a booming literature on intermodal effects although the basic phenomenon has been recognised for several decades. In a 1976 paper McGurk and Macdonald describe showing participants a specially edited film of a woman talking, in which repeated utterances of the syllable [ba] had been dubbed on to the visual footage of her face and lip movements for the syllable [ga]. Participants, however, reported hearing only [da] - A unique fusion of the two sensory inputs.

Remarkably, the effect can be removed instantly by closing one’s eyes, and restored by opening them once again, almost at will. The effect is clear, powerful and often unnerving. This general interplay between visual and auditory experience has a more familiar feel when encountered in acts of ventriloquism. In this phenomenon visual cues modify our perception of the sound’s origin. A similar process allows audiences at cinemas to experience the conversation in a film as emerging from the mouths of the actors on screen, rather than from the speakers at the side of the cinema. In a review of such effects, Hayward lists eight different new cases of intermodal influence. What we hear, for example, modifies our sense of touch and texture: Chalk on a blackboard, he informs us, feels smoother when wearing earplugs.

The cases that I have set out are standardly assumed to be causal dependencies in the psychological literature. There is variation, however, on how common such intermodal

---


causal interactions are taken to be. It is perfectly possible to maintain that the dependencies are merely causal yet systematic. Both Bertelson and Prinz hold this line. I am interested in building a case for a systematic ontological interdependency of some kind. To do so, we will need to have a clearer view of the two contrasting approaches.

An atomistic approach emphasises the independence of different aspects of our experience. We might say that an entity in our experience is independent if we could have represented it alongside any number of other different entities. We might think that basic smells, tastes, and moods, for example, could combine with an almost infinite variety of other kinds of entities in our experience. Something might taste exactly the same even if we were to sit in a different bodily position, have a different series of thoughts as we eat, or listen to a different piece of music. If this is true, the taste has significant combinatorial freedom. Marking perhaps the extreme outer parameter of combinatorial freedom is the claim that we might experience the entity in question entirely on its own. We might experience a flash of red, for example, without any experience of shape, location, or time: A lonely experience.

The atomistic approach is deeply entrenched and has a long history. Hume was among the most militant in his advocacy of this kind of position, declaring that “there are not any two impressions which are perfectly inseparable” Hume also endorsed the possibility of lonely experiences.

Holistic approaches emphasise the interdependence of the different aspects of our experience and look to reject or limit the combinatorial freedom of the entities that we are conscious of. The two positions fall on a shared spectrum, nonetheless. A weak holism might simply look to significantly restrict the combinatorial freedom of an experienced entity. A strong holism might deny that we can experience a certain entity in more than one context or experiential whole.

---


The dominance of the Humean line continues to this day with respect to type dependencies. Cases of apparent intermodal interdependency are typically interpreted in causal terms and as reflecting only an occasional exception to a wider pattern of independence. Although the atomistic approach towards type-dependency is routinely left as an implicit background assumption, it plays a significant role in much wider philosophical theorising.

A few have been more explicit about their commitments, however. Opie articulates what we might take as the atomistic manifesto:

Close attention to our instantaneous experience reveals it to be a complex aggregate of many elements – a sum of relatively independent parts. Right now, for example, as you concentrate on these sentences, your phenomenal experience is a very complex affair: visual experiences … auditory experiences … tactile experiences … These parts are independent because they are distinguishable in experience, and because any one of them can be removed or lost without affecting the others (try closing your eyes for a moment) … this independence among the parts of experience is even evident, to some extent, within modalities.122

Tye briefly notes the existence of some “gestalt effects” yet remarks that “[i]t is more the exception than the rule, however…And with intermodal cases, there are few Gestalt effects.”123 Dainton gives the holistic approach a far more serious hearing yet reaches much the same conclusion: “Effects as striking as the Muller-Lyer,” he comments, “are notorious precisely because they are unusual.”124 A co-authored paper by Bayne and Chalmers voices the same atomistic intuitions.125

Despite this, there are no systematic arguments in favour of atomism. Moreover, some intuitions point in exactly the opposite direction. Sprigge describes his as follows:

125 Bayne, and Chalmers, ‘What is the Unity of Consciousness?’. 
Consider the character of a painting and the relation between its parts when the painting is seen as a whole. Consider the painting, that is, as a total presence in someone’s perceptual field… It is a commonplace of aesthetics and of right minded psychology, but something we can each discover for ourselves, that every detail in the painting as a complete presentation has some difference, even within its own bounds, from what that detail would have if it were seen apart, or in another whole… An eye as it figures in a certain painted face, will supply a good example. Certainly the same identical shape and pattern of colour can be present in a different whole, but one cannot think of what lies within the eye’s own bounds as having a character unaffected by the whole it helps form… [I] invite the reader to consider whether he can think of any element within experience as having for its total character something which is untouched by its precise role in the experience as a whole. One surely cannot isolate something which would be only the same, without a shred of difference, rather than something possessing an affinity thereto, if it occurred in another total experience.”

Weighing in on this side of the clash of intuitions, James, the most seasoned of phenomenologists, approvingly cites the Rev. Wills’ claim that “the most dim shade of perception enters into, and in some infinitesimal degree modifies, the whole existing state.”

These counter-intuitions should not be dismissed. Until very recently it was routinely assumed that there were no significant interdependencies at all across the senses, whether ontological or causal. It is only recently that the philosophical community has begun to accommodate the evidence from psychology. We should be alert to the possibility that we are overlooking a more substantial phenomenon. Atomistic intuitions may be little more than lingering dogma. Clearly, we need to look to the arguments to settle this.

Dainton’s assessment of the holistic approach is primarily a phenomenological exercise that proceeds on a case by case basis. “Would a sense of melancholy,” he asks, “alter in


127 James, Principles of Psychology, Vol. 1, p. 241
felt quality if the noise of the passing cars was a fraction louder, or the room slightly brighter?” When we look at a painting, is the way that we see an eye or a face affected by the wider picture? If a pile of books were a centimetre further away from us, would the rest of the visual field seem different? These are all useful demonstrations of what is at stake in the debate, yet the danger is that once raw intuitions have locked horns on a given case we may not see any resolution. The subtlety of such cases is particularly problematic. We can trade intuitions on this all day without making any ground.

I want to offer the first systematic argument for accepting a strongly holistic view. My hope is that this can dodge the swampy territory of a case-by-case defence. I will argue for a form of structuralism about experience in which the content and character of our unified experience is interdependent, right across the modalities. In arguing for this holistic approach, I will also flesh out the view of unity that I have so far developed. To see the force of this answer to the Dependency Question, we must first, however, consider another class of problems that faces any study of unified consciousness.

6.2. Regress Problems

Regress problems are often thought to affect those who subscribe to Multiple-Experience Views. We have considered a couple of these already. In a similar way, Tye challenges the mereological approach by offering a reductio: Suppose unity holds between experiences. This relation must itself be experienced otherwise there would be nothing it is like for a collection of experiences to be unified. But if the relation is experienced, then it has its own phenomenology. However, if it has its own phenomenology then it too must be unified with the original experiences. For this, we need another unity relation. But this in turn must be experienced, and so on, into a vicious regress. Therefore, unity is not a relation between experiences.

The most popular response to this particular kind of regress goes something like this: The regress problem arises when you make the mistake of thinking that unity involves further 'binding experiences' or further phenomenal content. But this is wrong. There are no further experiences or representations of the unity relation - in addition to the experiences that are unified. Rather, co-consciousness is just a relational property of the

---


129 Tye, Consciousness and Persons, p. 20.
experiences in question. There can be *something it is like* for a collection of experiences to be unified without the unity relation itself having its own phenomenology. Dainton and Bayne both defend this kind of response.\textsuperscript{130}

This alleged regress in experiences is just a part of a far broader and deeper problem, however. Moreover, pulling back to see the full stature of the problem really casts doubt on the adequacy of these responses. As noted earlier, the regress issue in the unity of consciousness literature has its roots in Hurley. She was well aware of the scale of the problem. How, she asked, “can anything internal to content determine unity, given that content presupposes unity? What prevents the problem of co-consciousness from applying all over again to it?” This is the Just-More-Content objection (JMC).\textsuperscript{131} This query was part of a wider attack on the idea that we could wholly explain unity or co-consciousness in subjective terms. Her notion of content is a liberal one, then. For Hurley, *anything* that is conscious is liable to generate a regress.

This seems right. In fact, the regress looms regardless of the nature of the relation in question, or the nature of our awareness of the relation. *Any* kind of conscious awareness of *any* kind of relation between two entities generates a potential regress. This is a serious problem, to say the least.

We can quickly see that the standard line fails to block the regress. In claiming that co-consciousness is just a relational property of the experiences in question, and that further binding experiences or representations are not required, the response commits to the claim that our awareness of co-consciousness is *direct*. We must be aware of their unity simply in virtue of *undergoing* the experiences. Nothing more is needed.

I argued in Chapter Two that such awareness is impossible: Given that the unity relation has to connect represented physical properties to other physical properties and phenomenal properties, the relation has to be represented itself. Let us set this aside, though, for now. Even if our awareness of the unity relation was direct it would not offer even a glimmer of hope.


\textsuperscript{131} Hurley, *Consciousness in Action*, pp. 97-102. More widely, regress arguments involving relations go back to Bradley and his argument for Monism, and beyond.
It does not matter whether our awareness of the unity relation is representational, phenomenal, or direct. We will still have to be aware of the relation *as together* with the entities that it relates. Even if our awareness of it does not involve distinctive phenomenal properties or a state of representation, this must still be the case.

The response does not generate a regress in representational content or a regress in experiences, yet it is clearly threatened by a potential regress in the entities that we are directly aware of. If we are not aware of the unity relation *as together* with the experiences that it relates, then we cannot be consciously aware of their unity. Yet if we *are* aware of the relation *as together* with the experiences then it remains possible to ask what it is that their unity consists in. If we posit a further relation the same question arises. A regress beckons. If we do not, we are arguably left with no more than a collection of isolated components: Isolated experiences and an isolated co-consciousness relation.

Just as the nature of the relation and the nature of our awareness do not matter, nor does it matter what kinds of entities it is that the unity relation appears to relate. The regress problem really is this broad. Whether you claim that unity holds between *experiences* or the entities represented by a single rich experience, the regress has equal bite. The big problem with these regresses, then, is that everyone is stood on the edge of one.

I think the JMC problem *can* be resolved yet it cannot be done so simply by claiming that the unity relation has a certain nature, that we have a certain kind of awareness of the relation, or by adopting a certain answer to the Counting Question. These manoeuvres merely constrain the *formulation* of the JMC problem.

There is a sense in which we might distinguish between two unity problems, then. The project of the first four chapters centred on the identification of the kind of relation involved in all cases of unity. Without wishing to trivialise our progress, we might now think of this as the *Shallow Unity Question*. In contrast, the JMC problem demands an answer to the question of how this common relation is bound, connected, or attached to the entities that it relates. We might think of this as the Deep Unity Question.

This rebranding of JMC has the virtue of both placing the problem in its correct wider context and avoiding misleading implications regarding the term *contents*. I will argue that there is only one possible answer to the Deep Unity Question yet its implications are bewildering and difficult to understand. For this reason, the discussion from this point
on will be speculative. I will not attempt to satisfactorily resolve the many questions that my sketch of the solution will raise, yet I hope that my discussion will at least point us in the right direction.

I have shown that it is very plausible to think that unity involves the representation of B-series temporal relations and that these relations appear to hold between physical properties, phenomenal properties, and certain abstract entities, rather than experiences. This view precludes the possibility that we have direct awareness of the relational properties of our different experiences. Furthermore, I have argued that a unified region involves only a single, rich experience. This puts in place a One-Experience formulation of Temporalism. It should now be clear, however, that this does little to arm the view against the dangers of the Deep Unity Question.

I will now argue that the only viable solution to the problem entails a striking form of holism. I will begin by setting the solution out, before considering a couple of alternative responses. I will argue that each of the alternatives fails to achieve what the holistic solution does. I will then go on to consider certain wider implications that this package of views holds, and review a couple of worries that we might have.

6.2 An Answer to the Deep Unity Question: The Holographic Conception of Consciousness

A holographic image has certain remarkable properties. One of the most well-known concerns its unusual structure. If you examine even a tiny part of the hologram it will display an image of the entire image as a whole. In his discussion of holistic approaches to consciousness, Dainton describes a possible view that he labels the Holographic Conception. This view claims that:

[T]he entire and exact character of a total experience is in some manner reflected or encoded in each of its parts. Take any small component of a particular total experience, and you will find it to be imbued with the character of the whole experience of which it is a part… [W]ere a total experience in any way different, the difference would be reflected in each of its parts.
Dainton takes this view to be very implausible and adds:

But no one – so far as I am aware – has tried to defend a holographic conception of experience. (Not even Leibniz, although he may have held that the character of each particular experience was encoded in every other total experience.) This is hardly surprising. How could the entire complex phenomenal character of my current visual experience be reflected in each and every component of my current tactile experience, or in the character of the smallest components of my visual experience for that matter? Experience does not and cannot possibly interpenetrate in this manner: a simple sensation such as a pain or itch does not possess the intrinsic phenomenal complexity that would be required for the holographic thesis to be true.\textsuperscript{132}

I have significant sympathy for this sceptical assessment. Nevertheless, I will argue that we have no choice but to make sense of the idea somehow. I will suggest that however baffling it may first appear, something like the Holographic Conception must be true. In particular, I will argue that only a Holographic Conception of consciousness can adequately answer the Deep Unity Question.

Of course, I will be formulating the claim in terms of a One-Experience View. According to this formulation, a unified region of experience consists in a single experience in which each aspect reflects every other in some sense. I will say more about the precise nature of this relationship shortly.

To see why we need to take the Holographic Conception seriously, we need to really pin down \textit{what it is} that triggers these regresses. For the sake of simplicity, consider just a single pair of properties once more, such as those involved in the experience of a flash and a simultaneous bang. These might again be either physical or phenomenal properties. The One-Experience View is unable to dodge this possible regress. It makes little difference. It just means that the potential regress will be a regress in \textit{content} rather than in experiences. Similarly, even if it is true that the One-Experience View also only involves one representational state, this takes us no further. It only amounts to a claim about an \textit{objective} condition. It says nothing about how it is that we \textit{experience} the represented entities as unified. Furthermore, even though it is plausible that a temporal

relation is involved in unifying the flash with the bang, it is unclear how the flash is itself unified with the temporal relation. Let us suppose we have the following two representations: [Flash] and [Simultaneous with bang]. I will set aside for now the issue of how it is that the bang is itself unified with the flash. If we can find a successful answer to the first question, the second can be answered in the same way.

What generates the regress is actually very simple. Regardless of the underlying objective conditions, if the [Flash] appears to be a numerically distinct entity from the [Simultaneous with bang] relation, then a regress will begin. Unless they appear to be identical, a connecting relation of some minimal kind is needed. Without this connecting relation, we will not be aware of the flash as together with the relation and the relation will not appear to relate the flash to the bang. Accordingly, the flash and the bang will not be unified. Yet if we introduce a further connecting relation we are then back to where we started.

I will say more in a moment in support of this claim but first let us see what the claim amounts to when generalised to each and every P-temporal relation that an entity appears to stand in. The picture it supports clearly involves a Holographic Conception of consciousness. Each individual property reflects the totality of P-temporal relations that it stands in in the stark sense that it appears identical to them. This picture might be thought of as a form of structuralism about experience. In particular, it is loosely akin to the kind of moderate ontic structural realism that Esfeld and Lam defend with respect to the physical world. 133 Primarily motivated by the phenomenon of quantum entanglement, their view is moderate in the sense that it does not deny the existence of physical individuals. On the contrary, it accepts that relations require relata. It simply claims that there is nothing to the individuals over and above the relations that they stand in. They do not have an intrinsic nature.

I will argue that in order to escape regress problems, we must adopt a parallel position within experience. This view gives P-temporal relations a central constitutive role in qualitative experience and denies that there are any representations of non-relational entities. As with moderate ontic structural realism, the view does not involve the outright elimination of individual entities. This would be deeply implausible and entail

that we just experience *empty time*. A stretch of pure succession and temporal passage in which nothing happens and no qualitative properties are instantiated. Rather, on this view qualitative individuals and relations appear one and the same.

The identification is a real identity claim that respects their parity. A given quality – such as a certain colour – must appear to be identical to its total set of P-temporal relations. Yet these P-temporal relations cannot themselves appear numerically distinct from the relevant set of qualitative properties that they relate.

In respecting the reality of the qualitative representations, the view is able to resist the *No relations without relata* objection that *radical* ontic structural realism in the physical domain often faces. Whilst it is very plausible to think that in order to experience relations we must experience relata, it is not so obvious that the relata must appear to be *numerically distinct* from the various relations. As it stands this is nothing more than a raw atomistic intuition and one that comes close to begging the question against the structuralist. This is not to say that the idea presents no difficulties at all. Far from it. I noted at the outset that the view that emerges from the Deep Unity Question will pose various challenges. My angle will be this: We simply have no choice but to face them down. We *know* that our experience exhibits deep unity. If this is the only way that this is possible then some kind of Holographic Conception of consciousness is true. Therefore, we need to try and make sense of these ideas.

This may take time. There is a lot of work to be done. Firstly, we need to understand how these entities appear to play a dual role of being *both* relations and relata in some sense. It may be, for example, that we are naturally disposed to apply different *concepts* to the same things and - in thinking about them in different ways - we generate the false notion of relations that are *distinct* from relata. A second issue concerns the kind of relations in play. It may be that it is best to think of a single qualitative individual as consisting in a single *many-place relation*, strictly speaking. I do not pretend to have satisfying answers to any of these issues. These are big questions for another day. I record them only to acknowledge the testing nature of the picture and to hopefully point towards a few fruitful areas of discussion. Just as shifts in our understanding of the microphysical world has generated deep questions regarding the nature of physical

---

individuality, it seems likely that shifts in our understanding of the microstructure of experience will generate difficult questions about our experience of individuality, and about the relationship between apparent singularity and apparent plurality.

I will argue that experience must have a holographic structure. I will say that a represented entity is exhaustively relational if it satisfies these conditions and appears identical to its set of P-temporal relations (or to a certain many-place relation). The position allows for a broad construal of the term ‘relation’. What I say will apply to even the most minimal form of apparent connection between different aspects of experience.

This solution to the Deep Unity Question is simple in a certain sense yet puzzling in other respects. Let us now pause to consider the case for the claim that I have advanced. I am claiming that in experiencing [Flash] we must experience the [Simultaneous with bang] relation. My reasoning is essentially as follows: If we do not, then we cannot experience the flash as unified with the bang. Yet we clearly do experience them as unified. Therefore, it must be the case that in experiencing [Flash] we experience the [Simultaneous with bang] relation. This very plausibly entails that in experiencing the flash we experience the bang. Given that this same line of reasoning can be applied to every unity relation that the flash stands in, we can conclude that in experiencing the flash we experience everything that it is unified with. Furthermore, it applies to any element in a unified region of experience, including the bang: In experiencing the bang, we must experience everything that the bang is unified with, including the flash, in turn. This delivers the Holographic Conception of consciousness.

Every representation is encoded in every other.

The crucial step lies in the claim that in experiencing [Flash] we must experience the [Simultaneous with bang] relation. An atomistic approach will wish to allow for the obvious fact of unity whilst denying that this involves the full interpenetration of the flash and the bang.

It might be suggested that the argument is guilty of equivocation: It is true in one sense that in experiencing [Flash] we must experience the [Simultaneous with bang] relation yet false in another, stronger sense. Moreover, the first sense is not sufficient to deliver the conclusion that the flash appears to be identical to its set of relations or that there is any significant form of interpenetration.

The only way to address this concern is to assess a couple of possible interpretations of
the pivotal phrase. I will take each in turn, beginning with the loosest, before slowly tightening the screw, and revealing the intimate way in which the two representations are attached.

It might be claimed, firstly, that all the relationship amounts to is this: *When* we experience the flash we are *also* aware of its relations *at the same time*. This option admits of two readings. The first involves the claim that we experience [Flash] as simultaneous with [Simultaneous with bang]. It should be clear that this move jumps headfirst into the regress. In order for this further represented temporal relation to unify the two other representations, we must be aware of them *as together*. Understood in atomistic terms, at least, this move just means that a further representation of a temporal relation will be needed, and so on.

The second reading just makes the claim that when we represent [Flash] we represent [Simultaneous with bang] at the same *objective* time. This offers no advance. It does nothing to explain their unity. Mere objective simultaneity is not sufficient for unity.

As I have already emphasised, it is also no good claiming that it means only that a single experience, objective state of representation, or act are responsible for the experience of [Flash] and [Simultaneous with bang]. These objective conditions in no way dodge the regress. In fact, they do literally nothing to explain their unity *in experience* unless they are taken to entail further claims about subjective experience - such as the presence of a certain phenomenal relation. Yet this simply brings us to the brink of the regress once more.

A stronger interpretation is required. It might be thought that *in experiencing* [Flash] we must experience the [Simultaneous with bang] relation in the following sense: We experience the flash as being an event with certain intrinsic qualitative properties that *has* further relational properties. There is no mysterious interpenetration, however. The intrinsic properties and the relational properties remain entirely distinct. Either the event as a whole appears to instantiate the further relational properties, or the individual intrinsic properties appear to do so. The relationship between them in both cases, though, is one of *instantiation*, not identity.

The problem with this is that the instantiation relation opens up enough distance between the respective entities that further unifying relations are required. An event cannot appear to *instantiate* certain relational properties if we are not aware of the event,
the *instantiation relation*, and the relational properties *as together*. Similarly, an individual intrinsic property such as brightness cannot appear to instantiate the further relational property of ‘Being simultaneous with a bang’ unless we are aware of the intrinsic property, the instantiation relation, and the relational property *as together*. This interpretation generates the following picture, then: [Intrinsic properties of flash] *unified with* [Instantiation relation] *unified with* [Relational property of being simultaneous with bang]. Yet in order for these further unity relation to relate the different entities, they must themselves appear to be unified with them. A regress begins again.

An even tighter relationship is required. It may be suggested that each individual intrinsic property has a part that is purely intrinsic and a part that is relational. The second part is relational in the sense that appears identical to the relations that the intrinsic property as a whole appears to stand in. This gives us the following ingredients: [Part 1 of brightness of flash], [Part 2 of brightness of flash], and [Simultaneous with bang]. On this view, [Part 2 of brightness of flash] appears numerically identical to [Simultaneous with bang]. This aims to accommodate our concerns over wholly atomistic approaches to the Deep Unity Problem, whilst still maintaining that there is some core part of a qualitative property that remains distinct from and independent of wider experience. It does so by splitting each intrinsic qualitative property in two. One half deals with connections. The other half deals with its qualitative being or nature.

Unfortunately, this fracture is fatal. It naturally invites the question of how this first part is unified with the second part. Even if the two parts appear to form a single whole intrinsic property, this mereological relation requires unity. One entity can appear to be *part of the same thing* as another entity unless we are aware of the three entities *as together* with one another. Yet this requires further unity relations between each. The regress now erupts *within* the intrinsic qualitative property.

It seems that if we wish to capture the unity of the flash and the bang a regress erupts no matter what *unless* it is apparent from each and every aspect of the flash that it is simultaneous with the bang. The bang must be evident in its core qualitative nature. There must be complete interpenetration. No intrinsic property can appear numerically distinct from its relation to the bang. Each must be exhaustively relational. This turns the orthodox picture of experience inside out.
These arguments hold for any elements that the flash is unified with. This means each of its intrinsic qualitative properties must appear to be identical to their full set of P-temporal relations. Moreover, the argument holds in reverse. Many elements must appear to be identical to a set of relations that includes an apparent temporal relation to the flash – or its properties.

Recall Fig. 2 in which a physically identical patch of gray could be experienced as either yellow or blue, depending on its wider context. Look again at the image. If the Holographic Conception is correct this involves more than just a causal dependency. When we see yellow its very yellowness is exhausted by its set of relations. If you take it out of its context, you tear out its qualitative nature. There is nothing more to it than its structural role. What it is like to experience that shade of yellow is what it is like to experience an entity having that unique position in the wider structure.

We might now set out the view as follows:

**HOLOGRAPHIC CONCEPTION**: Each element that we are consciously aware of must appear identical to its set of P-temporal relations, or a corresponding many-place relation.

Dainton denied that a simple sensation such as a pain or an itch could possess the intrinsic phenomenal complexity needed for the Holographic Conception. Puzzling though it may first seem, it appears that something like this is true. The quality of a slight itch must appear to be identical to its total set of P-temporal relations. Anything short of this generates a clear regress. As soon as it is claimed that a qualitative property appears numerically distinct from its unity relations, a regress opens up. It is not possible to draw this quantitative distinction. There is no way to quarantine relationality. It soaks right in to the core of experience. In experiencing [Flash] we must experience the [Simultaneous with bang] relation in the following sense: [Flash] appears to be numerically identical to the [Simultaneous with bang] relation.

It might be thought that I have overlooked an alternative holistic reading of the evidence. Might it not be said that in experiencing [Flash] we must experience the [Simultaneous with bang] relation in the following sense: [Simultaneous with bang] appears to be grounded in [Flash]? It may well be that phenomenal-grounding needs to play a bigger part in phenomenology and philosophy of mind yet its role is limited here. If [Flash] appears to be numerically distinct from [Simultaneous with bang] then the
kind of grounding in play will involve a \textit{relation}, in at least some minimal sense. It will appear to connect two different entities in a particular way and must, therefore, appear to be distinct from both. Yet if the kind of grounding in play involves a relation, then a regress beckons. In order to be aware of [Flash] as \textit{grounding} [Simultaneous with bang], we must be aware of the two events and the grounding relation \textit{as together} with one another. This requires further connecting relations, however. On the other hand, it may be that [Flash] does \textit{not} appear to be distinct from [Simultaneous with bang]. If this is so, then the grounding relation will not connect two distinct things. Furthermore, given than any line of argument for the claim that [Flash] appears to ground [Simultaneous with bang] can be just as naturally extended in support of the reverse position, the grounding relation that follows is symmetric and indistinguishable from an identity relation in this case. Such a position is compatible with the Holographic Conception of Consciousness.

I have set out the provisional case for this radical approach to experience. The position deserves to be taken seriously. Nevertheless, we need to consider some possible alternative responses to the Deep Unity Question before we firmly endorse the view. Having explored the regress threat in some detail we should be in a better position to properly assess these rival answers.

6.3 Alternative Answers to the Deep Unity Question

6.3.1 The Self-Binding Response

We saw earlier that the most common response to regress problems is to deny that the unifying relation involves a further experience or representation. Another response that has attracted interest claims that the unity relation is \textit{self-binding}. No further relation is needed as, like a glue, it binds itself to the entities that it relates.\textsuperscript{135}

This claim is typically made in the context of a view according to which the unity relation is a real relational property of experiences. We have seen that this view is not

\textsuperscript{135} Certain remarks of Dainton’s suggest sympathy with this line of response, although it is not entirely clear how this meshes with the main line of counterargument discussed earlier: Dainton, \textit{Stream of Consciousness}, op. cit., p. 215. Reviewing the book, Bayne suggests that there is no obvious reason why there should not be self-binding relations: \textit{The Unity of Consciousness}, p. 83. Bayne appears to back away from the idea somewhat in later work, however.
plausible. The unity relation is represented. Accordingly, this view must make something like the following claim: The representation of the unity relation involves the representation of the unity relation as attached to the entities that it relates.

The most immediate concern about this claim is its motivation. Given that we have been hunting for a unity relation to bind together the other elements, why think that some representations are able to self-bind whereas others are not? It seems arbitrary and odd.

This unease spreads when we realise that, as it stands, it only amounts to a claim about certain objective conditions. It is, in effect, claiming that the representational state that represents the unity relation also represents its attachment. In short, that only one state underlies it. Yet this does nothing to explain the experience of deep unity.

What the self-binding view really needs to do is make a claim about what the experience of attachment consists in. Suppose it says that it involves further relations tying together the unifying relation and the different events. This invites the regress back in.

The only option is to make a claim that is a subjective parallel of the earlier objective claim about the singularity of the representational state. Consider the simple case of the flash and the bang again. We have three possible ingredients: A flash, a bang, and a simultaneity relation – construed minimally, apart from its relata. The self-binding theorist might attempt to account for the experience of deep unity in the following way:

In experiencing the simultaneity relation, minimally construed, we experience it as attached to its relata. On this view, the experience of attachment is built right in to the experience of the simultaneity relation itself. This is the subjective spin on self-binding.

We have seen that such claims are most profitably understood in terms of apparent identity. The relation itself - minimally construed - must appear identical to its attachment to the flash and the bang. There is no further distinct relation over and above its attachment to these entities. Anything short of this strong interpretation is likely to generate a vicious regress.

Yet if the relation appears to be identical to its attachment to the flash and the bang, then it must also be the case that in experiencing the flash we experience it as attached
to the simultaneity relation. For this proposal to dodge a regress, it must be that we experience the flash as identical to its attachment to the simultaneity relation:

\[
\text{[Flash] identical to [[Attached to [Simultaneous with bang]]]}
\]

Without this apparent identity, the experience of the simultaneity relation as attached would still involve a regress. Further relations would be required. Yet if [Flash] appears identical to [[Attached to [Simultaneous with bang]]] then in experiencing the flash we are aware of the bang.

A parallel line of reasoning applies to the experience of the simultaneity relation as attached to the bang. The upshot of this is that in experiencing the bang we must be aware of the flash. Together, these two findings show that the subjective formulation of the self-binding view actually entails the Holographic Conception. In claiming that our experience of the simultaneity relation itself involves awareness of it as attached to the flash and the bang, the opponent must accept that in experiencing the flash we are aware of the bang, and in experiencing the bang we are aware of the flash. Clearly, it is no good saying that in experiencing the relation the two events interpenetrate yet we are also aware of each of them in isolation, entirely disunified. Not only is there no phenomenological motivation for this claim, such experiences would be irrelevant to our inquiry. We are interested in the structure of complex unified experience only. We can conclude that the subjective formulation of the self-binding view is, at heart, an exhaustively relational account.

6.3.2 The Benign Regress Response

The next possible alternative might be presented as the lesser of two evils. Horrified by the Holographic Conception of consciousness the opponent may refuse to go any further:

Hold on. This is too weird. I thought a vicious regress was bad but this makes it look like a reasonable option. Let’s go back! Give me the regress over this! Better the devil you know.
The reasoning might be developed further. Perhaps the regress is not really vicious. Maybe we really do experience an infinite number of unifying relations – with each successfully unifying the previous layer of entities. Experience is a complex phenomenon and difficult to carve up and count, after all. Moreover, it is often difficult to really pin down the difference between a vicious regress and a benign regress.

It might even be suggested that we can make a case for thinking that such a regress would be subtle and easy to miss when introspecting – despite the vast architecture involved. It may be that there are certain limitations on introspection that mean that we are unable to register its long shadow.

Unfortunately, though, there is no going back now. Even if we grant all of this, the case for the Holographic Conception still stands strong. One thing that the Holographic Conception does is allow for the immediate termination of the regress before it begins: We say that the flash appears identical to its set of relations, rather than try and tie them together with further relations. Yet the Holographic Conception has equal force even if we allow an extension to this chain of relations. In fact, it has equal force even if this chain of experienced relations is infinite. It makes no difference. Consider the following infinite structure:

[Flash] …. [Simultaneous with [simultaneous with [simultaneous with bang]]]

The dots indicate an infinite nesting structure of simultaneity relations. The basic thrust of the case for the Holographic Conception remains much the same. Either the flash appears to be identical to the entire set of relations or it is completely disunified from the lot. No matter how many times you introduce a relation that appears numerically distinct from the flash, it will not make a difference. The view is not an alternative, then. Even if it succeeds in unifying, the number of relations does nothing to block interpenetration. It just packs more in to the flash.

To really challenge the Holographic Conception from this direction, the opponent would have to maintain that there was a breakdown in the transitivity of our awareness of each step in the series.

Suppose the opponent claims that in experiencing the flash we are aware of the first simultaneity relation yet we are not aware of the successive simultaneity relation that it
attaches to, nor the one after etc. In being aware of a given relation, it might be said that we are only aware of the neighbouring relation, not more distant relations in the chain.

The problem with this is that it fails to capture the fundamental feature of the overall experience: The sense in which the flash appears to be unified with the bang. There is no awareness of this. There is only partial snapshots of pairs of unified entities. The panoramic view is missing in which we can be aware of the end-points of the chain as unified with each other.

An analogy here may be helpful. Suppose we had hundreds of photos of the world’s longest queue but each one was a photo of just two people stood next to one another. As we flick through this set of photos, at no point will we see the overall line, or the two on each end together. The view described above is like this. It fails to give us the overall picture.

This point holds for any series of relations, no matter how long. If you want to be aware of the two end points as together in any sense, in experiencing each one you must experience the other. There is nothing about an infinite chain that would resist these points. It merely makes it less plausible phenomenologically. This response fail to block the Holographic Conception, then.

6.3.3 Primitivism about Deep Unity

The final group of responses that I will consider urge us to retreat to some safe form of Primitivism, rather than accept the unsettling consequences of the Holographic Conception. Let us see how this view might go.

The first way in which the opponent may press for Primitivism is by claiming that Temporalism only works at a certain grain of description. Drop down into the real details and you need a primitive unity relation once again. The Temporalist has no choice but to come sheepishly crawling back.

Temporalism might be thought to work at the following grain:

[Flash] simultaneous with [bang]

It allows us to understand – loosely – how a flash might appear to be connected to a bang. Yet when we look more closely, the question arises of how the simultaneity relation is itself unified with the flash and the bang. It might be thought that at this
grain, the Temporalist has to abandon its reductionist aspirations:

[Flash] primitively unified with [Simultaneous with] primitively unified with [bang].

The problem with the response from Primitivism, however, is that it faces precisely the same kind of regress that Temporalism does.

I showed earlier that the kind of awareness we have of the relation does not matter. Nor does it matter what the particular character of the relation is. All that is needed to fuel a regress is the fact that we are consciously aware of two entities as related. This structural issue transcends party politics. Temporalism and Primitivism both face regresses. If each primitive unity relation is to unify these entities, we must be aware of them as together with what they relate. Yet if this requires another relation, a regress is launched. If it does not, we still need an explanation of why.

A slightly different line may be pursued. It may be argued that it is a primitive fact that a flash, a bang, and a simultaneity relation are unified. No primitive relations are required. Yet if we are to account for our first-person conscious awareness of deep unity, it is not enough that it is just a matter of objective fact. We must be consciously aware of this fact.

This amounts to the following view: The bang, the flash, and the simultaneity relation appear to enter as constituents into a single fact. This might be thought to explain our experience of unity. Yet it can do so only at the risk of running into a regress. To say that each appears to enter into a fact is to say that each appears to stand in a merological relation to the fact as a whole. This prompts the question what it is that unifies each of the three constituents with their respective part/whole relations and what unifies each of these relations with the fact as a whole. Unless they are unified, it cannot appear as if the flash, the bang, and the simultaneity relation enter as constituents into a single fact. Consequently, it cannot appear as if it is a fact that they are all unified. Yet if further relations are required to the part/whole relations with the three constituents and with the fact as a whole, then the question of their unity crops up in turn. A regress opens up.

At this point it may be tempting to ally oneself with Hurley. Her central aim in presenting the JMC problem was to demonstrate that unity cannot be wholly understood in subjective terms. We have to turn to something outside of consciousness to explain the phenomenon.
But we should not be too quick here. It may well be that part of the unity story must make reference to something objective. Yet the big issue that we are interested in still remains: How can we characterise the phenomenon internally? What does the experience of unity consist in? Do we just have to settle for characterising it in terms of a unique, primitive unity relation at some point?

There is no reason to think that this project is jeopardised by the claim that a complete explanation of the phenomenon as a whole must make appeal to objective facts. Indeed, it seems as if this project makes clear what it is that the latter must explain.

If it is said that we are unable to understand deep unity in experiential terms then we have a real problem. The problem is that the sceptical argument threatens to prove too much. If deep unity is incomprehensible in experiential terms, then it cannot be fully understood at all. The reason for this is that even if you find a smoothly correlated physical or functional condition for deep unity, you will always lack an explanation of how it is that the experience itself is possible. On the face of it, the regress problem seems to show that we cannot experience entities as unified, regardless of whether they might be unified in certain physical or functional respects.

It seems, then, that you do need to resolve the regress problem in experiential terms to show how the experience is possible, even if further work needs to be done later to fully understanding the phenomenon as a whole. I have shown that by challenging certain atomistic assumptions about the fundamental structure of experience, we can answer the Deep Unity Question. However surprising this answer may be, it is surely preferable to a sceptical view that entails that such experience is impossible – despite everyone knowing that we undergo such experience all the time.

6.4 Implications of the Holographic Conception of Consciousness

6.4.1 A Holistic Answer to the Dependency Question

It seems that something very much like the Holographic Conception must be true, although there are clearly many details and potential problems to thrash out. I will now consider some immediate implications of the view.

The One-Experience View blocked the possibility of a traditional atomistic view according to which our unified experience consists in a number of experiences that are largely independent of one another. Moreover, it suggested that our unified experience
only involved one representational state. This left no room for the recombination of either experiences, or representational states.

We saw, however, that it might be claimed that the qualitative distinctions within experience can still allow for a compelling formulation of atomism. If it is possible to distinguish and pick out distinct entities in some way then we can still make plausible claims about their combinatorial freedom within our experience. The atomistic intuition can survive – however we label the entities that it makes combinatorial claims about.

On the face of it, the Holographic Conception threatens this view. It suggests that every individual entity appears identical to the entire network of unified elements. Each part mirrors the whole. Accordingly, it may be thought to demonstrate that atomistic approaches are untenable.

To see whether the atomistic intuition can survive we need to look at it in more detail. The atomistic intuition is rooted in something like the following procedure: To begin, we attend to an individual entity, such as a phenomenal property, a physical property, a physical object, or an event. We take ourselves to be focusing just on that. We think that our attentional experience is selective and exclusive. It picks out that entity and leaves the rest behind. Having selected an entity we then go on to form certain demonstrative thoughts, imagine alternative scenarios, or compare the current one to a past event through memory.

For example: We might think to ourselves that we could experience that precise kind of red in a completely different situation. Alternatively, we might sensorily imagine what we take to be that kind of red either on its own or in a different context. Finally, we might recall a previous event in which we take ourselves to have experienced that same kind of red.

What we can see in each case is that we reach the atomistic conclusion by building on the original act of apparent attentional exclusion. We assume that in attending to a given entity we successful exclude many other entities. Our subsequent demonstrative thoughts pick out that and only that property, for example. It is only by linking the thoughts, imaginative acts, and memories to this act of selection, that they give us the impression of learning about the combinatorial freedom of an existing entity rather than simply involving the representation of a different entity in a different context. For example, if we just imagined a colour on its own this would not tell us whether that colour could be
experienced in different contexts. We would need to attend to a colour, whether real or imagined, and then test whether this could be imagined again in a different context. Attentional exclusion is an essential ingredient. This procedure gives rise to the assumption that holistic dependencies need to be demonstrated on a case by case basis: that the burden of evidence lies with the holist.

The Holographic Conception of consciousness turns this issue on its head. We have seen that there is no way to understand the experience of deep unity without endorsing something like the Holographic Conception. Yet it seems to block the possibility of exclusive attentional selection. It seems to suggest that we cannot really pick out individual entities, attend only to them, and sharply distinguish them from the wider world. No entity can appear numerically distinct from its set of P-temporal relations to other entities. Each must appear identical to this wider network of unified elements. This strongly suggests that in attending to a given entity we must be attending to the entire network of unified elements in some way.

This not only undermines the apparent motivation for atomism, it threatens its very coherence. The Holographic Conception of Consciousness suggests that we cannot even coherently conceive of a certain entity being experienced in a different context. If attending to that entity is just attending to the entire network of unified elements, then thinking that we could experience that entity without experiencing the rest of them, is no more coherent than thinking that we could experience a triangle without experiencing a triangle. So it seems.

To distinguish between attending to a single entity and attending to the entire network, they must very plausibly appear to be distinct. Yet if they appear to be distinct, then a vicious regress follows in which they cannot appear to be unified. Yet if we know anything, we know that they are unified. This is more secure than our model of attention. Accordingly, if we are to give anything up we must look again at the assumption of attentional exclusion. It may be that a mistaken model of attention generates an illusion of combinatorial freedom.

It might be thought that these holistic claims can be safely quarantined by drawing on the type/token distinction. Consider our case of the flash and the bang. It may be argued that it is only that particular token property of brightness that appears to be identical to a certain set of relations to other entities. If true, this would allow that the
same \textit{type} of property might be clearly distinguished and be thought to enter freely into a number of different combinations.

Whilst this distinction is worth bearing in mind it is no help to the atomist. Everything that I have said in support of the Holographic Conception applies with full force to \textit{type} properties. If it is true that when we experience a flash we experience both a token property and a type property, it is true of both that they \textit{must} appear to be identical to their respective set of relations. If they do not, then a vicious regress is generated which leaves the experience of deep unity impossible.

It is difficult to see how an atomistic approach might garner support for their position. In order to explain how it might even be possible to coherently conceive of atomistic recombination they must either provide a new model of attention that dissolves the worries laid out, or argue for a non-holographic interpretation of deep unity. It is hard to see how either of these might go. This is not to say that these projects are impossible. Nevertheless, there is good reason to take a strongly holistic view as the default position. It seems plausible that every aspect of our overall representational state depends on every other aspect. \textit{We know} that our experience exhibits deep unity, therefore any view that seemingly necessitates that this is false should be set aside - in the absence of further support. It should no longer be up to the holist to scramble around to find phenomenological evidence on a case by case basis. The presumption should be in favour of holism across the board.

This is not to claim that the holistic approach has no work to do. It faces many difficult questions. The holistic approach must explain \textit{why} it is that we have the impression that we are only focusing on a certain aspect of our overall experience. The holist must look to develop a new model of attention according to which attention does not \textit{exclusively} select entities. If the Holographic Conception is right, attention must modify everything in some way. This is not wildly implausible. When we do focus our attention on a certain thing, it typically seems to \textit{background} other things, modifying their appearance too. One possible view is this: Covert attention involves the deployment of particular \textit{concepts} to the structure \textit{as a whole}. Apparent shifts in overt attention consist only in certain conceptual changes. We might think of this in adjectival terms: \textit{We conceive of} the world as being presented in certain \textit{ways}. When we take ourselves to be focusing on
a bus, we are experiencing the world bus-ly. Nevertheless, attention is not exclusive in what it applies to. We might think of this as a world-first view.\footnote{Watzl defends a model of attention that has hints of such an account in ‘Attention as Structuring of the Stream of Consciousness’. His model is essentially relational in each and every experience is connected and structured by wholly contrastive attentional relations. Foregrounding one element, entails the backgrounding of others.}

### 6.4.2 The Relationship between Phenomenal Properties and Physical Properties

The question of the relationship between representational contents and phenomenal properties is the focus of heated debate. I have argued that our awareness of phenomenal properties is representational. We do not have direct awareness of them. Yet this says nothing about the question of supervenience. The claim that our awareness of phenomenal properties is representational is compatible with both \textit{i}) The claim that phenomenal properties can vary independently of represented physical properties, and \textit{ii}) The denial that they can do so.

Nonetheless, we can now see that the Holographic Conception very plausibly suggests that wherever we are aware of both phenomenal properties and represented physical properties together, we have no reason to believe in the possibility of combinatorial freedom for the phenomenal properties in question. Consider a single phenomenal property, such as the quality of what it's like to lie in the warm sun. This phenomenal property cannot appear numerically distinct from its set of P-temporal relations to other unified properties. These other properties include the various represented physical properties such as the apparent temperature of the sun. If they appear numerically distinct a regress opens up. However, if they do not appear distinct then it is difficult to see how we can coherently conceive of the phenomenal property being apart from its corresponding physical property. Everything that we have said about our ability to conceive of combinatorial freedom holds here. This is just a special case. In order to conceive of, imagine, or remember a given property in a different context we must first exclusively pick it out and distinguish it from the context. If we cannot do so, we have no reason to believe that phenomenal properties and physical properties can vary independently of one another. This undermines the idea of such scenarios as spectrum inversions in which a certain set of phenomenal properties is essentially conceived of as recombining with a different set of physical properties.
6.4.3 The Death of Mereological Views

Our next implication concerns the mereological approach to consciousness, broadly construed. We have seen this approach subjected to a series of bruising blows as we have progressed. Its fall from grace begins when we recognize that there is no subjective evidence for the common assumption that our unified experience consists in a plurality of experiences. The Inscrutability Principle notes that it is impossible to establish through introspection alone how many experiences we are having at a given time. Argument is required either way. In setting out the case for the One-Experience View I supplied such an argument. I showed how the Multiple-Experiences View, at best, has bizarre commitments and argued that we have little reason to accept the claim. I then went on to suggest that it may even be incoherent. Precisely the same problems plagued the idea that our unified experience consists in a plurality of representational states. At best, we have little reason to believe the bizarre commitments of the view. At worst, it is incoherent.

In Chapter Four I described the Progressive Mereological Approach. This view argues that all of our experience appears to fall within a single mereological structure yet these part/whole relations hold between a wide variety of entities, such as physical properties, phenomenal properties, and abstract entities such as facts. I argued that this view fails as a general account of unity as it fails to account for the unity of the overall whole with its various parts – at least, without making the implausible claim that we continually experience an improper part/hood relation between the whole and itself.

Taken together, these findings drastically reduce the possible role of mereological relations. Nonetheless, it might still have been thought that the apparent composition of different entities in experience is still an important, common feature of human experience – alongside phenomenal-spatiality, perhaps.

The Holographic Conception of Consciousness may deny the approach even this small crumb of comfort, however. It is not clear that we can think of experience in significant mereological terms at all. Under an atomistic approach, we might previously have taken the sharpness of a knife to be a proper part of a more complex experience, involving, for example, the pain of the onions making us cry, and the sound of the knife hitting the chopping board, and so on. According to the Holographic Conception however, the sharpness of the knife cannot appear to be distinct from the entire network of unified entities. The whole must be apparent in even the simplest part. To
begin with, this strongly suggests that our experience does not break up into proper parts at all.

It might be held that the sharpness appears to be an improper part of the whole experience, in the sense that the whole experience is a part of itself. This claim could then be extended to all parts. Every element appears to be an improper part of the whole. This proposal is difficult to assess but I do not wish to rule it out. Nevertheless, it is far from clear that we actually experience improper parthood relations very often. They may be legitimate within formal mereology but this in no way means that they are a common part of ordinary human experience. Furthermore, our strongest mereological intuitions about experience seem geared towards proper parthood. It is very questionable whether we have any reason to believe in this heavily circumscribed mereological role. What is more certain, though, is that experience seems resistant to significant mereological analysis. No interesting analysis seems possible.

6.4.4 The Key to Continuous Change

The final implication of the Holographic Conception that I will consider concerns our experience of temporal passage. I wish to claim that the view has remarkable explanatory power with respect to one of the most mystifying features of temporal consciousness.

The diachronic structure of experience is deeply perplexing, on the face of it. Consider, first of all, our experience of continuous change. We might experience continuous change in our own phenomenal properties, or in physical properties. For example, we may experience gradual change in the apparent volume of a song, the colour of an ember, or the position of a car.

Let us consider the last of these examples. A popular model of change in the physical world claims that what it is for a car to be moving is for the car to occupy different locations in space at different times. There is no more to the change than this. The kind of change being proposed is extrinsic in the sense that at each time the position of the car is unchanging. It changes only in the sense that it occupies different positions at neighbouring times. We might think of this as the Russellian view of change, or, alternatively, the cinematic view. On this view, the car is continuously moving during a certain period if it occupies a different position at each and every time during that period.

---

137 I take these two views to be equivalent. B. Russell set out his model of physical change in Our knowledge of the external world as a field for scientific method in philosophy, (Chicago: Open court
Even if the Russellian view of physical continuous change is correct, however, this is arguably not how we experience continuous change. Suppose a car flashes past you. It is plausible to think that the car appears to be continuously moving in a sense that goes beyond mere variation in its position at different times. Its movement does not appear to be wholly composed of a series of intrinsically static, discrete states. It does not seem true to say that the car seemed to be at one position at $t_1$ yet now at another position at $t_2$ and that there is nothing more to the experience than this. In fact, this seems to miss out the very essence of the experience: The changing. It is either yet to happen or done and dusted. This misses out the apparent connection between the different states.

There seems to be a sense in which in being aware of the state of the car at every time we are also aware of its next state. It seems to slip seamlessly from one state into another, without pausing for even an instant. In short, there seems to be intrinsic change. Adopting Cleland’s helpful terminology, let us call this real change.\(^{138}\)

In their discussion of physical change, Priest and Routley describe real change like this:

\[
\text{[I]n change… there is at each stage a moment when the changing item is both in a given state, because it has just reached that state, but also not in that state, because it is not stationary but moving through and beyond that state.}^{139}\]

The claim that the Russellian model of physical change misses out real change is a familiar worry. I do not wish to enter this debate here. However, it seems that a plausible model of diachronic unity should be in a position to explain our experience of continuous change.

When considering the problem from an atomistic perspective, the answer is far from obvious. One answer is tempting yet ultimately misguided. It may be suggested that our experience consists in a series of discrete, intrinsically unchanging representations yet...
these generate the appearance of a seamless, continuously changing world in the same way that static cinema frames do. This picture is atomistic in the sense that it claims that our diachronic experience can be wholly accounted for in terms of independent instantaneous representations. Our experience is no more mysterious than our experience every time we go to the cinema.

This view is far too simplistic, however. It is one thing to claim that a series of intrinsically unchanging physical stimuli can be perceived as involving continuous real change, and quite another to claim that what we consciously represent at different times can be intrinsically unchanging yet – in some other sense – can appear to involve continuous real change. This is a wholly different phenomenon. The only way to make sense of this alleged phenomenon, it seems to me, is to claim that perceptually our experience is Russellian yet we judge that the world involves continual real change. There seems little motivation for this and it is dubious whether this can capture the phenomenology of the experience. It is far preferable to have an account that can allow for non-Russellian change at the perceptual level.

The Holographic Conception can do this. It offers a simple, specific, and well-motivated way to describe this phenomenon. Until now, we have only considered the regress problems that face attempts to unify an entity with the relations that it stands in to other entities at that time. Yet precisely the same problems face attempts to unify an entity with its diachronic relations. Suppose we are listening to a wailing guitar solo. At \( t_1 \) we may hear one high note and at \( t_2 \) an even higher note. If \( t_2 \) immediately succeeds \( t_1 \), it is likely that we will experience the lower note as unified with the higher note. We are jointly aware of them as together in some sense. This is part of what makes a guitar solo so exhilarating. Yet this apparent succession faces a regress problem like any other relation. How is it that the low note is unified with this relation of succession? The answer it seems must be the same. Anything but apparent identity generates a vicious regress. The low note cannot appear to be numerically distinct from its set of \( P \)-temporal relations – both synchronic and diachronic. This means that in experiencing the low note, we must experience the high note as immediately following it.

This application of the Holographic Conception to diachronic consciousness yields an elegant explanation of our experience of continuous real change. It allows us to

---

140 Dainton makes much the same point in ‘Temporal Consciousness’.
understand how it is that “there is at each stage a moment when the changing item is both in a given state, because it has just reached that state, but also not in that state, because it is not stationary but moving through and beyond that state.” In fact, given that we know that our experience is unified through time, it must have this structure. It is the only way that such experience is possible. The opponent may well interject here:

Wait a second. This is all very well and good for cases of continuous real change but experience is not always like this. Sometimes we experience things as staying the same. The Holographic Conception, however, is a perfectly general account. It claims that all unified experience must have this structure or there is trouble. Why is our experience not always like our experience of continuous movement?

There is a response available, however. Suppose we can experience some things as completely unchanging. For example, we might hear one musical note droning on, unchanging. What needs to be recognised, though, is that even in this case there is a certain continuity to the experience that goes beyond merely experiencing the note as having the same properties at different times. It does not seem to have discrete stages in this way. Each stage of the note appears to flow seamlessly into the next. These stages may not be varied qualitatively but they exhibit a similar continuity to cases of real change. There are no distinguishable slices to the experience.

The Holographic Conception predicts precisely this. Each stage of the note must appear to be identical to its relations of succession. In experiencing the uniform high note at one time we must experience the note as being there at the next time. In this way it appears to be ongoing, and persisting, continually pushing into the future, rather than simply being repeated.

There is no doubt that these points are deeply speculative. Further development is required, to put it mildly. Yet the potential explanatory power of the Holographic Conception is enormous. It may allow us to get to grips with one of the most puzzling features of experience. Moreover, we might even be able to extend the account to our experience of spatial continuity.

Big questions remain. Amongst these, one is perhaps the most pressing: How do we account for the experienced transition between different unified stretches? We should

---

141 Priest, Routley, and Norman, loc. cit.
expect to have to grapple with questions of this kind. The restructuring of experience being proposed is a radical one. Any overhaul of this kind will need time.

6.5 Conclusion

This thesis had two broad aims. Firstly, I set out in detail several core questions about the internal structure of consciousness, mapped some of the possible answers that we might give, and charted some of the connections between them. In putting this framework in place, I have drawn extensively on *metaphysical* ideas. For many metaphysical questions, there is a corresponding phenomenological question. These metaphysical moulds provide useful ways of focusing phenomenological investigation. Even if my views have not tempted the reader, I hope that my work emphasises the value of systematic structural analysis within experience.

Secondly, I have argued for a novel package of answers to the three core questions. Having lobbied for a change in the way that we approach the Unity Question, I argued for a new account of the unity of consciousness:

**TEMPORALISM:** Two elements are unified if and only if they are represented as *temporally related*.

I then went on to show the implications that this view has for the Counting Question:

**ONE-EXPERIENCE VIEW:** A unified region of consciousness consists in only one single experience.

The final chapter centred on the point at which the Dependency Question intersects with the Unity Question. Exploring the devastating regress problems that plague accounts of unity, I argued for a form of *structuralism* in experience and suggested that this strongly holistic view was the only way of resolving the issue:

**HOLOGRAPHIC CONCEPTION:** Each element that we are consciously aware of must appear *identical* to its set of P-temporal relations, or a corresponding many-place relation.

These answers form a single integrated system. They yield a view whereby our unified consciousness consists in a single holistic experience in which each element is exhausted by its set of P-temporal relations.
This view runs counter to the orthodox approach to consciousness. It denies that our experience breaks up into many different simpler experiences. It denies that the senses should be thought of as separate, independent channels of experience. Yet we have seen that there are serious motivations for the view, however puzzling it may appear. It seems that once you’ve broken a person’s experience into bits, nothing will help put it back together again. It will always be broken. Although puzzling, the view promises progress in our understanding of a number of other questions, including the otherwise mysterious phenomenon of continuous change.

Along the way, our discussion has wound its way through a number of other important issues. I have shown that we have good reason to believe in selfless experience, offered an account of our awareness of abstract entities, and challenged the idea of indeterminate temporal experience.

I will now finish by briefly considering the wider implications of our findings. At the outset I argued that the radical changes in our understanding of the microstructure of the physical world served as an important reminder that even our most cherished assumptions can – and sometimes should - fall quickly out of fashion. I suggested that a similar overhaul of our picture of experience may be needed. The orthodox view of its microstructure has remained untouched for too long. Interestingly the new picture that has emerged is broadly comparable in its holistic flavour to this new picture of the microphysical world.\textsuperscript{142} Relatedly, the Holographic Conception poses a challenge to our traditional understanding of the experience of identity, singularity, and plurality that is as deep and difficult as the challenge that the new microphysical picture poses for our understanding of the corresponding physical notions. Quantum physics is having to take seriously the possibility of either eliminating or radically revising the traditional notion of individuality.\textsuperscript{143} We may have to do the same within unified experience. It may not be long before we have to speak of phenomenal entanglement.

There are a couple of ways in which the emerging view might be conducive to a monistic account of reality. Firstly, the Holographic Conception suggests that we are primarily consciously aware of a single world consisting in various interrelated features.

\textsuperscript{142} See, for example: Esfeld, ‘Quantum entanglement and a metaphysics of relations’.

\textsuperscript{143} For an exploration of this debate see S. French, and D. Krause, Identity in Physics: A Historical, Philosophical, and Formal Analysis, (New York: Oxford University Press, 2006).
This seems to cast doubt on the idea that we are consciously aware of wholly non-physical properties. Whatever our experience of phenomenal properties as phenomenal consists in, it seems unlikely that it is inconsistent with a monistic view. The various properties seem to fuse quite unproblematically into a single structure. Each phenomenal property appears identical to a relation that involves a physical element. We might tentatively take this to suggest that there is nothing about our own experience that makes a monistic view implausible.

Secondly, as we saw earlier there has recently been a revival of interest in the Russellian claim that scientific theory only documents extrinsic or relational properties. In contrast, it is often assumed that phenomenal properties are intrinsic properties of experience and non-relational. This supposed incompatibility is thought to present a problem for monistic theories like traditional physicalism. We recorded one option for the monist earlier: A moderate error theory based on the representational nature of our awareness. A second option has now opened up. We have uncovered evidence that phenomenal properties do not appear to be properties of experiential states at all. The bearer or bearers are inscrutable, hidden from view. This leaves their precise nature open. Furthermore, the various properties that we are consciously aware of appear to be relational in some sense. Depending on the details of a more mature formulation, this may allow the monist to deny any apparent incompatibility with a relational physical world.

The Holographic Conception also seems to have clear implications for the neuroscientific investigation into consciousness. One of the common assumptions of contemporary neuroscience is the principle that different mental activities can be identified, isolated, and associated with different regions of the brain. Whilst there is substantial doubt about whether localisation is possible for all of our mental activities, many are uniformly taken to be localisable.\footnote{W. R Uttal is one of the outspoken voices against the assumption in The New Phrenology: The Limits of Localizing Cognitive Processes in the Brain, (Cambridge MA: MIT, 2001).} The approach is not threatened by a causal interdependency in our experience, even it is systematic. It might still be held that the different sites regularly interact. Yet certain forms of the approach are challenged by an ontological interdependency. We have seen that there is good reason to think that there is only one strongly holistic representation. This stands in clear tension with certain forms of localisation. It suggests that either the unified conscious
state supervenes on the *overall* brain state, or that there is a single, multi-modal site where it all *comes together* and is represented at once. Both clash with *reductive* forms of localisation in which it is assumed that the local modality-specific sites are individually sufficient for the relevant conscious representations. This clearly cannot be the case if our experience is holographic. If it is true that *in* representing a flash we represent other events such as bangs, then a purely visual system will be unable to generate the conscious state in question. I take this to be an example of the way in which phenomenological investigation can generate useful constraints on the plausibility of different physical accounts of experience.
Bibliography


Block, N. 1996. ‘Mental paint and mental latex’, *Philosophical Issues* (7).


Yang, C. M. et al. 2010. ‘What subjective experiences determine the perception of falling asleep during sleep onset period?’, *Consciousness and Cognition*, (19) 4.