



Précis: Stream of Consciousness

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1. Overview

That our ordinary everyday experience exhibits both unity and continuity is uncontroversial, and on the face of it utterly unmysterious. At any moment we have some conscious awareness of both the world about us, as revealed through our perceptual experiences, and our own inner states – our bodily sensations, thoughts, mental images and so on. Since once wakened we tend to stay awake for several hours, tracing out continuous routes through whatever environment we happen to find ourselves in, it is hardly surprising that our experience itself is continuous rather than discontinuous.

Or so it may seem. That there is something to be accounted for starts to emerge as soon as we consider more closely what our experience is like in its own right. Suppose your stream of consciousness over the past few hours has been a perfectly realistic hallucination, created by (fill the gap with your preferred scenario). Your experience exhibits the same kind of unity and continuity as per usual, but since this can no longer be explained in terms of uninterrupted contact with a unified and continuously existing world, it must be accounted for in some other way. Just what is it that binds your various experiences together? Since the environment only impacts on our consciousness indirectly – by influencing the way in which our brains generate experience – ordinary

non-hallucinatory experience poses precisely the same problem. What is the unifying force or relation that holds the experiential constituents of a typical stream of consciousness together? What has been unifying the myriad different parts of your own stream of consciousness for the past few hours, or for the past few seconds?

Stream of Consciousness is devoted to exploring solutions to this problem. But only solutions of a certain sort. There are interesting questions about the sorts of processes in our brains that are responsible for our experience being as it is, but I leave these to one side, and concentrate instead on the task of trying to discover what can be said about the basic structures of our ordinary streams of consciousness from the first-person perspective. While this phenomenological approach has its risks and limitations, the potential rewards are considerable. In investigating the basic structures of our streams of consciousness we are probing the general framework within which all of us live out our conscious lives, and it may well be that this framework has features which only phenomenology can reveal.

The unity of consciousness has synchronic and diachronic aspects, and although both aspects are to be found in any ordinary stretch of experience, it helps (at least initially) to consider them separately. To bring the synchronic aspect to the fore, focus your attention on two enduring parts of your current stream of consciousness – a visual experience and a bodily sensation, a visual experience and a sound – it doesn't matter, provided the parts you choose are not too fleeting to introspect for a short while. Having selected your experiences, consider how they are related to each other from moment to moment. There is clearly a relationship between these experiences, but of what sort? It may be that either of these experiences could have existed on its own, but as it happens they both co-exist within your consciousness, and the *togetherness* of these two experiences is itself something that you experience – at least in the sense that there is something that it is like to have them both at once, rather than separately. As a little introspective experimentation will confirm (if it is not already obvious) a similarly intimate relationship holds between many of your other current experiences, irrespective of their qualitative or modal type (e.g. an itch and a smell, a smell and a buzzing sound, a buzzing sound and a mental image, a mental image and a conscious thought). I call this inter-experiential relationship “co-consciousness”.

The physical realm also contains a diverse range of objects – stars, teacups, cats – and these too are unified at any given time, irrespective of the distance separating them. But instead of belonging to a single consciousness, physical objects belong to a single universe. Quite how objects in a single universe are related is much-disputed, but there is some consensus as to what the basic options are. The physical world is a spatio-temporal world, and the task of understanding its mode of unity – at least on the large-scale – comes down to understanding space and time. So far as synchronic unity is concerned, there are two main options. Some regard the stars and galaxies as embedded in a substantival spatial manifold; objects which exist in the same spatial (or spacetime) manifold exist in the same physical universe. Others reject substantival space as superfluous to requirements, and posit instead spatial relations which link and bind material things into a common spatial system. Do either of these options extend to the realm of experience? It is at least conceivable that they might: perhaps there is something akin to a spatial manifold in our consciousness, or perhaps there isn't, but diverse

contents are bound together by something akin to spatial relations. However, there is another possibility. It goes without saying that we are “aware” of our experiences as they occur, so perhaps the unity of consciousness consists simply in the fact that diverse contents (the particular instantiations of various phenomenal qualities) fall under the gaze of a single conscious awareness. There is no obvious counterpart to this “top-down” mode of unification in the physical world.

These possibilities, along with others, are explored in chapters 2 and 3 of the book. Chapter 4 is also concerned with synchronic co-consciousness, but the topic is the scope of this unity rather than its nature. Are all parts of a subject’s experience at any one time unified, or is a partially disunified consciousness a possibility? Is co-consciousness a transitive relationship?

Chapters 5, 6 and 7 are given over to diachronic unity, the way our experience is unified over time, from moment to moment. The simultaneous parts of our streams of consciousness are co-conscious, but so too are the directly successive parts, or so it seems natural to say. However, this diachronic unity is a particularly intractable topic. Our consciousness seems confined to the present – the future we can only anticipate, the past we can only recall – and the present, common sense suggests, is a momentary interface between past and future. So is a stream of experience a succession of momentary states of consciousness? There are considerations that suggest otherwise. It is hard to believe that a strictly durationless state could have any phenomenal characteristics. Could a stream of consciousness – of the sort we enjoy – be entirely composed of parts that do not in themselves possess any phenomenological reality? Moreover, we are continually and directly aware of change, and surely an experience of change requires time. So perhaps the present of consciousness has some temporal breadth. But this option also seems problematic. How long are these “chunks” of experience? How are they related to one another? Since a temporally extended experience will have earlier and later parts, how can we be aware of both parts together? Can we be directly aware of what is past or future? As these brief remarks have perhaps made clear, describing the distinctive sort of unity-within-flux that our ordinary experience exhibits is hard, and making sense of it harder still. This difficulty is reflected in the amount of space I devote to the topic of diachronic unity.

Some writers have suggested that the (phenomenal) character of a particular experience is affected by the other states of consciousness it is experienced with. If this is right, then there is a sense in which consciousness is holistic: the character of experiential parts depends upon the wholes of which they are parts. Whether this claim *is* true is another matter. I tackle this topic in the final two chapters of the book, where different forms and potential sources of holism are distinguished. In the opening chapter I prepare the ground by explaining how certain terms will be used, and setting out certain assumptions. I will mention a few of the more important of these.

I adopt a robust realism about consciousness, and so take items such as bodily sensations and sensory experiences to be perfectly real ingredients of reality; I reject – without argument – all attempts to reduce the experiential to the non-experiential. On the issue of how consciousness is related to matter, I remain largely neutral. I use “experience” to refer to consciousness in all its forms (so conscious thoughts and vague bodily feelings count as “experiences”). I take any state with a “phenomenal character”

to be a conscious state – a state has phenomenal character if there is something it is like to have it. Since I assume a representative theory of perception, I regard the items we are directly aware of in perceptual experience to be experiences (or parts of experiences). That this is not how these experiences seem is something I fully accept. Perceptual experience is “world-presenting”: our experience is such that we have the impression that we are directly apprehending our physical surroundings; we are not normally aware of any “experiential medium” standing between us and the world. I reconcile this terminological preference with my phenomenological approach by distinguishing between “informed” and “naive” phenomenology: the latter attempts to remain neutral on how the world really is, the former does not. I opt for the informed approach, and since I take science seriously, I can see no reason to believe that material objects are clothed in the intrinsic phenomenal qualities we are acquainted with in our experience. I also take phenomenology seriously, and suggest there may be a distinctive range of “phenomenal truths” about experience which can be discovered only through introspection. However, these truths may not be easily discovered, since some features of experience may be more obvious than others, and finding the best way of describing these features may not be easy. It is natural to think phenomenal truths (if there are any) only concern how reality appears, rather than how reality is in itself. But from the standpoint of a robust realism about experience, this is a mistake. If experiences themselves are as real as anything else, in learning about experience we are making discoveries about how things really are.

2. Unity, Introspection and Awareness

The unity within our consciousness is something we experience, it is something of which we have an awareness. Might it be that awareness itself is responsible for, or at the very least closely bound up with, the unity that it discloses? I begin my investigation into synchronic co-consciousness by considering this idea.

Perhaps the most obvious way of interpreting the proposal is in terms of attentive or introspective awareness, the kind of awareness that occurs when we pay attention to some aspect of our experience, possibly (but not necessarily) with a view to forming a belief about it. However, interpreted in this way, the proposal faces an obvious difficulty: attention is selective, and generally speaking, at any one time we are only paying attention to a relatively small part of our overall state of consciousness. Is the unity of consciousness restricted to those parts of our experience to which we pay attention?

To see that this is not the case it suffices to consider what our ordinary experience is like. Imagine you are studying a painting in an art gallery; your attention is absorbed in what you are seeing. If you were to compile a careful inventory of everything you are experiencing, what would it include? At the top of the list, of course, would be your visual experience of the painting, but this is not all, far from it. There is also what you are thinking or imagining *as* you pay attention to the picture, and what you feel in response to it – together with your general emotional state (vague annoyance that the gallery is so crowded). There are the (somewhat blurred) contents at the periphery of your field of vision; there are also sounds, perhaps smells, perhaps some flavours (you have just finished a strong mint). Also, and easily overlooked, there are various bodily feelings. These include sensations of pressure, itches, twinges of pain and so forth, along with the proprioceptive awareness of the disposition of your limbs and the general

orientation of your body (upright rather than upside down). All these diverse experiences belong to what I call “the phenomenal background”, which consists simply of all those parts of our consciousness to which we are not paying explicit attention as and when they occur; typically, the bulk of our consciousness falls into this category.

Perhaps the best way of rendering the existence of the phenomenal background vivid is by imagining how different one’s experience would be if it were suddenly and completely to disappear. It is hard to imagine what it would be like for one’s consciousness to shrink down to a disembodied awareness of a few colours and nothing else, but it would clearly be very different from how our consciousness usually is, even when we are paying close attention to a few colours. However, for our purposes, it is not the existence of the phenomenal background which matters so much as its character. Is it a collection of unconnected experiential fragments? Again, clearly not. The phenomenal background is both structured and unified: it is simply the surrounding three-dimensional world (as it features in our experience), a world we feel ourselves wholly present within.

The existence and character of the phenomenal background poses a problem for anyone seeking to explicate the unity of consciousness in terms of introspective or attentive awareness. Since the experiences in the phenomenal background are themselves unified, and so co-conscious, it is clearly not an option to hold that experiences are co-conscious if and only if they are the objects of introspective or attentive awareness. But other options exist. Experiences which are not actually introspected *could* be, or so it seems natural to think. So perhaps we can explicate co-consciousness in terms of what is *introspectible*, rather than in terms of what is actually introspected. Can we say that experiences are co-conscious if and only if they are the actual or potential objects of a single introspective awareness? I call this the “I-thesis”, and it can be interpreted in a stronger or a weaker way, depending on whether we view introspectibility as constitutive of co-consciousness, or merely correlated with it (see *Stream* section 2.3). But however it is viewed, the I-thesis is problematic.

The claim that experiences are co-conscious only *because* they are introspectible has no phenomenological foundation: this is simply not how it seems (and of course, for phenomenology this is all that matters). I doubt anyone has the feeling that the stability, coherence and unity of the world about them depends upon their ability to direct their attention where they wish, and the same applies to experience itself. There is an explanation for this: the phenomenal background is a constant presence (and a constantly unified presence) in our experience, one that is largely unaffected by changes in the focus of attention. (I deal with the question of quite how we can know this in section 2.2.)

What of the weaker claim that introspectibility and co-consciousness are correlated, so that as a matter of fact, any co-conscious experiences are the potential objects of a single introspective awareness? There are at least two difficulties with this. Since the phenomenal character of an experience is essential to its identity, the claim that we could have attended to an experience to which we did not in fact attend could only be true if, in general, the character of experience is unaffected by attention. But in fact, the reverse is true. The phenomenal character of at least some experiences is attention-dependent; the itch from the mosquito bite on my leg would have felt different (worse) if I had been paying close attention to it for the past few minutes (I haven’t been). The second difficulty is one of principle rather than fact, and it applies to both the strong and

weak forms of the I-thesis. Introspection is contrastive; if I am introspecting one part of my overall state of consciousness at a given time, other parts will go unintrospected. The introspected and non-introspected regions of my consciousness are themselves co-conscious (recall my earlier remarks about unity of the phenomenal background with the attended-to parts of consciousness). Is the experienced unity of such regions itself introspectible? Obviously not. Quite generally, the unity of introspected and non-introspected experiences is not itself introspectible.

So the I-thesis must be rejected. But there is another way of construing the idea that the unity of consciousness is the product of awareness. According to some, consciousness itself is essentially bi-polar, and any experiencing has two components: an act of pure awareness (or sensing) and one or more contents falling under the act. Awareness in this sense is bare apprehension, and all contents – the phenomenal background included – fall under awareness if they are experienced at all. This notion of pure awareness – or simply “Awareness” henceforth – cannot be identified with the more familiar “attentive awareness” which featured in the I-thesis. The Awareness of the act-object theorist extends to all corners of consciousness, and takes in contents which are not the objects of attention (as we normally construe it). If consciousness in general has an Awareness-content structure, then we have a plausible account of the synchronic unity of consciousness: all and only those contents which fall under a single Awareness are thus unified. I call this combination of claims the “A-thesis”.

The A-thesis is not susceptible to direct empirical refutation. The fact that one cannot detect Awareness in ordinary experience proves nothing in itself. Awareness is supposedly that *to which* ordinary phenomenal contents are presented, it is not itself an object of consciousness, so the fact that it cannot be discerned among such objects does not mean it is not there. Nonetheless, an argument based on general phenomenological considerations can be mounted. The A-thesis posits a complex two-component view of consciousness, and so is vulnerable to Occam’s razor. Unless we have some positive reason for believing the two-component picture we should accept a simpler one-component account of the structure of consciousness. In sections 2.4-2.6 I argue that no such reason exists, at least if we confine our attention to what it is like to have experience. The claim that the A-thesis should be accepted for its ability to account for the unity of consciousness would have to be taken seriously if no competing account were available, but – as will emerge – a competing account is in fact available. For now I will mention only the main points in my case against the A-thesis itself.

The idea that consciousness has an awareness-content structure might seem quite natural, even common sense. In 2.5 I suggest otherwise. The real business is done 2.6. If we assume there is a dualism of Awareness and content, a question remains to be answered: what precisely is the relationship between the two components of ordinary experience? Can Awareness exist by itself, independently of content? Or is Awareness content-dependent? Can content exist by itself, independently of Awareness, or is content Awareness-dependent?

It is difficult to see how the thesis that Awareness can exist independently of content could possibly be justified on phenomenological grounds. Since Awareness itself is supposed to be entirely devoid of its own phenomenal character, there could be nothing that it is like to *be* an Awareness in the absence of content. If anyone were to claim to

have experienced the condition of being reduced to a bare Awareness we could reasonably ask: “Are you certain the state in question was entirely lacking in phenomenal features, no matter how faint and unusual”? If the answer is affirmative, we can ask: “What makes you think you hadn’t lost consciousness entirely”? To this it might be objected: “As is well known, the notion of a ‘pure’ or ‘void’ consciousness plays an important role in many meditative traditions; many people have actually encountered a form of consciousness that is devoid of content. Doesn’t this constitute phenomenological evidence for the existence of Awareness?” I think not. While there is certainly a sizeable literature on the topic of “pure consciousness”, the precise character of the relevant experiences is far from clear, and the same questions can be posed: Is the pure consciousness state entirely devoid of phenomenal characteristics? If it is, how is being in this condition different from being wholly unconscious (or non-existent)? This said, I see no reason to reject the claim that “pure consciousness” is possible if “pure” means “qualia-free” and “qualia” are taken to be the sorts of sensory qualities we encounter in our everyday experience. There may well be several ways in which a state of consciousness could lack all sensory characteristics but nonetheless have a distinctive phenomenal character. I can imagine (albeit not very clearly) being reduced to a condition in which I experience nothing more than a definite sense that *something* is about to happen, or in which I experience nothing but the (non-sensory, fringe-type) feeling that things are going well (or badly). But accepting the possibility of these kinds of state is one thing, accepting the possibility of experiences that are subjectively indistinguishable from non-existence is quite another. So far as I can see, the condition of being reduced to a bare Awareness *would* be indistinguishable from non-existence, phenomenologically speaking.

Since the doctrine of content-independent Awareness has proven to be problematic, we can move on to consider the versions of the A-thesis which reject the possibility of a bare Awareness. The status of content now comes to the fore. Suppose an A-theorist maintains that just as Awareness cannot exist independently of phenomenal contents, the latter cannot exist independently of Awareness. *Prima facie*, this may seem a very natural position. After all, the idea of pains, itches, thoughts and perceptions existing when no one is experiencing them is counterintuitive, to say the least. But it is one thing to say that a phenomenal content has to have a subject, another to say that a phenomenal content has to fall under the A-theorist’s pure contentless Awareness. The former claim may well be true, the latter claim is precisely what we are seeking a rationale for believing. On closer scrutiny it is difficult to see how the claim in question could have a rationale. A phenomenal content is a realization of one or more phenomenal properties. What is it about phenomenal properties which prevents their being realized independently of Awareness? The dependence thesis would clearly be warranted if Awareness had some distinctive quality which all phenomenal contents possess, but by hypothesis Awareness is entirely featureless and so brings nothing to the contents which fall under it. Does Awareness *cause* phenomenal properties to come into being, when combined with appropriate non-phenomenal properties? This view might make sense on a purely conceptual level, but it is hard to see how it could be motivated by appeal to phenomenology – Awareness, don’t forget, is introspectively invisible!

So should the A-theorist take the view that phenomenal contents *can* exist independently of Awareness? Although some A-theorist do take this view, it is open to

an obvious objection. Consider the phenomenal contents which feature in your own current experience, and imagine exactly similar contents occurring without Awareness. Why wouldn't these Awareness-free contents constitute *experiences* in their own right, experiences just like those you are having? The A-theorist will no doubt insist that experience in the absence of Awareness is simply impossible. But while this claim would be perfectly justified in the context of the awareness-dependence doctrine, we are currently assuming that contents can exist independently of Awareness with all their phenomenal characteristics intact. Given this, what reason do we have for thinking that contents which exist unsensed (in the distinctive A-theoretical way) differ in any way from contents which are sensed (in the same A-theoretical way)? In the absence of any difference, what could prevent both sorts of contents from constituting experiences in their own right? In its current guise, Awareness has no role; at most it is akin to an unseen witness, passively apprehending our conscious lives from a distance (metaphorically speaking). There is absolutely no reason to think such a thing exists.

Since each variant of the A-thesis faces difficulties, it is clear that we must seek an alternative account of the synchronic unity of consciousness. While this discovery amounts to progress of a sort, the examination and rejection of the A-thesis also serves an additional purpose, for it has cast some useful light on the nature of consciousness itself. The A-theorist's conception of ordinary conscious experience is dualistic: every experience, even the simplest, involves both Awareness and content. In rejecting this dualism we are free to adopt a simpler, one-level, conception of experience. If there is no need for phenomenal contents to be accompanied by a separate, onlooking, Awareness in order to be conscious in the first place, we can hold that instantiations of phenomenal contents are conscious in and of themselves. On this view, phenomenal contents are intrinsically conscious, they are self-revealing – in the sense that such contents do not need to be apprehended by any higher-level awareness in order to constitute fully-fledged conscious experiences. For obvious reasons, I call this non-dualistic view of consciousness the *Simple Conception*.

The Simple Conception can seem strange. In section 2.7 I argue that it is not as counterintuitive as it may initially seem. But at this stage I hold back from concluding that the Simple Conception is true. Thus far I have been concerned only with synchronic unity; since a number of influential conceptions of the diachronic unity of consciousness presuppose the A-thesis, or something close to it, the case against the latter will only be complete when these conceptions have been examined and found wanting – and this point not reached until chapter 7. But before embarking on this task there are further issues concerning synchronic unity to be pursued.

3. Phenomenal Space

I next consider this proposal: that simultaneous experiences are co-conscious by virtue of occurring within a single unified phenomenal space. I call this the *S-thesis*. If this thesis is true, a similar unifying principle is at work in both the physical and the phenomenal realms.

The very idea that consciousness is spatial might strike some people as very odd. Isn't it a commonplace in the philosophy of mind that consciousness is temporal but entirely *non-spatial*? This doctrine is associated with substance dualism: the non-physical

substance which Descartes posited as the bearer of conscious states is (usually) supposed to lack a location in physical space. Since I adopt an agnostic stance with regard to the relationship between matter and consciousness, I take no view on the relationship between experiences and physical space. However, from the standpoint of phenomenology the S-thesis has a good deal in its favour. Our ordinary perceptual experience is world-presenting, and the world that is presented is obviously spatial as well as temporal. Moreover, the experiences our different senses provide seem to belong to a single unified space. My bodily experiences and conscious thoughts and feelings seem to be located in the same space as the objects I can see, smell, taste and hear. The space in question may be a phenomenal or experiential space, rather than a physical space, but this does not matter. What does matter is whether this phenomenal space is wholly and solely responsible for the unity we find (or could find) in our experience. I argue that it is not. In sections 3.2-3.3 I suggest there are counterexamples to the S-thesis: experiences which are co-conscious without being spatially related. In 3.4-3.6 (and 4.2) the topic is the nature of phenomenal spaces themselves, and the while findings here may not decisively refute the S-thesis, they certainly reduce its appeal.

The first sort of counterexample relies upon the fact that some kinds of experience do not seem, in themselves, to be spatially extended: conscious thoughts which don't involve spatial imagery of any kind, certain emotional feelings, certain types of sounds (as "heard" in the acoustic imagination). It seems perfectly conceivable that a subject could have two or more of these non-spatial experiences at the same time, and experience them as co-conscious with each other, without also experiencing them as being spatially related. This said, a consciousness of this kind is not something we can easily imagine, for the simple reason that our imaginings always occur (under normal circumstances) against the backdrop of a spatially extended phenomenal body-image. So try to imagine what it would be like to lose your body-image and all bodily sensation (perhaps due to neurological damage, or drugs), to be in darkness and silence, alone with your thoughts, feelings, memories and imaginings. Would these different experiences all have spatial extension? Would they all seem to be in some definite spatial arrangement, or at definite distances and directions from one another? I suggest not. But since it is hard to be certain, I am reluctant to dismiss the S-thesis on these grounds alone.

Hence the second counterexample. I develop a scenario in which the consciousness of a single subject is distributed across two distinct phenomenal spaces; although the experiences in these different phenomenal spaces are not spatially linked, they are fully co-conscious. I will not try to summarize this scenario here, but an idea of what it involves can be gleaned from a similar, if slightly simpler, thought-experiment. Imagine a future in which brains can be hooked up to bodies at a distance, by (in effect) instantaneous signals and transceivers. These brain-body connections are such that they deliver an experience of being fully and normally embodied. Many people no longer live in their bodies in the old-fashioned way – their brains are not in their heads – but this difference (or distance) does not register in any phenomenologically discernible way: they feel as though they are *in* their bodies in the usual manner. In fact, you are one of these people. Your original body was damaged in an accident, but your brain survived, and is maintained in a vat. Since you prefer to work in the city but spend your free-time in the countryside, you had *two* new bodies cloned; you spend your weekdays in your city-body (your country-body is disconnected), and your weekends are spent in your

country-body (your city-body is then disconnected). The saving in commuting costs is considerable.

One day during the working week the equipment malfunctions, and you suddenly find yourself “living in” both of your bodies simultaneously. Needless to say, this is very confusing. You are not accustomed to having two sets of bodily and perceptual experiences at once – and for a time the two sets of experiences seem superimposed on one another, creating a quite baffling phenomenal melange. But after a while you find things stabilizing; the superimposed experiences separate out into two separate and coherent sub-streams (the emergence of order from blurry disorder is somewhat akin to that which can occur when looking at “magic eye” pictures). Each of these sub-streams comprises a collection of spatially unified experiences, and these experiences are co-conscious, but you have no sense whatsoever that the experiences associated with your city-body are spatially related to the experiences associated with your country-body. Controlling the movements of your two bodies is a tricky business. When you need to drive to the nearest village in your country-body, you “park” your city-body somewhere safe and secure, and direct all your attention to driving. On doing so, you feel yourself “moving into” the country-body, and leaving your city-body behind; but the transfer is not total, you continue to be passively aware of your city-body throughout. When circumstances require you to move around in your city-body, you retain a similar background awareness of your country-body. Either way, you retain a continuous (if usually only passive) awareness of two spatially unconnected fields of consciousness.

Although the forms of experience which feature in this genre of thought-experiment are very odd indeed, it seems by no means inconceivable that consciousness could take such a form; even if we are unable to imagine exactly what experience of this kind would be like we can get close to doing so. Of course, the very fact that we *are* unable to imagine with complete clarity what a spatially disunified consciousness would be like means the S-thesis cannot be decisively refuted by such methods. So I reinforce the thought-experiment with some more general considerations concerning phenomenal spaces.

Earlier I mentioned the two competing conceptions of physical space: the substantialist and relationist accounts. These accounts correspond to two distinct forms of phenomenal space. Just as a substantial physical space must possess some real physical being, so must a substantial phenomenal space; but whereas the physical characteristics of a substantial physical space can be invisible – and so detectable only indirectly – a substantial phenomenal space must have some discernible phenomenal character to call its own. Hence what I call a “phenomenal plenum” or “P-space” is a continuous spread of phenomenal content, e.g. an expanse of colour, of two or more dimensions. Phenomenal spaces of the relational kind lack discernible intrinsic features. Hence what I call a “phenomenal void” or “V-space” consists of phenomenal objects that are experienced as occurring at a certain distance or direction from one another, despite the fact that the objects concerned are surrounded by an *absence* of intrinsic phenomenal content. Think of a pair simultaneous sounds against a backdrop of silence; the sounds are of a familiar kind, and you have a clear sense of where they are, relative to one another and to yourself, but you are aware of these sounds as occurring in an auditory void.

I characterize these spaces in some detail in sections 3.4 and 3.6, but here I will confine myself to pointing out the relevance of the distinction to the S-thesis. It is possible to imagine life as a being whose consciousness takes the form of a single P-field. Clearly, the consciousness of such a being is spatial in a very profound way. If our imaginary being were to consider the nature of co-consciousness, it might well (and quite understandably) arrive at the conclusion that experiences are co-conscious if and only if they are connected by a continuous path through a phenomenal manifold. Our consciousness is not of this kind, it is of the V-variety: we find ourselves surrounded by phenomenal void. Although we perceive objects to be some distance apart, the intervening space usually lacks any intrinsic phenomenal character (think of the space lying between your eyes and the page in front of you, unless the room is filled with smoke or illuminated fine dust, this stretch of space is invisible). As a consequence, we are not obliged to define co-consciousness in the same way as our imaginary P-being; indeed, for beings such as ourselves, the positing of a substantival phenomenal space is wholly unwarranted. Spatial relations in a V-space are *direct* links between objects separated by void – not continuous paths through a substantival phenomenal manifold – and these links lack any intrinsic phenomenal features to call their own.

This lack means that for beings such as ourselves the bond between co-consciousness and spatiality is far more tenuous than for our imaginary P-being and its kin. So tenuous, in fact, that the idea that experiences could be co-conscious without being spatially related seems eminently plausible. Think again of hearing two simultaneous sounds; this time the sounds are of an unfamiliar kind, and their location relative to you and each other is entirely unclear; although you have no definite impression of distance or direction, the fact that these two sounds are *co-conscious* could not be clearer. In this sort of case, co-consciousness overwhelms or dominates distance and direction to a remarkable degree: despite the absence of definite spatial relations, co-consciousness is entirely undiminished. So is there any reason to think that phenomenal contents can only be co-conscious if they experienced as being spatially related? It seems not. Which is precisely the reason why the spatially disunified form of experience invoked in our earlier thought-experiment seems possible, even if we are not quite able to imagine it clearly.

We have considered, and rejected, the I-thesis, the A-thesis and the S-thesis. What view should we adopt about the relationship of synchronic co-consciousness? Only one option seems to remain: we should take the relationship to be a primitive experiential feature, a direct and unmediated relationship, one which cannot be analysed away or reduced to anything else, and one which does not in itself have distinct phenomenological features (by which I mean: we are not aware of co-consciousness as an additional experiential ingredient, we are simply aware of experiences occurring together). Although it is natural to think of co-consciousness as linking different experiences (this sound, that coloured object, that pain), this is not all it does. The parts of an individual experience are themselves co-conscious (think of the upper and lower halves of a expanse of white); precisely the same unifying relationship holds within phenomenal contents as holds between them.

Positing a primitive experiential relationship might seem an act of desperation, or deplorable mystery-mongering. It is neither. There is nothing mysterious about co-

consciousness, for the relationship in question is one we are all perfectly familiar with, even if we usually manage to get by without devoting much attention to it. There is something that it is like to have several experiences together (or to have a single experience with parts that are experienced together), and this “togetherness” is co-consciousness. Nor is it an act of desperation to describe a relationship as primitive or basic if that is what it is – and this is how co-consciousness seems, at least from the standpoint of phenomenology.

4. Transitivity

If we view synchronic co-consciousness as a relation, what are its properties? It is a material (rather than formal) relation, since it only holds between concrete particulars – experiences and their parts – and cannot hold between abstract entities. It is also a genuine *connection*, unlike other relations, such as “same shape” (which can hold between objects in different universes). It is certainly symmetrical (if an experience e_1 is co-conscious with e_2 , then e_2 is co-conscious with e_1). Reflexivity is less obvious. The idea that an experience is co-conscious with itself initially seems rather odd. If e_1 is co-conscious with e_2 , we have a genuine connection between two numerically distinct experiences; since e_1 is not numerically distinct from itself, it cannot be co-conscious with itself (as a whole) in this sort of way. Or so it might seem. However, when viewed in another way, the two cases are precisely analogous. Every part of e_1 is co-conscious with every part of e_2 , and vice-versa, but similarly, every part of e_1 is co-conscious with every other part of e_1 (co-consciousness holds within as well as between experiences). In both cases, we have a single state of consciousness (e_1 , and the combination of e_1 and e_2) all of whose parts are co-conscious with each other. In this sense at least, co-consciousness *is* reflexive. What of transitivity? If e_1 is co-conscious with e_2 , and e_2 is co-conscious with e_3 , must it be the case that e_1 and e_3 are also co-conscious?

How this question is answered has significant implications for the possible configurations experiences can enter into – the possible “shapes” of consciousness, if you like. If co-consciousness were reflexive, symmetrical and transitive, it would be an equivalence relation. Collections of objects linked by an equivalence relation are partitioned into distinct non-overlapping groups, with each member of each group bearing the relationship in question to every other member of the group. If co-consciousness were an equivalence relation, the totality of experiences existing at a given time would divide off into discrete non-overlapping bundles, with each experience in each bundle being co-conscious with every other experience in the same bundle. I call such bundles “total experiences”, and until this point I have been (tacitly) assuming that a subject’s consciousness at a given time consists of a total experience. If this is the case, and is so necessarily, then consciousness is *strongly* unified, and essentially so. However, if co-consciousness is not transitive, it is possible for a consciousness to be only *partially* or *weakly* unified. At a given time a subject could have experiences $\{e_1, e_2, e_3, e_4\}$ where e_2 and e_3 are co-conscious with one another, e_1 is co-conscious only with e_2 , and e_4 is co-conscious only with e_3 . An experiential configuration of this sort is unified by co-consciousness, but in an uneven way. Every experience is *directly* co-conscious with at least one other, but some experiences are connected only by the weaker relationship of *indirect* co-consciousness (in our example, e_1 and e_4 fall into this category).

The question of whether co-consciousness is transitive is important, but difficult to answer. Common sense suggests that from moment to moment our experience is strongly unified. But this is unsurprising, and may not mean very much. The verdict of common sense is grounded in the knowledge we have of our own consciousness provided by introspection. Since any experiences we introspect are always co-conscious with one another (we are aware of them together), introspection can never reveal partial unity. If our consciousness *were* only partially unified on a given occasion, this is not something we could be introspectively aware of. A similar point applies to what we can imagine. It is impossible to imagine a configuration of experiences which are not strongly unified. Given the link between what is imaginable and what is possible, can we conclude that a weakly unified consciousness is impossible? No. Any experiences we imagine are always going to be co-conscious, simply because in imagining them we *render* them co-conscious. Since the impossibility of imagining experiences that are only indirectly co-conscious is a consequence of the structure of “imaginative space”, as one might call it, we cannot conclude that co-consciousness itself is essentially transitive.

However, the fact that common sense is fallible here does not necessarily mean that it is mistaken. There are different methods of exploring the experiences one is having at any given time. The “active” ways involve the deliberate focusing of attention on some particular part of one’s experience; but there is also the “passive” route, which involves relaxing (or broadening) the focus of attention, in an attempt to take in all that is there. Both methods deliver roughly similar answers to the question “What sorts of experience are usually to be found in my consciousness?” This fact has clear implications for our current concern. Call the range of experiences these methods reveal the “normal field of consciousness” or “NFC” for short. Even if it were possible for there to be experiences that are co-conscious with the contents of the NFC, which our active and passive introspective techniques never reveal, it seems unlikely on purely naturalistic grounds that they exist. We never find ourselves behaviourally responding to “hidden” experiences, experiences of a sort which we know are never to be found in the NFC. Surely natural selection would soon lead to the elimination of creatures which waste energy producing experiences which always go “unused”, as it were.

But considerations of this kind are of no assistance when assessing the question of whether it is *possible* for consciousness to be partially unified. In section 4.5 I mount an argument against the possibility of partial unity grounded in the character of co-consciousness itself. We are always (passively) aware of this relationship, but its remarkable nature is easily overlooked – no doubt the very ubiquity of co-consciousness is largely responsible for this. My basic claim is simple: when an experience e_1 is co-conscious with a simultaneous experience e_2 , the two experiences are fused into a single unit of experience in such a manner that it is impossible for a third experience, e_3 , to be co-conscious with (say) e_2 without also being co-conscious with e_1 . The connection between experiences that co-consciousness creates is so intimate and pervasive that it is impossible for transitivity to fail. Or so I argue.

However, although this consideration may have considerable intuitive force, there are considerations which run in the other direction. As is well known, there is evidence to suggest that cutting the nerves connecting the cerebral hemispheres leads to a “divided consciousness”, and this is often taken to mean “two completely distinct streams of

consciousness”. However, since the brains of split-brain patients are not completely divided into two – the lower-brain remains intact – might it not be that the patient comes to have a partially rather than a completely divided consciousness? Rather than two distinct streams, such patients might have two partially overlapping streams. This hypothesis provides a more economical explanation of the data in cases where the “right-subject” and the “left-subject” both report having an experience of the same type at the same time.

I consider this sort of case (and other more speculative variants) in 4.4 and 4.6. I argue that although the split-brain considerations are far from negligible, there is still plenty of room for doubt, especially in the light of the phenomenological considerations which suggest co-consciousness *must* be transitive. So, somewhat tentatively, I conclude that synchronic co-consciousness is transitive, and partial unity impossible.

5. Diachronic Unity: Streams of Experience

Thus far we have been concerned with the way in which experiences at any given moment are bound together. But if our concern is the unity of consciousness in its full generality we need to consider another question: what binds consciousness together from moment to moment? A typical stream of consciousness is an uninterrupted succession of experiences lasting several hours. How are the myriad components of a stream related to one another?

These questions occupy me in chapters 5, 6 and 7. My approach to diachronic unity follows the same pattern as my approach to synchronic unity: I arrive at a solution via a process of elimination. In chapter 5 I sketch out various aspects of the problem, introduce several constraints to which a satisfactory solution must conform, and consider two accounts of diachronic unity, both of which prove flawed. But the flaws prove informative, for they provide valuable clues as to how to proceed. Attempts by Broad and Husserl to describe what our immediate experience of time involves are considered in Chapter 6; these various accounts are relevant because of their implications for diachronic unity. Both philosophers changed their views on the topic, and I suggest the difficulties they encountered in formulating an adequate account were due to flawed assumptions both were making. (Husserl’s views on this topic are very complicated – and often obscure – and I make no attempt to provide a full and accurate guide to them.) By this point it is reasonably clear where the solution must lie, and in Chapter 7 this solution is explored. The key, it turns out, is co-consciousness: the same primitive relationship which binds simultaneous experiences together also binds experience together from moment to moment. However, it turns out that co-consciousness in its diachronic form is, in one respect, significantly different from its synchronic counterpart, and I suggest co-consciousness alone cannot account for all aspects of phenomenal continuity, something else is needed.

Having described how the discussion proceeds in the book, I will now leave it behind, and expound the main lines of argument in a different, rather more schematic, form.

There are two experiential features to be accounted for, at least if we want to understand both the unity and continuity which are to be found in a typical stream of

consciousness: our direct experience of change, and our direct experience of persistence. Imagine you are in a room; the windows are open, and a long straight road is close by. You hear a car in the distance, and over the next minute or so, you listen as it gradually approaches, passes and recedes into the distance; what you hear is a constant drone, which changes in volume and timbre. In addition, just as the car is getting close, you turn your head and see it move past your front gate. When you do so, you see the car in motion – you see this motion as plainly as you see the car’s colour and shape. You experience the changes in the sound the car is making in a similarly vivid and immediate manner. But as well as directly experiencing change, you directly experience persistence: you hear the drone *continuing on* for an entire minute. In this particular example, the experience of persistence is accompanied by qualitative change – the noise changes in volume and tone – but we often experience persistence without any accompanying qualitative change. Imagine hearing an enduring but unvarying tone, or staring at an unchanging red sphere, or feeling the constant warmth of a hot bath. In such cases there is discernible *phenomenal flow* (as I call it), a sense that the same kind of phenomenal quality is being continuously renewed or replaced, in a perfectly smooth, continuous fashion. Thus far I have been focusing on individual experiences, which we happen to be paying attention to, but the same sort of flow is present throughout our consciousness: the phenomenal background is a mass of continuously flowing phenomenal content. Even when we experience sudden changes and discontinuities (a firecracker going off, the jolt of pain when treading on an unsuspected nail), these occur against a largely stable backdrop, a backdrop which is continually flowing.

Although we are aware (usually only passively) of experience flowing on for long periods of time, we are not aware of the entire temporal stretch as a whole; we experience it through a narrow temporal “window” (or “clearing”). We are aware of the passing of our lives in somewhat the same way as we are aware of countryside we observe through the window on a train – by the end of the journey we will have seen a lot of it, but only a bit at a time. (Of course, bearing in mind the earlier discussion of the A-thesis, I do not want to suggest that we “observe” our experiences – the analogy has its limitations). This narrow temporal clearing is known as the “specious” or “phenomenal” present. Its narrow span – perhaps less than a second – is due to the fact that our direct experience of change (or persistence) is restricted to brief intervals. When listening to a piece of music we directly experience the transition from one note to another, we do not directly experience the first note and the last. The same applies to our typical streams of consciousness in their entirety.

So much for the phenomenological data. What experiential features and structures are needed to explain it?

One popular approach appeals to memory. On this view, we do not directly apprehend change and succession in experience; we may seem to, but this is an illusion. What is really happening when – say – we listen to a succession of brief (but not momentary) notes C-D-E, is that we first hear, C; we then hear D accompanied by a memory of just-having-heard-C; then we hear E, accompanied by a memory of just-having-heard-D (or possibly, a more complex memory with content “just-having-heard-D-preceded-by-C”). The same applies across the board, to all the contents of our streams of consciousness as they unfold. There is no denying the central role memory plays in

the “macro-phenomenology” of time – our experience of living through hours, days and years – perhaps it has a similar role in the “micro-phenomenology of time” – our experience of living from one moment to the next.

But as quickly becomes clear, the memory-theory is problematic on several counts. To explain away our apparent direct *experience* of succession and change, the memories involved must themselves have phenomenological features – so they cannot be akin to (dispositional) beliefs. This is not necessarily a problem: there is nothing to prevent the memory-theorist positing special short-term and involuntary “memory images” (corresponding to different types of experience) which accompany our actual experiences. However, a memory of the required sort, of (say) “C-being-followed-by-D”, is a memory of directly experiencing change or succession, and so possesses the very phenomenal features that are supposed to be explained. This points towards a second and more fundamental difficulty. Two claims can be distinguished. A weak claim, to the effect that experiential memory plays an important and indispensable role in our temporal awareness, and a strong claim, to the effect that temporal awareness is *entirely* a product of experiential memory. Thus far we have been considering only the weaker claim. We have been considering whether the experience of hearing one note being followed by a second note and then a third can be explained in terms of memory. But each individual note also possesses discernible duration. Consequently, if phenomenal temporality is to be explained entirely in terms of memory, the apparent duration of each individual tone must be a product of short-term involuntary memories. The problem now is acute: what are these memories *of*? There is only one answer. The experience of an individual tone, such as C, must consist of a succession of durationless auditory experiences, each of which is accompanied by durationless memory-images of durationless auditory tones. Even if we can make sense of durationless phenomenal tones and memory images, there clearly remains a severe plausibility problem with this proposal. The postulated complexes of memory-images are purely hypothetical, we are not aware of them in our experience. All we *hear* is a single clear tone. Since the memory-theory is unable to explain this most basic of micro-phenomenological facts in a phenomenologically realistic way, we must look elsewhere.

There is a simple remedy to the main flaw of the memory-theory. Why not simply hold that our streams of consciousness consist of a succession of discrete pulses, each of some short but finite duration. Although these pulses are of some duration, they consist of a temporal spread of phenomenal content, all of whose parts are experienced together (but not as occurring simultaneously). As a consequence, direct experience of change and persistence is possible, and occurs, but it is restricted to the confines of a single pulse. The transitions between pulses are not themselves directly experienced; successive pulses are linked by short-term memory. So if I hear C-D-E-F, my experience consists of two successive pulses: P1: [C-D] and P2: [E-F]. Since I remember experiencing P1 when experiencing P2, I have the impression that my consciousness is continuous.

This “pulse theory” solves the problem of how change and experience can be directly experienced, but it too is phenomenologically unrealistic. If our streams of consciousness were structured in this way we should be able to discern two distinct kinds of experiential transitions: those which occur *within* single pulses, and those which occur

between pulses. Since the transition from C to D is directly experienced, but the transition between D and E is not, the difference between the two should be discernible. The trouble is, it isn't. When we hear C-D-E-F, the transition between each note is experienced in the same immediate way.

This problem runs deeper. In the absence of experienced transitions between pulses, successive pulses might as well belong in entirely different streams of consciousness. Suppose someone a hundred year ago had an experience of hearing C-D-E-F which was just like yours (so was the rest of their experience during this short time – you were both sitting in a darkened room). Your experience consists of S1 = [C-D], [E-F], theirs consists of S2 = [C*-D*], [E*-F*], where C and C*, D and D*, etc., are phenomenally indistinguishable. So far as experienced transitions and connections are concerned, there is nothing to distinguish the actual (we are supposing) stream-phases S1 and S2, from the non-existent stream-phases S3 = [C-D], [E*-F*] and S4 = [C*-D*], [E-F]. This seems absurd. It seems absurd because in actual fact adjoining phases of our streams of consciousness are linked to one another by directly experienced transitions; successive phases are *phenomenally bonded* to one another. An adequate account of phenomenal temporality must accommodate phenomenal bonding. The pulse account doesn't (and it is not alone, as we shall see).

A quite different approach (or family of approaches) relies on the awareness-content model of consciousness. (Although I found no compelling reason for adopting this model when exploring synchronic unity, the situation may well be different in the diachronic context, so the A-thesis remains a force to be reckoned with.) Some theorists take the view that if a temporal spread of content is present to consciousness, it must be present *at once*, and they interpret “at once” as meaning *simultaneously*. There is only one obvious way for this to be possible: temporally extended contents must, at each instant, be apprehended by an awareness which itself is momentary. Although each act of awareness is itself momentary, the contents apprehended seem to extend through time; we seem to have direct experience of change and persistence because the different parts of these contents are presented *together* to a single locus of awareness.

This basic idea can be elaborated in quite different ways. The variants fall into two categories: realist and representationalist (or anti-realist). Realists and representationalists agree on the “awareness + temporally extended content” model, but diverge over the character of the contents. Realists take the view that the contents have genuine temporal breadth, representationalists deny this. The difficulties facing realism are such that the representationalist option quickly gains in appeal; but this too faces difficulties.

Realism in its simplest form is simply the pulse-theory in A-theoretical guise. For example, the experience of C-D-E-F might consist of two acts of awareness and two extended contents, A1 = [C-D], A2 = [C-D]. Since an account of this kind cannot accommodate phenomenal bonding, it must be rejected. But a simple remedy is at hand. What if the contents of successive acts overlapped? The experience of C-D-E-F might take this form: A1 = [C-D], A2 = [D-E], A3 = [E-F], although in reality there might well be far more acts than just these three. This proposal secures (in its fashion) phenomenal bonding, but it faces a simple and devastating problem: repeated contents. The succession of acts A1, A2, A3 delivers *two* apprehensions of both D and E, so the subject

of these acts would hear these notes not once but twice (and many more times, if we introduce more acts of awareness). Evidently, this does not happen.

The representationalist solves the problem of repeated contents in a seemingly effective way. Rather than holding that successive acts apprehend numerically the same temporally extended contents, they hold that the contents of successive acts are always numerically distinct, for what they consist of are momentary contents – contents which lack genuine temporal breadth – but which *appear* to be temporally extended. Since the contents of successive acts differ both numerically and qualitatively, the repeated contents problem is resolved. Representationalism comes in different guises (the versions found in Broad and Husserl differ in certain ways) but I will restrict myself here to the basics.

We shall consider the experiencing of a succession of brief sounds, C-D-E-F-G-H-I-J-K, which are apprehended by nine acts of awareness. Let us further suppose there are six degrees (or intensities) of a property which we can call *presentedness* (as Broad does). In reality, there might be many more acts of awareness involved in an experience of this sort, and many more degrees of presentedness – I want to keep things simple. Contents which possess maximum presentedness seem to be happening in the present; contents with lesser degrees of presentedness seem to be occurring a short distance in the past (the less presentedness, the more past). In Figure 1, the different degrees of presentedness are indicated by font size – the larger the font, the more intense the presentedness.

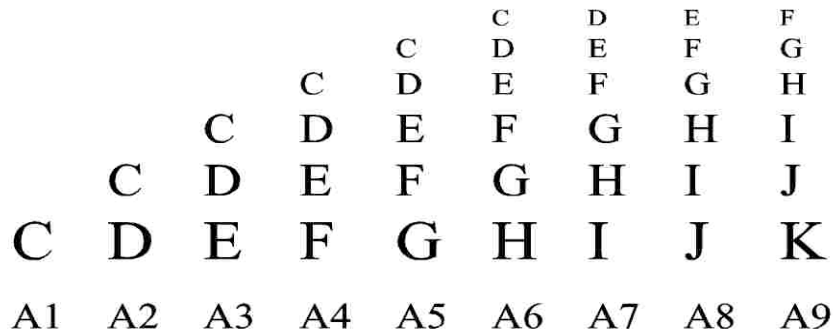


Figure 1: Generating the illusion of temporal depth in momentary episodes of consciousness: the representationalist account of phenomenal temporality. Tone C is apprehended as possessing diminishing degrees of “presentedness” in successive acts of awareness, and so is experienced as sinking into the past. Or so it is claimed.

The diagram has the form it does because A1 was preceded by a period of silence. Each act apprehends one content as possessing maximum presentedness; in subsequent acts, this content is apprehended as possessing progressively lesser degrees of presentedness, and so is experienced as sinking further into the past, until finally it fades from the domain of direct awareness, and is available only through memory. So for example, D is apprehended as present in A2, and in A3-A7 it is apprehended as increasingly more past, and by the time A8 occurs it is gone. The same process is repeated for the other contents.

The representationalist model can also account for *phenomenal flow*, the impression we have that a qualitatively unvarying sensation is continuously refreshed or renewed. Figure 2 illustrates the hearing of an extended C-tone. In each of the momentary awarenesses A1-A6 a “new” C-content is presented, and these are retained, albeit in altered form, in subsequent awarenesses. The subject’s consciousness soon becomes entirely filled with the sound of this tone, which is experienced as enduring in the present while simultaneously sinking into the past.

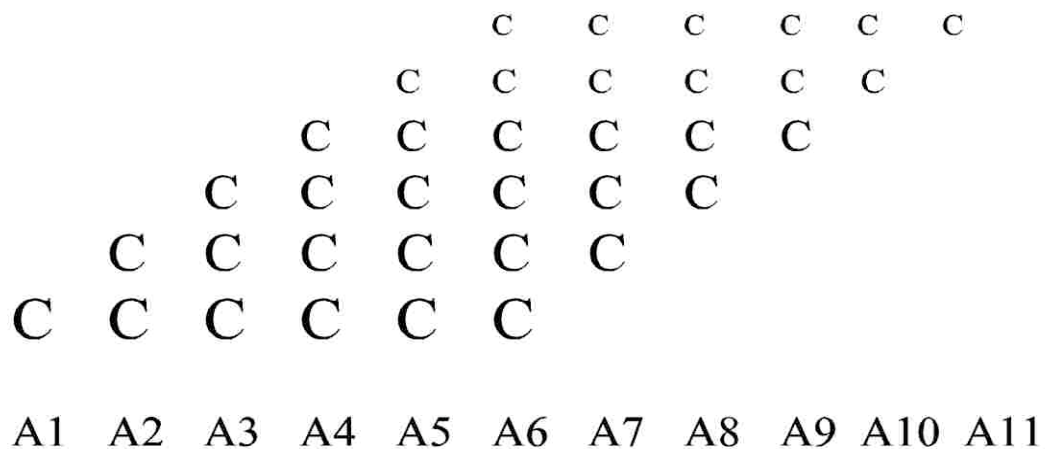


Figure 2: The representationalist account of phenomenal flow: contents do not immediately vanish from consciousness, they continue to be apprehended in later acts, in modified form.

In effect, the representationalist is offering a *two-dimensional* account of phenomenal temporality. As well as extending through ordinary (real) time, phenomenal content is (apparently) spread through an additional, orthogonal temporal dimension. Two-dimensional accounts of real-world temporal passage are problematic for the simple reason that there is no reason to believe that a second dimension of time exists. Should we accept the two-dimensional account of phenomenal time?

I argue not. Despite its ingenuity and explanatory potential, the account is problematic on several fronts. I will briefly run through the problems, and move swiftly on to consider a superior account.

First, its phenomenological accuracy is questionable. Are we aware of complex systems of representations attaching themselves to every brief phase of our experience? It seems not. Are we aware of contents hanging around in our consciousness as they gradually fade into the past? Again, it seems not: contents often end abruptly, and disappear “cleanly”, without lingering. Since the experiential processes posited by the two-dimensional model have no phenomenological reality, there is no reason to believe they exist.

Second, awkward questions can be asked about the notion of “presentedness”. Presumably, this is an intrinsic quality which is combined with “ordinary” phenomenal contents such as colour and sound. Are we aware of any such property in our experience? There are no obvious candidates, to say the least. But perhaps it can be detected indirectly, through its effects. We are told that contents which possess less of this quality seem to be in the (recent) past. But what quality added to a current pain sensation would have the effect of “pushing” this pain into the past? Surely, whatever form this quality took, it would be experienced in the present, along with the pain. In response, it might be held that presentedness is not an additional quality which contents can possess, rather it is akin to Hume’s “force and vivacity”? it is simply a measure of the qualitative intensity of an experience. But this suggestion faces an obvious difficulty. Do you experience the less ‘forceful’ parts the image shown in Figure 3 as existing in the recent past?

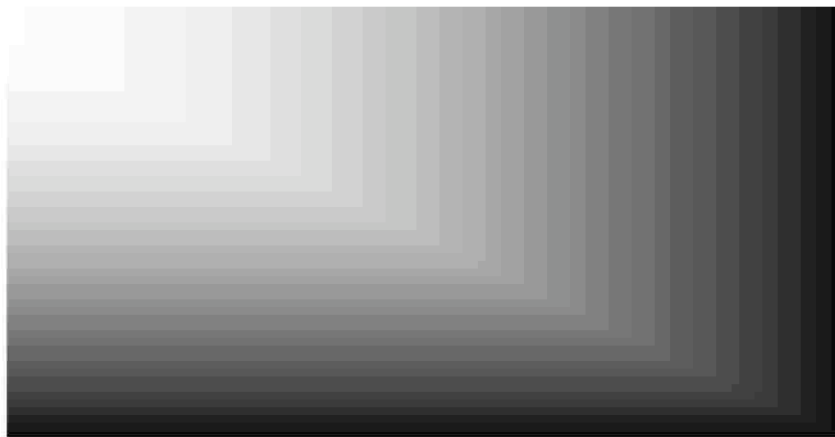


Figure 3: A difficulty for the representationalist: what sort of phenomenal characteristic could make a presently occurring content appear to be occurring in the past? Intensity or vivacity clearly aren't up to the job.

A third problem is the most damaging still: representationalism in all its forms fails to accommodate phenomenal bonding. The two-dimensional account is in fact deeply atomistic. Each momentary awareness consists of a discrete episode of experiencing; neighbouring acts of awareness may possess contents which *resemble* those in nearby acts, but this is all: there are no real experiential connections between one awareness and its close neighbours; individual acts are totally isolated from one another. From a purely experiential perspective, the successive phases of our streams of consciousness might as well exist in different universes. But this is manifestly not the case. There are real connections between the successive parts of our streams of consciousness, connections of an experiential kind, connections which go beyond mere resemblance.

So we must look elsewhere for a realistic account of diachronic unity. The flaws in the theories we have considered thus far point the way forward. We have always been looking for an account that is faithful to the phenomenological data, but we now have a better idea of what such an account might look like. In addition to making room for the direct experience of change, persistence and phenomenal flow, it must accommodate phenomenal bonding, and do so without postulating mechanisms or processes which cannot be discerned within experience itself.

An account with just these features was proposed in outline by Russell (in 1915 or thereabouts) and more recently (and in somewhat more detail) by Foster. I call it “the overlap model”, and expound and explore it further in chapter 7. Here I restrict myself to the bare essentials.

Let us return to the pulse theory and its problems. We have our simple stream of consciousness C-D-E-F, and two pulses, [C-D] and [E-F]. Each part of [C-D] is fully co-conscious with every other part, let us suppose, and the same applies to [E-F]. Recalling our earlier terminology, each of these pulses constitutes a “total experience”, albeit a temporally extended one. The pulse theory failed because it ignored phenomenal bonding, but there is a simple way to remedy this defect. We need simply increase the number of pulses, and allow them to overlap by sharing numerically identical parts. Instead of holding that C-D-E-F is experienced in two distinct pulses, we say that it consists of three temporally extended total experiences $E_1 = [C-D]$, $E_2 = [D-E]$, $E_3 = [E-F]$, where the D-tone in E_1 and E_2 is numerically the same experience, and likewise the E-tone in E_2 and E_3 . In reality, there could be many more pulses than this – indeed, it is plausible to suppose that there are successions of pulses which differ in just-noticeable ways – but this complication does not affect the situation in the slightest: given that they will overlap nearly completely, these additional experiences will not be noticeable as such. All that will be experienced is the simple succession C-D-E-F. What holds for this simple case will apply more generally, to the rich and varied contents of our ordinary streams of consciousness. These too consist of successions of overlapping temporally extended total experiences of short duration.

It is possible to formulate the overlap theory in terms of the split-level awareness-content model of consciousness; all we need do is shift from a momentary point-like awareness, to a temporally extended awareness which runs concurrently with its contents, and hold that these temporally extended awarenesses *themselves* overlap by sharing common parts. But this additional complexity is unnecessary. The overlap theory can also be formulated in terms of the one-level Simple Conception of consciousness,

appealing only to a primitive relationship of diachronic co-consciousness, a relationship which unifies the constituent parts of temporally extended total experiences. For obvious reasons, I prefer the latter formulation. Why introduce an indiscernible additional layer into consciousness if it is not needed?

There is a second point to note. In the synchronic case, co-consciousness is transitive (or so it seems, at least in everyday experience). In the diachronic case it clearly isn't. Returning to our simple example, although C in E1 is co-conscious with D, and D is co-conscious with E (in E2), C is not co-conscious with E. If transitivity did not fail in the temporal case, every part of a day-long stream of consciousness would be co-conscious with every other part. While a consciousness of this form might be possible, in our case at least, the distinctive unity co-consciousness brings is temporally restricted, and transitivity is ruptured by temporal separation. Indeed, we can now see that our direct experience of time has the character it does precisely *because* transitivity breaks down.

Earlier I suggested, on phenomenological grounds, that co-consciousness was essentially transitive. We can now see that this is wrong, since in the diachronic case it clearly isn't. But of course in forwarding this claim I was considering only synchronic co-consciousness. Nonetheless, the trans-temporal failure of transitivity shows that co-consciousness is not in itself a transitive relation, at least if we assume that the same basic relation of co-consciousness is involved in both synchronic and diachronic unity – an assumption that is supported by the phenomenological data (diachronic unity seems just as direct and immediate as synchronic unity).

What of the argument that transitivity cannot fail? I suggested that when two experiences are co-conscious they are fused into a single experiential unit, in such a way that it is impossible for a third experience to be co-conscious with one without also being co-conscious with the other. As is now clear, if fusions of this strong kind exist, they are short-lived, for they last no longer than the specious present. But do such fusions exist? Two facts suggest otherwise: co-consciousness is not in itself a transitive relationship, and transitivity is *continually* being ruptured in our consciousness. Shouldn't we conclude that strong fusions of the envisaged kind simply do not exist? Not necessarily. For the very fact that the known failures in transitivity occur *over* time helps to explain why we find it so hard to comprehend how transitivity could break down *at* a time. Non-transitivity is associated with the dynamic character of phenomenal temporality; we hear C-flowing-into-D, and D-flowing-into-E, with C dropping out of consciousness as E enters consciousness. In trying to envisage synchronic breakdowns of transitivity we are imposing on contents that are experienced as fully simultaneous an experiential structure that is normally possessed only by *non*-simultaneous contents, contents that are separated by an interval of time longer than the specious present. Might it not be that this experiential structure simply cannot exist among contents that are experienced as fully simultaneous with one another?

There remains one further issue. I have just mentioned the directed dynamic character of experience, the feature of immanent phenomenal flow. This feature cannot be explained solely in terms of co-consciousness, which is itself a symmetrical relationship. In the case of the temporally extended total experience [C-D], tone C is co-conscious with tone D, and tone D is co-conscious with tone C. Yet we hear C-flowing-

into-D, not D-flowing-into-C. What is the source of this asymmetry? We saw earlier how the two-dimensionalist can account for phenomenal flow, how can this most basic feature of experience be explained using the resources available to the overlap theorist?

One option would be to hold that there is a directional asymmetry built into the relationship of co-consciousness itself. But while this idea has a certain appeal, it would mean positing two distinct kinds of co-consciousness, one synchronic and one diachronic. Since I take co-consciousness to be simply “experienced togetherness”, a relationship which holds at and over time, there is no rationale for the distinction in question.

Another possibility is to appeal to the nature of time. On one view, time itself is dynamic: the universe as a whole is continually growing, as new “layers” of reality are created and added to the already-existing past. If the universe is dynamic in this sort of way, it is not surprising that experience is too, or so it might reasonably be thought. However, there are reasons for not taking up this option. Many reject the idea that world-time is dynamic, and posit instead a four-dimensional “block” universe. While it is far from clear that the block conception is correct, it is also far from clear that it is *not* correct, at least on general scientific and metaphysical grounds. This would not matter if the phenomenological evidence in favour of the growing-universe view were overwhelmingly strong – empirical evidence of this sort might tilt the balance in favour of the dynamic conception of world-time. But it isn’t. Phenomenal flow is an *intrinsic* feature of contents, and as such it is hard to see how it could be explained by the coming-into-being of contents which did not previously exist. Suppose an extended C-tone is composed of momentary (or near-momentary) “slices”, C1, C2, C2 .. Cn, which come into being successively. These tone-slices do not themselves possess phenomenal flow – the latter feature is meant to be explained by the coming-into-being of the slices themselves. So first C1 exists, then C2 comes into existence, and is co-conscious with C1. Let us further suppose that the combination [C1-C2] is experienced as possessing phenomenal flow. Can the presence of this feature be explained by the coming-into-being of C2? It is difficult to see how. First C1 exists, then C1-C2 exists. The latter experience possesses phenomenal flow *as a whole*. Consequently, the “coming-into-existence” of C2 renders an experience of phenomenal flow possible, but does not *explain* it: the “coming into existence” of C2 is not itself experienced, even though – as is obvious – C2 cannot be experienced until it exists.

There is a simpler option, and one which is neutral with respect to the controversy concerning the nature of world-time. We need simply recognize that the contents which are symmetrically joined by co-consciousness themselves possess an inherent directional dynamism. The C-tone is not a static auditory quality, but a flowing quality, likewise for D and E. This *immanent flow* is an essential ingredient of any auditory content, just as essential as timbre, pitch or volume. If such contents did not possess this intrinsic dynamic character we would not experience them as we do: we would not hear C persist briefly then run into D, which persists briefly and runs into E, and so on. Precisely the same applies for all other phenomenal contents which possess phenomenal flow. When I see a ball thrown through the air, I do not see it occupying different places at different times, in a series of static “frames”; what I see is a *ball moving* – this dynamic temporal animation is an intrinsic feature of my experience, as basic as colour or shape.

It could be objected that positing inherently animated contents is expediency born out of desperation. However, although such contents are indeed what the overlap theory needs in order to accommodate the phenomenological data, there is no denying that phenomenal contents have the feature in question. The measure may be convenient, but it is also justified. Also, once the distinctive temporal animations of different types of experience are recognized, the temptation to ascribe phenomenal flow to co-consciousness itself diminishes.

To sum up: the unity and continuity in our streams of consciousness has two sources. First, there are the symmetrical relationships of co-consciousness linking adjoining stream-phases, and the breakdowns of transitivity which restrict the span of our direct experience of change. Second, there is the asymmetrical temporal animation which contents possess, and which explains immanent phenomenal flow. This account of phenomenal temporality is largely neutral with regard to the different conceptions of time *per se*. It is even compatible with the Block view. There is, it seems, no need to postulate a dynamic world-time to explain the dynamism to be found within our consciousness.

6. Holism

Having explored what the unity and continuity of our experience involves, I conclude – in chapters 8 and 9 – with an examination of some of its possible consequences.

When phenomenal contents are experienced together, does this fact impact upon the contents themselves? Some have held that phenomenal character of an experience is in some way altered or influenced by the other experiences which occur with it in the same state of consciousness. Since the identity of an experience depends on its phenomenal character, this is tantamount to holding that the very *existence* of a particular experience depends upon the other experiences with which it is co-conscious. If co-consciousness does have such effects, it would be an “internal” rather than an “external” relation, and consciousness itself would be holistic: the character of experiential parts would depend on the experiential wholes to which they belong. Given the sheer variety of experiences and the possible modes and sources of inter-experiential interdependence, this is a highly complex topic, and my investigation is far from exhaustive. In an attempt to bring some clarity to a potentially confusing area, I draw a fair number of distinctions, and the discussion at times becomes rather involved; in this summary I will keep complications to a minimum.

Several of the relevant distinctions emerge in sections 8.2-8.4. Holism could apply to only some parts of total experiences (or some parts of some total experiences), or it could apply to all parts of all total experiences. I call the latter *complete* holism, and the former *partial* holism. If some degree of holism does obtain, it could do so necessarily, or only contingently. We also need to distinguish *token* holism from *type* holism, each of which can apply partially or completely, and necessarily or contingently. If token holism obtains, then if an experience *e*₁ is co-conscious with two other experiences *e*₂ and *e*₃, then *e*₁ could not exist except as co-conscious with these particular token experiences. If type holism obtains, then *e*₁ could exist with “phenomenal counterparts” of *e*₂ and *e*₃, i.e. a pair of experiences *e*₂* and *e*₃* which are phenomenally indiscernible but numerically distinct from *e*₂ and *e*₃. The possibility of

phenomenal counterparts is a product on the stance I adopt on the individuation of experiences. In order to remain neutral on the relationship between experience and subjects of experience, I elect to individuate token experiences in terms of time, phenomenal character and material basis, rather than time, phenomenal character and subject – the latter would rule out phenomenal counterparts, but the former does not.

In 8.4 I start to examine the doctrine I call the “phenomenal interdependence thesis”, the claim that the familiar qualitative properties of an experience are dependent upon the wholes of which they are parts. Some writers (Sprigge certainly, perhaps James and Bradley) uphold the phenomenal interdependence thesis as a necessary truth about *all* experiences. I suggest there is no evidence for this whatsoever, at least of a phenomenological kind. My current visual experience would be as it is if the noise outside were a fraction louder, or the pain in my back a fraction less intense. Generally speaking, if one small part of our overall experience at a given time were different from how it actually is, the remainder of our experience would be unaffected, at least at the level of intrinsic phenomenal character. However, although the *complete* phenomenal interdependency thesis is false, the *partial* interdependence is not. There certainly are *some* inter-experiential interdependencies. Often these are intra-modal, but they can be intermodal (what we see can affect how we feel). Usually they are contingent rather than necessary (a sight which makes me feel nauseous might well leave someone else unmoved). I make no attempt at a full investigation of these local interdependencies; instead I focus on two specific types of case.

Sensory gestalts are one potential source of intra-modal interdependence, and I consider these in 8.5. Psychologists of the gestalt school were adamant that the phenomenal characteristics of the constituents of “organized wholes” were indeed interdependent, and there is certainly some evidence for this. The Muller-Lyer illusion depends on local interdependence: changing the orientation of the “arrow-heads” alters the apparent length of a line.



Figure 4: The Muller-Lyer illusion.

The line on the page has the same length in both cases, the line as it is experienced – the line *qua* phenomenal object – does not. The interdependence in cases such as this is contingent: it is due solely to the particular ways our brains process perceptual input. It is also not very far-reaching - there is no “interpenetration” or “fusing” of the relevant experiential parts.

That this is so clearly emerges as soon as two ways in which the character of an experiential whole can impact upon its parts. In cases of what I call “strong impingement”, the effect of the whole on the part is so profound that an experience with the same general character as the part could only exist in a whole of the same or similar type. In cases of “weak impingement”, the character of the part is partly dependent upon the whole, but an experience with the same character as the part could exist in a different type of experiential context. In the Muller-Lyer case, the impingement is clearly of the weak variety. Phenomenal objects with the same character as the central lines can obviously exist in different phenomenal contexts (just draw two lines of differing lengths on a page and look at them). The same applies in many similar cases.

Do any cases of strong impingement exist? I consider – and reject – several possibilities in 8.6, where I consider “gestalt switches” in some detail. I conclude that strong impingement is certainly rare, but not necessarily impossible. Perhaps the boundaries of Kanisza’s illusory triangle provide us with an instance of it. Could a triangle possessing just these phenomenal characteristics exist in a markedly different phenomenal context? It seems unlikely, but it is hard to be certain.

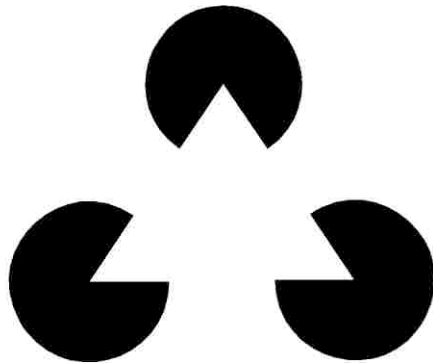


Figure 5: Kanisza’s Triangle

The topic of 8.7 is phenomenal interdependence in another specific area: “meaningful wholes”, where the meaning in question is propositional. I suggest that the experienced-meaning of a word in a sentence is affected by its context, but the impingement is usually of the weak variety. I also consider whether demonstrative reference to one’s own experiences generates significant impingement. I will not try to summarize this discussion, but merely my conclusion: in this case at least, there is reason for thinking that the interdependence of part on whole can be of the token-specific variety.

Thus far the discussion of holism has been restricted to the phenomenal interdependence doctrine, the idea that the phenomenal *qualities* (auditory, visual, etc.) of experiences are affected by their experiential contexts. In chapter 9 I consider whether co-consciousness itself might generate a mode of inter-experiential dependency. I argue

that it does. What I call “C-holism” is complete, necessary and extends to both types and tokens. In one respect, C-holism is similar to the complete phenomenal interdependence thesis: if it exists, there is a sense in which the phenomenal character of every part of every experience is affected by every part of its experiential context. However, the interdependence is of an unfamiliar sort, since it concerns an aspect of phenomenal character that is not usually recognized, an aspect which does not involve the intrinsic qualities of experience as these are usually understood.

Consider a brief token audiovisual experience E , with visual component $v1$ (of type F – a certain shade of red) and auditory component $a1$ (of type G – a certain kind of buzzing sound). To simplify, we will assume that E is a total experience; as a consequence, all of E 's component parts are mutually co-conscious. We further assume that no phenomenal interdependence (of the ordinary) sort obtains in this instance. So the intrinsic visual characteristics of $v1$ would have been just as they are if $a1$ had been absent, and likewise, the auditory features of $a1$ would have been just as they are if $v1$ had been absent.

If $v1$ were a total experience in its own right, a complete description of its phenomenological features would register its visual characteristics (F -type) and nothing else. Similarly, if $a1$ were a total experience, a complete description of its phenomenological features would mention its auditory characteristics (G -type) and nothing else. But $v1$ and $a1$ are not total experiences in their own right, they are co-conscious. Moreover, *that* they are co-conscious is itself a phenomenal feature of the total experience $E = v1 \setminus a1$. How are we to register this fact? Since we have rejected the A-thesis, the co-consciousness of $a1$ and $v1$ is not due to their being apprehended by a higher-level awareness, it is a product of the fact that these two experiences are connected by a primitive and symmetrical experiential relationship. Since the co-consciousness of $v1$ and $a1$ is rooted in $v1$ and $a1$ themselves, and is itself a phenomenal characteristic, it seems this characteristic must itself be a feature of the two experiences involved, $a1$ and $v1$.

In trying to make sense of this I distinguish between the *local* and *global* feature of an experience. The local phenomenal character of $v1$ are its F -type visual properties; in virtue of being co-conscious with $a1$ it also has a global phenomenal property, one which can be (roughly) characterized as “being co-conscious with an G -type auditory experience”. Similarly, the local character of $a1$ is its G -type auditory features, but also, in virtue of being co-conscious with $v1$, it has the global property of “being co-conscious with an F -type visual experience”. I call these global features of experiences “C-properties”.

C-holism is phenomenal interdependence at the level of global rather than local experiential properties. Given the conception of co-consciousness I defend, there seems no option but to recognize that experiences do possess global C-properties over and above their local properties. Since all discernible parts of a total experience are co-conscious with one another, the global properties of an experience depend on the precise character of all the other experiences with which it is co-conscious. C-holism is thus complete. It is also necessary, since it applies without exception to all co-conscious experiences, and does so solely in virtue of the fact that they are co-conscious.

But other questions remain to be answered. In 9.2 I consider the different ways in which global character can be viewed. I distinguish between “broad” (token-specific) C-properties, and “narrow” (type-specific) C-properties, and suggest that both sorts of property are genuine, they simply correspond with more or less discriminating ways of describing experiences and their properties. Corresponding to these different modes of description are different grades of holism. Broad characterizations yield token-holism, narrow characterizations yield only type holism.

In 9.3 I consider a still finer-grained way of characterizing experience, one which mentions spatial properties. Thus far I have been focusing exclusively on synchronic unity. In 9.4 I lift this simplifying assumption and consider the C-properties of temporally extended total experiences. Since the global character of an experience depends on *all* the other experiences with which it is co-conscious, and co-consciousness operates over time as well as at a time, the C-properties of a particular experience reflect all those earlier and later experiences to which it is joined by co-consciousness. This fact leads to a deeper understanding of phenomenal temporality, or so I argue in 9.5. The vexed issue of transitivity makes a final appearance in 9.6, where I suggest that the existence of global properties does not, in itself, mean that partial unity (in the synchronic case) is impossible. I close with an overview of the relationship between the different varieties of experiential holism.

7. Consciousness and Co-consciousness

If the preceding analyses are along the right lines there are at least three general conclusions to be drawn.

The first is that the unity we find in our consciousness is both simpler and more involved than might have been assumed. Simpler in that a single primitive unifying relationship is at work, more involved because of the various forms of interdependency that have emerged, and the combination of structural and qualitative factors characteristic of phenomenal temporality.

The second lesson is that experience is self-unifying. In making sense of the unity we find in our experience, so far as phenomenology is concerned, we do not need to appeal to anything beyond or external to experience itself.

The third concerns the nature of experiential unity. All the discernible parts of experiences occurring in a single state of consciousness, no matter what their kind, no matter how different in character, are connected to one another by the immediate (but unmediated) relationship of co-consciousness. The unity within experience is clearly of a distinctive and quite remarkable sort. That we do not usually appreciate just how remarkable is due largely to the simple fact that this mode of unity is everywhere that we look (or introspect). The main goal of the book has been to bring this relationship, and its uncanny character, into the light of day.

I conclude with a speculation. The so-called “problem of consciousness” is how the phenomenal and the physical realms are related. In getting to grips with this problem it would help to know what the distinguishing features of phenomenal properties are. Just how do phenomenal properties differ from physical properties? This question is made more difficult by the following consideration. Conscious beings come in very different

physical forms, and beings with different physical constitutions will very likely have very different kinds of experience (try to imagine what it might be like to be a star-nosed mole, which senses its surroundings in a highly discerning way using the twenty-two tentacle-like flanges of its hand-like nose). As soon as one realizes that experience very probably comes in forms very different from any we are acquainted with, the prospects for finding a distinguishing feature of phenomenal properties begin to look bleak. Perhaps the answer lies in unity. Might it not be that what distinguishes phenomenal from non-phenomenal properties is simply that instantiations of the former, but not the latter, consist of intrinsic qualities that are unified by co-consciousness? Perhaps *any* instantiated intrinsic quality unified in this way is an instantiation of a phenomenal property, and hence an experience.