Phenomenal Unity of Consciousness
and the Individuation of Experience

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0.1 Introduction: A Word About “Consciousness” and “Unity”

In the philosophical and scientific arenas, the word “consciousness” is invoked in many different senses. In this essay I will use the word “consciousness” primarily to mean phenomenal consciousness. Phenomenal consciousness is the kind of consciousness most closely related to the subjective, first-person mental perspective. It is plausible to think that phenomenal consciousness is a feature of mental states. A mental state may be said to be phenomenally conscious if and only if it has a qualitative character, or a subjective ‘feel’ (Tye, 7). Relatedly, our notion of phenomenal consciousness is closely tied to our notion of experience. Another way of characterizing phenomenal consciousness is to say that a state is phenomenally conscious if and only if there is something it is like to be in that state, in the sense of the phrase made famous by Nagel when he asked ”What is it like to be a bat?” (165).

Corresponding to this conception of phenomenal consciousness, we also have a notion of phenomenal unity. “Phenomenal unity” simply means the unity of phenomenal consciousness. “Phenomenal unity is present in all normal cases of phenomenal consciousness. It is usually taken to be a property of experiences or phenomenally conscious states” (Tye, 13). Like Michael Tye’s 2003 book Consciousness and Persons: Unity and Identity, this paper is concerned with phenomenally conscious mental states and the unity of phenomenal consciousness. Accordingly, I shall use the word “consciousness” to mean phenomenal consciousness and “unity” to mean phenomenal unity, unless otherwise noted.

In Consciousness and Persons, Tye offers an account of conscious experience on which the problem of phenomenal unity, “as standardly conceived,” turns out to be a mere pseudo-problem (Tye, 36). He argues that the standard way of thinking about phenomenal unity is hopelessly mistaken, and that we can dissolve the alleged “problem of phenomenal unity” by re-thinking the metaphysics of conscious experience.
Once we get clear about what counts as an experience (and what does not), we are able to see that the problem of phenomenal unity is not a problem at all. Tye’s account is not so much a ‘solution’ to the problem of phenomenal unity as a dissolution of that problem as standardly conceived. Does the attempt pass muster? I think that it does not, at least not in full.

The present discussion consists of three main sections and a brief concluding section. Section one deals with the problem of synchronic phenomenal unity, or phenomenal unity at a single time. I will begin by articulating a version of the ‘standard view’ of synchronic phenomenal unity, and follow by presenting what I hope is a charitable interpretation of Tye’s ‘one-experience’ view of synchronic phenomenal unity (2003). According to Tye, ‘standard’ theories can not solve the problem of phenomenal unity. But Tye’s own view is subject to criticism as well. I argue that neither the standard view nor the one-experience view has got it quite right, but that something resembling the one-experience view might be true.

The theme of section two is diachronic phenomenal unity, or phenomenal unity through time. Tye’s theory of diachronic unity is markedly different from his theory of synchronic unity. One difference is that his diachronic theory includes so-called ‘specious presents’ in the ontology, whereas his synchronic theory does not. Another difference is the addition of an extra necessary condition for diachronic unity over and above the necessary conditions for synchronic unity. These extra features do not seem to be in the spirit of Tye’s one-experience view. Worse yet, when we begin to apply Tye’s theory of diachronic unity to test cases, the extra features lead us into a deep muddle. Tye would do well to abandon the specious present and extra unity condition, and instead adopt a theory of diachronic unity that mirrors his theory of synchronic unity.

Section three draws from the literature on commissurotomy (split-brain surgery)
and the operation’s strange effects on the consciousness of the patient. The data from these experiments lead to more difficult puzzles for Tye’s theory of phenomenal unity. I argue that the confusion entailed by Tye’s theory is great enough that we should consider an alternative theory of phenomenal unity: minimalism. The section closes with a thought experiment designed to motivate an epistemic principle about self-knowledge of phenomenal disunity. Although the principle is worthy of consideration in its own right, it is a particularly interesting complement to a minimalist theory of unity.

The fourth and final section is primarily a springboard into future research. Here I briefly reiterate my main conclusions, then go on to explore some unresolved issues that show promise of growing into fruitful research projects. But let’s not put the cart before the horse. In order to decide whether Tye’s solution (or dissolution) to the problem of phenomenal unity is successful, we must first understand how it supposed to work. We will begin as simply as possible, with the view against which the bulk of Tye’s argumentation is directed: the ‘standard view’ of phenomenal unity.
1 Phenomenal Unity at a Single Time

“The mind is a strange machine which can combine the materials offered to it in the most astonishing ways.”


1.1 The Standard View

The standard conception of the problem of phenomenal unity goes roughly as follows: In the course of a typical day, one has many different experiences, each of which corresponds to a particular phenomenology (i.e. for each experience, there is something it is like to undergo that experience). However, there is also something it is like to undergo a collection of experiences together, over and above what it’s like to to undergo each experience individually. This way of characterizing the problem of phenomenal unity suggests two main theses, which I will call the “multiplicity of experience” and the “substantivity of unity,” respectively.

According to the standard view, experience is multiplicitous. During a typical stretch of conscious wakefulness, a normal subject has not one but *many* conscious experiences. “For example, I see some flowers, a fence, and two squirrels, and in seeing them, I undergo visual experiences” (Tye, 17). Indeed, it is not unusual for a normal subject to have many *simultaneous* conscious experiences. If a subject has many experiences, how is it that he is able to distinguish between them? It seems that a normal subject ought to be able to answer the question, “How many experiences am I having right now?” One way the standard view allows us to individuate experiences is by sensory modality. “[A]ccording to the received view, if I am using all five of my senses at a given time, I undergo five different simultaneous perceptual experiences at that time, each with its own distinctive sense-specific phenomenal character” (Tye,
17). So if Jim uses all five of his senses at a time, Jim has a visual experience, and Jim has an auditory experience, and Jim has a taste experience... and so forth. If we individuate experiences by sensory modality, we should say that Jim has five distinct sense-specific experiences.

There are other possible ways of individuating experiences. We might individuate experiences according to a criterion more fine-grained than mere sameness or difference of sensory modality, and instead distinguish between sensory qualities within a modality. On one such version of the standard view, a normal subject can simultaneously undergo many distinct visual experiences (Tye, 21). On a sunny day at Arizona State University main campus, for example, one might have an experience of the blue sky while also having an experience of the green cactus. We might individuate experiences in ways that cut across sense-modalities as well. For instance, we might individuate experiences by experienced event. One’s experience of a sunset has a very different overall phenomenal character than one’s experience of a solar eclipse. Another trans-modal option would be to individuate experiences by experienced object (i.e. percept, or thing perceived). One’s experience of a ripe avocado is qualitatively different from one’s experience of a ripe tomato; the two fruits look, feel, smell, and taste different ways.

There is undoubtedly some room for dispute amongst ‘standard-unity theorists’ about which ways of individuating experiences are legitimate and which are not. Even so, the standard theory clearly entails that experience is multiplicitous, and that there are a number of ways of counting and sorting experiences. Another way of capturing the spirit of the multiplicity thesis is to say that standard unity theorists adopt a pluralistic view of experience. On the standard view, normal perceivers have a plurality of experiences rather than just one. Although there is undeniably some single, maximal ‘way it is like’ for a subject at a moment, the standard theorist holds that
this maximal experience is ontologically dependent on a collection of simpler experiences. On this view, the simple experiences are somehow bound or fused together into a unified whole. Tye rejects the standard pluralism in favor of a monist theory of experience.

The second main feature of the standard view is the thesis that phenomenal unity is substantive. To say that phenomenal unity is substantive is to say that phenomenal unity consists in something over and above the mere conjunction of experiences. For the standard theorist holds that “the conjunction of two experiences isn’t itself an experience at all” (Tye, 20). In other words, there is nothing it is like to undergo “the conjunction of two experiences,” strictly speaking. This is just because there is nothing it is like to undergo a conjunction. But there is something that it is like to undergo two experiences as unified. Thus, the standard theorist has reason to believe that “the maximal experience must be a new experience, one that unifies the other experiences into a single phenomenal whole” (Tye, 20). So the substantivity thesis amounts to the claim that the phenomenal unity of a collection of experiences entails the existence of some further experience over and above the original collection. If true, the substantivity thesis would rule out the possibility of a deflationary or minimalist theory of unity. So standard unity theorists are not deflationary unity theorists.

Given this standard conception of experience, we are able to pose the ‘standard’ version of the puzzle of phenomenal unity: “How is it that if I am undergoing five different simultaneous perceptual experiences, it is phenomenologically as if I were undergoing one? How is it that the experiences are phenomenologically unified?” (Tye, 17-18). This way of putting the question seems to presuppose the multiplicity of experience. Even if we grant multiplicity, the question is only puzzling insofar as the substantivity thesis is true. For it is the conjunction of multiplicity and substantivity that forces us to understand the question to mean, “How are my many distinct
experiences combined into a further, unified experience?” Since a standard theorist of phenomenal unity cannot challenge multiplicity or substantivity from within this framework, it becomes his task becomes to fill in the details about just how a subject’s many experiences are unified into a new one. Tye thinks that this way of posing and pursuing the problem of phenomenal unity is doomed to failure, and that we must therefore discard the standard theory.

1.2 Three Regresses

Tye points out that any theory of phenomenal unity that satisfies both the multiplicity thesis and the substantivity thesis must face up to two regresses. I will argue that the standard unity theorist must confront not two but three subtly different regresses. The three regresses are similar in their general logical form, yet ever so slightly different in the details. Tye generates the first regress as follows (Tye, 21-22):

(R1) Suppose that there are five sense-specific experiences S1–S5.

(R2) Further suppose that there is some overarching (‘maximal’) experience U1 that unifies S1-S5.

(R3) U1 is itself an experience, and therefore U1 must be unified with S1-S5 in order to obtain total phenomenal unity. This requires a further unifying experience, U2.

(R4) U2 is itself an experience, and requires a further experience U3 to unify it with the others.

\[ \ldots \]

(R(n)) U(n−2) is itself an experience, and requires a further experience U(n−1) to unify it with the others.

The regress is a joint product of the multiplicity of experience and the substantivity of unity. The multiplicity of experience says that there is a collection of \( x \) experiences to be unified, where \( x \) may be greater than 1. In this case we are individuating
experiences by sense-modality, so \( x = 5 \). When the substantivity thesis is brought to bear, however, we appear to be committed to the existence of \( x + 1 \) experiences. That is, we appear to be committed to the existence of all the experiences in the original collection, plus the existence of a further overarching unifying experience. According to the substantivity thesis, the overarching experience must be a conscious experience in its own right, and thus requires yet another overarching experience to unify it with the others. We can run the same argument on this newly discovered experience, and the next one, and so on to infinity. Tye thinks that this kind of regress is a serious problem for any standard unity theorist. By tinkering with the premises, he generates a second regress with the same argumentative force.

To generate the second regress, we simply withdraw (R2) of the first regressargument. That is, we will no longer take it for granted that there exists some overarching experience that unifies the five sense-specific experiences. For according to Tye, “there is also a real question as to whether there is a maximal, unifying experience in the first place” (Tye, 22). Consequently, the argument takes on as its first sub-goal the task of establishing the existence of such an overarching unifying experience:

\[
\begin{align*}
(R1^*) & \text{ Suppose that there are five sense-specific experiences } S1 - S5. \\
(R2^*) & \text{ Suppose that } U1 \text{ unifies } S1 \text{ and } S2. \\
(R3^*) & \text{ Suppose that } U2 \text{ unifies } U1 \text{ and } S2. \\
(R4^*) & \text{ } U2 \text{ is itself an experience, and requires a further experience } U3 \text{ to unify it with } U1. \\
(R5^*) & \text{ } U3 \text{ is an experience, and requires a further experience } U4 \text{ to unify it with } U2. \\
\ldots & \\
(R(n)^*) & \text{ } U(n-2) \text{ is itself an experience, and requires a further experience } U(n-1) \text{ to unify it with } U(n-3).
\end{align*}
\]
So once again we are caught in the grip of a regress; and in this second version, we haven’t even managed to unify the five senses before falling prey to the vicious cycle! In a way, this regress seems more convincing than the first one. For here, we are unable to show that a maximal experience exists. This makes it plain that unity is lacking.

It is worth noting that we could generate a third regress, one that Tye does not explicitly mention. Suppose that we withdraw the assumption made in step (1) of both regresses described above. That is, suppose we withdraw the assumption that there are five internally unified sense-specific experiences. We might want to do this for the following reason. In some cases, the standard theorist finds it natural to say that a person has a multitude of visual experiences. In such cases he might legitimately wonder, “How is it that many distinct visual experiences are unified into just one visual experience?” Step (1), common to the two regresses above, takes the unity of visual experience for granted (and likewise for auditory experience, tactual experience, etc). If we do not take the unity of each sense-specific experience for granted, a third regress results:

\[(R1^{**})\] Suppose that there are five visual experiences $V1-V5$.
\[(R2^{**})\] Suppose that $U1$ unifies $V1$ and $V2$.
\[(R3^{**})\] Suppose that $U2$ unifies $U1$ and $V3$.
\[(R4^{**})\] $U2$ is itself an experience, and requires a further experience $U3$ to unify it with $U1$.
\[(R5^{**})\] $U3$ is itself an experience, and requires a further experience $U4$ to unify it with $U2$.

\[\ldots\]
\[(R(n)^{**})\] $U(n-2)$ is itself an experience, and requires a further experience $U(n-1)$ to unify it with $U(n-3)$.
These regresses are potentially damaging to a standard theory of unity. For one thing, they suggest that if we ever have phenomenal unity, we also have an infinite number of experiences. It is doubtful that any theorist would want to commit himself to the existence of an infinite number of experiences. Secondly, and sadly for the standard theorist, the regresses show that phenomenal unity is *never* achieved, no matter how many experiences we pile on. For at each iteration of the regress, there remains a single experience that ‘sits on top’ of the others, over and above them, and disunified from them.

Tye thinks that regresses like these spell disaster for the standard theory of phenomenal unity. That is, he thinks that the regresses are incommensurable with the multiplicity of experience and the substantivity of unity. I will challenge this claim in due time. At any rate, these regresses motivate Tye to consider a new approach to the problem of phenomenal unity. His approach is to deny the multiplicity of experience.

### 1.3 Tye’s Monist Metaphysics

Tye’s dissolution of the problem of phenomenal unity as standardly conceived goes hand-in-hand with his acceptance of a certain metaphysical doctrine that I will refer to as “the one-experience view.” According to Tye’s one-experience view, a collection of phenomenal qualities is unified if and only the qualitites all belong to the same ‘experience’, in Tye’s technical sense of the word:

On this view, there really are no such entities as purely visual experiences or purely auditory experiences or purely olfactory experiences in normal, everyday consciousness. Where there is phenomenological unity across sense modalities, sense-specific experiences do not exist. They are the figments of philosophers’ and psychologists’ imaginations. And there is no problem, thus, of unifying these experiences. There are no experiences to be unified. Likewise within each sense: there are not many simultaneous visual experiences, for example, combined together to form a complex visual experience. There is a single multimodal experience, describable in
So on the one-experience view, there are not a multitude of distinct experiences. There is just one. The one-experience view is monism about experience. The phenomena we might ‘standardly’ think of as experiences are relegated to non-experience status. According to the one-experience view, the way coffee smells and the way the alarm clock sounds are not experiences in their own right. Rather, they are merely ‘perceptual qualities’ experienced as (i.e. represented as) belonging to external objects (Tye, 36). In this case, the perceptual qualities are experienced as belonging to the coffee and to the alarm clock. While Tye denies that perceptual qualities are experiences, it is less than entirely clear what perceptual qualities are, on Tye’s view. However, it is clear that on Tye’s view it is perceptual qualities that are unified rather than experiences proper. For experiences are not the kind of thing that could be unified. Perhaps this requires further elaboration, but before considering matters of fine detail it will be beneficial to take a first pass at Tye’s purported solution to the problem of phenomenal unity.

1.4 Tye’s Solution: Synchronic Phenomenal Unity

With the one-experience view in hand, Tye begins to dissolve the problem of phenomenal unity by offering a positive theory of phenomenal unity at a single point in time, or synchronic phenomenal unity:

Specifically, phenomenal unity is a matter of simultaneously experienced perceptual qualities entering into the same phenomenal content... [Phenomenal content] is the content that endows experience with its phenomenal character (Tye, 36)

So phenomenal unity amounts to perceptual qualities entering into the same experience, insofar as experiences have unique phenomenal contents. Tye says that this
theory of phenomenal unity “best accounts for the facts of unity at a time” (Tye, 107). He also says that the view “has the virtues of being straightforward and intuitively plausible” (Tye, 84). I disagree on both counts. Although Tye’s view does shed some light on the unity of phenomenal consciousness, it is less than satisfactory; there is room for improvement. Regarding the second charge, I think that Tye’s one-experience view and corresponding theory of phenomenal unity are not at all intuitively plausible. Quite the opposite, I think that something like the standard view is much more intuitive.

That said, I think that Tye has hit upon something with his approach to the unity of consciousness. He achieves some interesting results, and at the end of the day, something like the one-experience view could be true of unified phenomenally conscious states. But Tye’s restrictions on the metaphysics of experience are too heavy-handed. His monism with respect to conscious experience seems unwarranted. We can be holists about experience without thereby becoming monists as well. I will also argue that ordinary language presupposes the multiplicity of experience, and is incompatible with the one-experience view. Even if Tye were right about the one-experience view, we should like to keep our common discourse. Tye provides no rationale for holding onto a way of talking about experience that is, strictly speaking, false. Similarly, we should like some explanation of why our discourse widely presupposes multiplicity, if multiplicity is false. That is, we should like some explanation of how we could have been mistaken about multiplicity.

1.5 Escaping the Regresses

Tye thinks that the regresses enumerated above constitute powerful evidence against the standard view of phenomenal unity. If the standard theory entails one or more of the regresses, it would indeed be a harmful blow. But does the standard theory entail
the regresses? I will argue that the standard theory, as captured by the multiplicity and substantivity theses, does entail the regresses. However, denying the multiplicity of experience is not our only option for escaping the regresses.

As noted above, the regresses appear to arise when we conjoin the multiplicity thesis with the substantivity thesis. Multiplicity allows cases where two or more experiences are unified. This feature of the standard view is represented in \( (R1) \), \( (R1^*) \), and \( (R1^{**}) \) of the regress arguments above. Substantivity says that for any collection of unified experiences, there is some further experience, over and above the experiences unified. This is captured in \( (R2) \), \( (R2^*) \), and \( (R2^{**}) \). Conjoining the further experience with the original collection is supposed to yield a new collection that is less than fully unified. Repeated application of these steps yields the regresses.

So we have an apparent dilemma: in order to avoid the regresses, we must discard either multiplicity or substantivity (or both). Tye chooses to discard the multiplicity of experience. He argues that adopting a monist view of experience solves the problem of phenomenal unity. Notice that in rejecting the multiplicity thesis, Tye implicitly rejects the substantivity thesis as well. For on his view it is not experiences that are phenomenally unified, but rather experienced qualities. If no experiences are unified, there can be no substantive experience that unifies some other experiences. Rejecting multiplicity (and indirectly, substantivity) is not our only option, however. We might achieve the same theoretical benefit by retaining the multiplicity thesis and rejecting only the substantivity thesis.

### 1.6 Why We Ought to Reject Substantivity

Although Tye rejects both the multiplicity of experience and substantivity of unity, we might also escape the problematic rejecting the substantivity thesis alone. There are many good reasons for rejecting substantivity. Consider the limiting case in
which there exists just one experience, which we shall call \( e \). Bear in mind that here we are speaking in the standard theorist’s language, not Tye’s one-experience language. Now, it seems beyond dispute that every experience is phenomenally unified with \( e \). According to Michael Lockwood, “It goes without saying…that every experience is co-conscious [unified] with itself: in logician’s jargon, co-consciousness is a reflexive relation” (Lockwood, 88). Like Lockwood’s co-consciousness relation, the phenomenal unity relation must surely be reflexive, and it follows from reflexivity that \( e \) is phenomenally unified with \( e \). If we accept the substantivity of unity, we appear to be committed to the existence of a further experience, over and above the collection of experiences unified. But in the case where the collection of unified experiences consists of just a single experience, \( e \), this result is patently absurd. Experience \( e \)’s reflexive phenomenal unity with itself plainly does not require the existence of some further experience. Intuitively, \( e \)’s unity with itself is just a matter of \( e \)’s being \( e \). So in at least one case, the substantivity thesis fails.

Another reason we might want to reject the substantivity thesis has to do with the relations that wholes bear to their parts. Suppose that Jones writes the word ‘UNITY’ on a piece of paper. His act of writing ‘U’ and his act of writing ‘N’ are unified in virtue of there being some third act, Jones’ writing ‘UN’. Similarly, the acts of Jones writing ‘U’ and Jones writing ‘N’ and Jones writing ‘I’ are unified in virtue of there being some act of Jones writing ‘UNI’. But in these cases, the unity of the whole act does not depend on the existence of some further act of Jones’ writing, over and above his writin ‘U’ and his writing ‘N’…and so forth. For Jones’ act of writing ‘UNITY’ just is his writing of ‘U’ and his writing of ‘N’…and so forth, in a properly conjoined fashion\(^1\). Here we should say that Jones’ act of writing ‘UNITY’

\(^1\)Perhaps the Jones’ act of writing ‘UNITY’ and the conjunction of his writing ‘U’ and writing ‘I’…and so forth need not stand in the identity relation. It might be enough to say that the whole act can be reductively explained in terms of the parts, or vice versa. Yet another option is to maintain
is unified with his writing of each letter because his writing of each letter is a part of his writing ‘UNITY’. The unity of the part-acts still depends upon the existence of some other act; namely the whole act of writing ‘UNITY’. It is just that the whole act of writing is not a ‘further’ experience in the sense required for substantivity.

1.7 Why We Ought to Accept Multiplicity

Although I have shown that we have good reason to reject substantivity, I have not said much about why we should refrain from rejecting multiplicity. One reason to be cautious about accepting Tye’s regress-based arguments against the multiplicity of experience are that those arguments might prove too much. Suppose we were interested in devising a theory of the unity of events. By constructing an argument that is isomorphic to Tye’s regress arguments, but substituting in ‘events’ for ‘experiences’, we can generate a regress that lends support to the theory that there is just one event in the universe!

(R1***) Suppose there are five events E1−E5.
(R2***) Suppose that event U1 unifies E1 and E2.
(R3***) Suppose that event U2 unifies U1 and E2.
(R4***) U2 is itself an event, and requires a further event U3 to unify it with U1.
(R5***) U3 is itself an event, and requires a further event U4 to unify it with U2. . . .
(R(n)***) U(n-2) is itself an event, and requires a further event U(n-1) to unify it with U(n-3).

But surely there are many events that occur in the universe! I sipped my coffee. I put on my sunglasses, I drove to the post office. Last weekend’s Phoenix Suns that the whole and the parts are each explanatorily irreducible to the other, but that one supervenes on the other, or that one constitutes the other.
game was an event, and so was Steve Nash’s dishing the ball to Stoudemire for the jam. Nash’s pass is unified with the game in virtue of a being a part of that game, and the game is similarly unified with the Suns’ 2004-2005 season (the event of all the games being played, plus perhaps some off-court events). But unlike the case of experiences, in the case of events there appears to be no non-arbitrary criterion for determining an upper limit for event-unity. The maximal case is that every event in the universe is unified, and that is a prima facie absurd result. The event-regress does not commit us to a radical monism about events. Similarly, the experience-regresses do not commit us to a monism about experiences. We would be wrong to accept a ‘one-event view’ based on the regress argument alone, just as we would be wrong to accept the one-experience view based on the regress arguments alone.

Another reason we might want to hold on to the multiplicity thesis is that we simply need not reject it in order to avoid the regresses. Adopting a monism about experience is not necessary; a more moderate holism will do nicely. Suppose we admit that the maximal experience is ontologically prior, rather than the simple aspects of experience. “On this approach, we do not start with basic atomic states of consciousness, and somehow glue them together into complex states. Rather, we start with a basic total state of consciousness, and then differentiate it into simpler states, and ultimately into atomic states” (Bayne and Chalmers, 2002). Adopting a holism about experience is consistent with respecting the experience-hood of simpler conscious states, just as adopting a holism about political states is consistent with respecting the state-hood of non-maximal political states. A holist about experience is not committed to the one-experience view, and still manages to avoid regress. This makes the one-experience view look theoretically extravagant.

Finally, we should not disturb our ordinary concepts and language when we can accomplish the same philosophical task leaving them untouched. It is not beyond
the realm of possibility that some of our folk concepts and scientific concepts are just plain wrong. However, admission of error requires powerful motivations of theoretical utility, and Tye simply hasn’t shown any great theoretical advantage that monism about experience has over pluralism about experience. Ordinary language seems to presuppose the multiplicity of experience. ‘The folk’ can and do count their experiences in a diverse fashion. People use phrases like, “Coffee and dessert was a pleasant experience”, “I had a near-death experience last night,” or “I had a great experience at summer camp.” Admittedly, it is not a good methodological practice to give decisive theoretical weight over to ordinary language. All else equal, however, it is preferable to respect the things the folk say. In any case, it is not just the folk that talk this way. The vast majority of philosophers who have put forth theories of unity have held the multiplicity thesis. Tye acknowledges this in saying that the plurality of experiences posited by the multiplicity thesis are “the figments of philosophers’ and psychologists’ imaginations,” and that “there are no such experiences” (Tye, 28). Again, it is not beyond the realm of possibility that our folk concept(s) of experience and our existing scientific and philosophical concepts have all been wrong. Error happens. But why disturb our ordinary concepts and language when we can accomplish the same task leaving them untouched? Tye simply hasn’t shown any great theoretical advantage that is enjoyed by monism about experience, but not by holism. Hence, we should adopt the theory that doesn’t attribute massive error to the folk, the scientists and the philosophers.
2 Phenomenal Unity Through Time

“And I asked myself about the present: how wide it was, how deep it was, how much was mine to keep.”

-Kurt Vonnegut, *Slaughterhouse-Five* (18)

2.1 Diachronic Phenomenal Unity: Groundwork

In chapter four of *Consciousness and Persons*, Tye lays out his theory of diachronic phenomenal unity, or phenomenal unity through time. Chapter four marks a departure from chapters one through three, in which Tye argues that his one-experience view ‘dissolves’ the apparent problem of phenomenal unity, showing it to be a mere pseudo-problem. In chapter four, on the other hand, Tye appears to offer a more conventional solution to the problem of phenomenal unity through time. Tye’s one-experience metaphysics commits him to the view that for any unified stretch of consciousness punctuated by two periods of unconsciousness (from waking to dreamless sleep, or whatever), there is just one experience, properly speaking [setting aside problem cases like split brain subjects]. However, Tye also wants to say that there is a collection of distinct but interrelated “specious presents” associated with that experience. On Tye’s view, there is something special about specious presents and their interrelations that gives rise to phenomenal unity. What is a specious present, on Tye’s view, and how is it related to other specious presents? What is the relationship between a collection of specious presents and the one experience? How does the ‘linking up’ of specious presents contribute to phenomenal unity through time?

The questions surrounding specious presents are myriad. First things first: what is a

\[\text{As a limiting case, Tye’s view seems to allow the possibility of an experience associated with only a single specious present. Typically, though, experiences consist of many interrelated specious presents, rather than just a solitary specious present.}\]
2.2 The Specious Present

Tye claims that the experienced present, or specious present, has a brief but finite duration (Tye, 87). Thus, it “allows us to experience an extended event, such as a continuing sound or a word, or a sequence of events, such as a group of musical notes, all in one whole” (Tye, 87). So according to Tye, specious presents allow us to experience events holistically, and experiencing events holistically is intimately related to the experienced presentness of things and the experience of things as changing through time. Tye says little else about what specious presents are, exactly. Tye’s notion of the specious present certainly leaves something to be desired. The absence of a detailed positive theory of specious presents should make us somewhat cautious about Tye’s theory of diachronic phenomenal unity, given the central role that specious presents play in the theory. Tye’s notion of the specious present certainly leaves something to be desired. It might be that the concept of a specious present is a ‘brute’ and unanalyzable one that is explanatory of both our experience of presentness and our experience of change through time. Alternatively, we might read Tye as asserting that specious presents are analyzable in terms of experienced presentness and experienced change. Although the concepts of presentness and change may be something of primitives in their own right, a brief discussion of them is warranted, for on Tye’s view they are intimately related to the specious present.

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3 One possible view is a kind of functionalism about specious presents. The proponent of such a view might claim that specious presents are “whatever it is that allows us to experience an extended event or sequence of events as all in one whole.” That is, the specious present is identical to whatever entity satisfies this functional/theoretical description. We could potentially expand and refine this description, and use the result to form Ramsey and Carnap sentences for the specious present(s). In turn, we could use the Ramsey and Carnap sentences to identify the specious present(s) in the actual world.
2.3 Experienced Presentness and Experienced Change

In order to illustrate presentness, Tye asks us to imagine a purely auditory experience: a single, sustained musical note (e.g. a slowly bowed violin, the fat lady singing, etc). “Once the sound begins, at any given moment, I have an experience of a sound with a certain pitch. At each such moment, my experience represents the sound as occurring now” (Tye, 86; original emphasis). So presentness might also be called “now-ness”, or the feeling that it’s happening now. Presentness is not a quality limited to auditory experience, but is rather “part of the content of perceptual experiences in all modalities” (Tye, 86). We might wonder whether Tye intends to assert that presentness is a necessary part of the content of perceptual experiences, or rather a merely a possible part of that content. I am inclined to think that presentness is a quality merely possibly represented in perceptual experience. If presentness is a phenomenal quality, there appears to be nothing preventing a phenomenal content from failing to possess the presentness quality. In the experience of normal subjects, however, presentness is such an omnipresent quality that it typically goes unnoticed.

Change is another apparent feature of temporal experience that Tye deems worthy of discussion. “The present is also experienced when one experiences something changing- a finger moving, say. This experience isn’t just a succession of different experiences of the finger in different positions. At any given moment, it is an experience of the movement of the finger” (Tye, 86-87; original emphasis). That is, experiencing the movement (i.e. spatial change through time) of the finger involves something over and above experiencing the finger as occupying different spatial locations in succession. “[T]he experience of A succeeding B requires not just the experience of A succeeded by the experience of B, but rather an experience that encompasses both A and B (in a certain temporal order)” (Tye, 87). That is, the experience of A succeeding B requires a single experience of B preceding A. Another way of putting this is
to say that in order to yield an experience of A succeeding B, there must be a single representation that has as part of its representational content, B followed by A.

### 2.4 How Many Fingers Am I Holding Up?

It is unclear what Tye intends to assert of the relationship between experienced presentness and experienced change one the one hand, and the specious present on the other. Perhaps he is saying that presentness and change are explanatory of the specious present (or vice versa), or perhaps he wishes to endorse some metaphysical doctrine. Or is it the case that Tye merely intends to characterize the specious present? Whatever his intention, there is a serious question as to whether the presentness and change principles are even consistent. For how can both A and B be experienced as occurring now, if B is experienced as occurring before A (or vice-versa)? This is prima facie absurd. Consider a single specious present in which a finger is experienced as moving from point X to point Z. According to the change principle, the finger is experienced as moving from point X to point Z. By the presentness principle, we can say that the finger is experienced as moving from point X to point Z now. But it also seems to follow from the presentness principle that the finger is experienced as being both at point X now and at point Z now. This cannot be right. A thing cannot be in two places at one time. And although a thing might be experienced as being in two places at one time, we should like to think that this kind of error does not typically occur when a normal subject experiences motion. In ordinary cases of perceived change (such as a finger moving), we do not experience the finger as being both at point X now and at point Z now. Rather, we experience the finger as being at point X before it is at point Z, and being at point Z after it is at point X. But if the finger is at both X and Z now, then the finger could not possibly be at X before it is at Z (or vice versa). Tye’s theory of specious presents
seems to entail that normal temporal experience is massively error-prone, leading to non-veridical experience whenever an object is perceived as changing.

2.5 Representations: Implementation and Character

Although initially puzzling, the apparent problems with the experience of presentness and change may turn out to be soluble. One approach that shows some promise is to make a distinction between representational implementations and representational characters. The distinction draws our attention to two different ways of thinking about representations. First, we might consider a representation as an object in its own right. That is, we might consider a representation as the physical instantiation of a particular logical structure, that instantiation being located in space and time. Alternatively, we might consider a representation as the bearer of a particular representational character. That is, we might make it salient that a representation represents the world as being such and such a way. Some philosophers might find it theoretically desirable to identify representational characters with propositions. A careful weighing of this option falls outside the scope of this essay, but it is worth noting the possibility. When considering a representation as a physical object in its own right, I will use the term representational implementation. When I wish to pick out the way a representation represents the world to be, on the other hand, I shall use the term representational character4.

4Ruth Millikan advocates a similar distinction in her Biosemantics (Chalmers, 502). Millikan thinks that we need to distinguish between two ways of thinking about information-states. She argues that in order for a state of some system (a brain, let’s suppose) to serve that system “as information,” the two following conditions must be met (Chalmers, 502; original emphasis):

(M1) The signs/states must be understood by the system.

(M2) The signs/states must be understood by the system as bearers of whatever specific information they, in fact, do bear.

Although Millikan draws this distinction in a semantical rather than a metaphysical context, it is a point that applies quite generally. Similarly for the representational character/implementation...
To illustrate the difference between representational implementations and representational characters, consider an image of George W. Bush on the television news. Considered as a representational implementation, the image has certain qualities: residing on the surface of my television screen, occupying such and such physical dimensions on the screen, having been generated from electromagnetic waves broadcast via FOX News’ satellites, and so on. When the image is considered with respect to its representational character, however, we can say that it represents a certain man as being a certain way. Namely, the image represents George W. Bush as uttering a particular series of English words at a particular press conference in the White House, as wearing such and such a suit and tie, and so forth.

A representation’s representational character need not tell anything of importance about the representational implementation. That is, there is no obvious entailment from representational characters to representational implementations. This is a consequence of the multiply realizable nature of representational characters. To say that representational characters are multiply realizable is just to say that the world may be represented to be a certain way by various distinct representational implementations. For example, the English sentence “The United States lies to the south of Canada,” the German sentence “Die Vereinigte Staaten liegen sudlich von Kanada,” and a political map of North America all represent the United States as lying to the south of Canada, even though they differ in their representational implementations.

Tye implicitly respects a similar distinction in holding that the temporal ordering of events in terms of representational character (i.e. the representation of events as occurring in a certain temporal order) implies nothing about the temporal ordering distinction; we might apply it in a semantical context rather than a metaphysical one. Millikan’s distinction is analogous to the representational character/implementation distinction insofar as it shows that the content of a representation can be teased apart from details about the vehicle by which that content is delivered.
of the relevant representational implementation(s) (that is, the temporal ordering of
the symbols that constitute or bear the representational character).

Granted, I experience the red flash as occurring before the green one. But
it need not be true that my experience or awareness of the red flash is
before my experience or awareness of the green one. If I utter the sentence
“The green flash is after the red flash,” I represent the red flash as being
before the green one; but my representation of the red flash is not before
my representation of the green flash. In general, represented order has no
obvious link with the order of representations. (Tye, 90)

Perhaps Tye has in mind something like the following. Since we can establish no
entailment from representational characters to representational implementations, it
does not follow from the fact that a specious present’s representational character is
non-momentary that its representational implementation is also non-momentary. To
put it another way, although a particular representation characterizes the world as
being a certain way through some non-momentary stretch of time, that representation
may well be implemented in a momentary fashion. Perhaps specious presents are
implemented momentarily, but have contents that range over an extended stretch of
time. This might help to explain the disconnect between the experience of presentness
and the experience of change on Tye’s theory of specious presents.

Although this is a far cry from a satisfactory solution, it shows that Tye has at
least one potential route toward defending his theory of the specious present against
outright incoherence. In any case, if we reject Tye’s theory of the specious present as
straightforwardly incoherent, then his theory of diachronic phenomenal unity fails to
get off the ground, and this is not very philosophically interesting. We have reason
to be suspicious, but for the sake of argument, let us assume that the apparent
incompatibility of presentness and change is a workable problem and move on to
examine the way in which specious presents contribute to phenomenal unity through
time. As we shall see, a theory of phenomenal unity through time that is built on
a foundation of specious presents presents far too many additional problems to be worth accepting.

2.6 Direct and Indirect Diachronic Phenomenal Unity

Like his theory of synchronic unity, Tye’s theory of diachronic unity says that phenomenal unity is a relation between experientially represented qualities, rather than experiences. Tye’s theories of synchronic unity and diachronic unity are also similar in that they require phenomenally unified qualities to enter into the same phenomenal content. But there is one notable difference between the two theories. The specious present plays an important role Tye’s in theory of diachronic unity that it does not play in his theory of synchronic unity.

How does the specious present help to account for phenomenal unity through time? Tye distinguishes between two kinds of phenomenal unity through time: direct and indirect diachronic unity. The direct diachronic phenomenal unity thesis places restrictions on the way in which the phenomenal qualities represented in temporally adjacent specious presents are related:

**Direct Diachronic Phenomenal Unity Thesis:** Direct phenomenal unity through time is a relation between experientially represented qualities. It obtains if and only if the qualities experienced in one specious present are experienced as succeeding or continuing on from the qualities experienced in the immediately prior specious present. (Tye, 100)

So in order for two phenomenal qualities to be unified through time, they must enter into the same phenomenal content. Additionally, the quality experienced in the latter specious present must be experienced as succeeding or continuing on from the quality in the immediately prior specious present. Tye’s indirect phenomenal unity thesis
incorporates the direct phenomenal unity thesis as a proper part. Indirect unity is
the ancestral of direct unity.

**Indirect Diachronic Phenomenal Unity Thesis:** Indirect phenomenal unity through time is also a relation that obtains between experientially represented qualities. It obtains if and only if the qualities experienced in nonadjacent specious presents are linked by chains of direct phenomenal unity. (Tye, 100)

The indirect diachronic phenomenal unity thesis yields some interesting results when applied to cases of split-brain surgery patients. For the time being, however, our main concern will be with Tye’s direct diachronic phenomenal unity thesis. The direct unity thesis is problematic enough on its own, without the additional baggage of the indirect unity thesis.

### 2.7 Motion Blindness and Phenomenal Unity through Time

Akinetopsia, or ‘motion blindness,’ is a perceptual disorder that occasionally results from physical injury to the brain. It robs victims of the ability to perceive spatial change over time (that is, motion) in the visual modality. Consider L.M., a victim of motion blindness:

L.M. arrived at the Neuropsychological unit of the Max-Planck-Institute for Psychiatry in Munich, Germany... L.M. Reported that looking at objects in motion made her feel quite unwell. The explanation she gave sounded rather odd. She claimed that she no longer saw movement; objects which should move, as she well remembered, now appeared as “restless” or “jumping around.” Although she could see objects at different locations and distances, she was unable to find out what happened to them between these locations. She was sure that objects did not move, but appeared as “jumping from one position to the next, but nothing in between.” (Heywood and Zihl, 3)
For individuals with akinetopsia, it is as if their visual experience itself were ‘strobed.’ When pouring orange juice into a glass, for example, a person with akinetopsia would have difficulty knowing when to stop pouring because he not be aware of the orange juice rising in the glass. Heywood’s study of L.M. lends support to this idea. “She could not see the fluid rising, and therefore couldn’t establish when to stop pouring” (Heywood and Zihl, 3). It is difficult to imagine in any great detail what it is like to suffer from motion blindness, but it seems safe to say that the akinetopsic’s experience does not visually represent the world as changing smoothly through time.

Tye’s direct diachronic unity thesis suggests a particular way of understanding the conscious experience of the motion blind individual. We might intuitively judge that the akinetopsic does not experience the phenomenal qualities represented in one specious present as succeeding or continuing on from the qualities experienced in the immediately prior specious present. If the qualities are not so experienced, then the akinetopsic fails to meet Tye’s direct diachronic phenomenal unity thesis, and we should say that his experience lacks phenomenal unity through time.

But would Tye accept the premise that victims of motion blindness do not experience the qualities represented in one specious present as succeeding or continuing on from the qualities experienced in the immediately prior specious present? It is far from clear that he must do so. Surely the akinetopsic has just one experience, in Tye’s monist sense of the word. It would be exceedingly strange to attribute a succession of temporally contiguous but numerically distinct experiences to the akinetopsic, at

\[\text{This is only a loose analogy. When perceiving a moving object under an actual strobe light, one experiences brief periods of motion interspersed regularly with brief periods of darkness. A person with akinetopsia, however, does not normally experience regular, brief periods of darkness when viewing a moving object. Nor does he experience regular, brief periods of motion when viewing a moving object. Rather, he experiences the moving object as briefly and statically occupying one position, then suddenly occupying another position, then another, and so forth.}\]
least while working from within Tye’s one-experience model. The prospect becomes stranger yet when one considers that the akinetopsic does not appear to lack phenomenal consciousness at any time. In characterizing the one-experience view, Tye uses periods of unconsciousness to ‘divide up’ or parcel out the experiences. This all suggests that the akinetopsic has just one experience. If the akinetopsic has just one experience, then it follows that the different visual qualities represented in that experience all enter into the same phenomenal content. Remembering the close theoretical connection Tye draws between the phenomenal unity of a collection of qualities and the entering of those qualities into the same phenomenal content, he should now feel some pressure to say that the akinetopsic’s experience is phenomenally unified. Alternatively, Tye might deny that the phenomenal qualities represented in one of the akinetopsic’s specious presents are represented as “flowing” or “continuing on from” the qualities represented in the immediately prior specious present, and in this way preserve the intuition that the akinetopsic is phenomenally disunified. However, this option seems contrary to the spirit of Tye’s monist metaphysics, and would thus be an ill-advised move for the one-experience theorist.

Here we have uncovered an asymmetry between synchronic phenomenal unity and diachronic phenomenal unity. All that synchronic phenomenal unity requires of the relevant phenomenal qualities is that they (simultaneously) enter into the same phenomenal content. No further restrictions are placed upon the qualities. Notably, there is no requirement for spatial unity (more on this in the next section). Diachronic phenomenal unity, on the other hand, puts additional restrictions on the unified phenomenal qualities, over and above their entering into the same phenomenal content. Diachronic unity further requires that the phenomenal qualities satisfy a two-place temporal relation (specifically, the direct diachronic phenomenal unity thesis). What is the relevant disanalogy between spatial unity and temporal unity? Why is
temporal disunity sufficient for phenomenal disunity through time, whereas spatial
disunity is not sufficient for phenomenal disunity at a time? These are puzzling
questions to which Tye does not provide any explicit answers.

2.8 Disoriented But Not Disunified (‘Mixed-Up Mike’)

Cases of akinetopsia are without a doubt bizarre, and such patients show all outward
signs of failing to appreciate the ‘smooth flow’ of conscious experience (at least in the
visual modality). However, we might nonetheless conclude that persons suffering from
akinetopsia are phenomenally unified through time. In support of this conclusion, we
might argue that merely showing a subject’s experience to be qualitatively disparate
is not sufficient to show that the subject’s experience is lacking in phenomenal unity.
Given the fact that a subject’s conscious experience represents the world as changing
less-than-smoothly through time (perhaps drastically so), it does not follow that
the subject’s experience is phenomenally disunified. Aside from entering into the
same experience, no special coherence of content is required for two qualities to be
unified. All that is required for the phenomenal unity of two phenomenal qualities
is that those two qualities enter into the same phenomenal content, which is closed
under conjunction. This is the single important condition for phenomenal unity. Tye
explicitly takes this position with respect to synchronic phenomenal unity, and he
should take this position with respect to diachronic phenomenal unity as well.

To illustrate the point with respect to synchronic phenomenal unity, Tye asks
us to imagine a man in a very unusual situation. The man has been placed in an
environment such that his perceptual experience and bodily experience represent the
world as being drastically different ways (Tye, 76-78). In particular, the man’s vision
and audition represent him as bearing a markedly different spatial relation to his
surroundings than his tactual sense represents him as bearing.
The man (let’s call him “Mixed-Up Mike”) arrived at this unusual situation in the following way. First, Mike is drugged so that he will remain unaware of the experimental setup. Next, Mike’s eyes and ears are physically removed from his body, while the relevant neuronal connections are kept intact by a special neuron-stretching agent. After that, an anesthetic is injected into Mike’s head so that he cannot locate his disconnected eyes and ears by means of his bodily sensess. Once his head has gone thoroughly and utterly numb, Mike’s nose is sealed, and an oxygen supply is connected to his mouth via a breathing tube. At this point, Mike’s body is buried in a large bathtub under a crushing weight of sand. Finally, the tub of sand is placed on the floor of an IMAX theater.

Mike’s eyes and ears are arranged just as they would have been if Mike were sitting upright in a plush chair in the IMAX theater. We might even suppose, as Tye does not, that Mike’s eyes and ears are appropriately affixed to a lifelike manikin, so that the absence of Mike’s head between his ears will not noticeably affect his auditory perceptions. For evidence from the psychology of perception suggests that the presence of a dense physical body between the ears plays an important role in determining the perceived location of sounds. Whatever details we decide to include or omit, the point is that Mike’s eyes and ears are poised to receive all the same physical inputs that a normal subject would receive from the IMAX video screen and the Dolby THX audio system.

The lengthy setup of Tye’s thought experiment is complete at last. The drugs are allowed to wear off, and Mike comes to. We flip the switch of the IMAX theater to the ON position. Lifelike images of the world’s tallest roller coaster begin to dance on the screen, and the hiss of rushing air and the rattle of coaster tracks are projected throughout the theater. What is it like to be Mixed-Up Mike?

As far as your audiovisual experience goes, it is for you as if you are
on a roller coaster. But that is not how it seems to you, as far as your bodily and tactual experiences are concerned. You feel the mouthpiece in your mouth, your body lying in the horizontal position, your rhythmic but labored breathing, the pressure that keeps you motionless with the exception of your fingers as you straighten and close them in the sand. You have the bodily and tactual experiences of someone buried alive!

On the one hand, then, it seems to you that you are moving fast through space, up and down, round and round. On the other, it seems to you that you are trapped, motionless, underground. Is not this a case of perceptual-bodily disunity? (Tye, 77)

One thing that we can certainly say about Mike’s experience is that it is very confusing to Mike. His experience visually and auditorily represents Mike as zooming down the track of a roller coaster at high speeds. On the other hand, his experience kinesthetically and tactually represents Mike as lying motionless under a great weight of sand. What is particularly puzzling about Mike’s situation is the marked lack of spatial unity between phenomenal qualities represented in his perceptual awareness and phenomenal qualities represented in his bodily awareness. Mike does not experience the roller coaster before his eyes as bearing any particular spatial relation to the sand upon his chest. It is as if Mike were in “two radically different worlds” (Tye, 78). That is, it is as if Mike’s audiovisual experience and bodily experience represent Mike as occupying two completely disjoint spatial frameworks at the same time.

Even though Mixed-Up Mike’s experience is strongly spatially disunified, Tye claims that it is nonetheless phenomenally unified. “[I]t seems to me, one reaction you may well have to your situation is that of asking yourself: How could I be experiencing both these things? How could I possibly be experiencing these things together? And this presupposes, of course, that there is unity or experienced togetherness, even though its existence seems incoherent to you” (Tye, 78). Mike’s very ability to compare the spatially incommensurable qualities represented in his experience seems to entail that those qualities are indeed phenomenally unified. For if Mike did not have a
unified experience of an F and a G, how could he be confused by the apparent spatial incommensurability of the F and the G? So according to Tye, spatial disunity does not imply synchronic phenomenal disunity.

2.9 Trouble in Paradise

These kinds of considerations about spatial unity and synchronic phenomenal unity apply mutatis mutandis to temporal unity and diachronic phenomenal unity. Suppose that it is possible to directly connect a person’s brain to a virtual reality device like the Matrix. That is, suppose that it is possible to systematically control a subject’s experience by means of some technology. Suppose next that a normal subject, Jim, is plugged into one of these simulator devices. Jim is pleasantly experiencing a simulation of blue skies, a gently rolling surf, and a warm sun. But all is not well. Jim is on the verge of experiencing an ice cold margarita (simulated, of course) when something goes horribly wrong; the drunken interface operator spills a real margarita all over the simulator controls!

Sparks fly from the machine, and it begins to snap, crackle, and pop uncontrollably. Still ‘jacked in,’ Jim undergoes a succession of rapidly changing phenomenally conscious states generated at random by the malfunctioning simulator. The simulator alters Jim’s consciousness so quickly and so drastically that for any two temporally adjacent specious presents, Jim experiences the world as being two wildly qualitatively dissimilar ways. In other words, the representational character of temporally adjacent specious presents varies wildly. For example, one specious present might represent some trees in a forest scene as standing motionless and moss-covered; the next specious present represents a riotous mob as smashing and looting a gas station; the specious present after that one represents a coral reef as undulating to and fro under the sea; and so on. It is important to note that what it’s like to be Jim varies
wildly across the modal board from specious present to specious present. It is not merely the visual character of his experience that changes drastically from moment to moment, but also its auditory character, tactual character, and so forth. The haywire simulator spares no sense-modality.

The simulator goes on malfunctioning for about fifteen minutes before it occurs to the operator to simply unplug the out-of-control machine. When Jim is (mercifully) disconnected from the simulator, he is conscious but thoroughly confused and disoriented. He has serious difficulty standing upright, and is more than a little queasy, but gladly accepts a free simulator pass in return for any physical or psychological damage that may have been caused by his misadventures on the simulator.

What should we say about Jim’s experience on the simulator? In particular, we should wonder whether Jim’s experience is phenomenally unified through time. One might have the intuition that Jim’s experience exhibits a certain element of disunity. After all, each specious present represents the world as being qualitatively quite different from the way the immediately prior specious present represents the world to be. That is, the experienced phenomenal qualities change dramatically from one experienced present to the next.

Upon reflection, however, we should come to realize that Jim’s experience is in fact phenomenally *unified* through time. For just as in the case of Mixed-Up Mike, it is precisely the unity of Jim’s experience that enables us to explain his confusion over the wildly divergent representational character of that experience. If the successive stages of Jim’s experience were not unified through time in a way that allowed Jim to compare them, then he would lack the propensity to become confused by their dramatically disparate representational characters. Indeed, if the phenomenal qualities represented in temporally adjacent specious presents were phenomenally disunified, it seems that Jim would not be in a position make comparisons of any sort.
But Jim is confused. He might even recall scenes represented in two adjacent specious presents and wonder, “Which of these scenes did I experience as occurring first?” There is no obvious answer to this question. On the one hand, the representations of the scenes are implemented in temporally adjacent specious presents. So the simulator operator might be able to inform Jim, “You saw the forest before you saw the riot.” On the other hand, the *representational character* of those representations specifies no particular temporal relation between the two scenes; for the simulation did not represent the scenes as occupying a common temporal framework. That is, Jim’s experience does not represent the forest and the riot as bearing any particular temporal relation to one another. This is analogous to the failure of Mixed-Up Mike’s experience to characterize the sand as bearing any particular spatial relation to the roller coaster. So we should conclude that Jim’s experience with the simulator is phenomenally unified. To be sure, his experience is thoroughly erratic and disorienting, but it is unified nonetheless.

### 2.10 The Haywire Simulator and The One-Experience View

What implications does our thought experiment about Jim and the malfunctioning simulator have for Tye’s theory? In particular, does Tye’s theory entail that Jim’s experience is phenomenally unified through time, or that it is not so unified? More explicitly, we might ask whether Jim’s experience satisfies both the direct and indirect diachronic phenomenal unity theses. As it stands, Tye’s theory appears to be ambiguous between these two possibilities. The unity or disunity of Jim’s experience turns on the way in which we interpret the direct diachronic phenomenal unity thesis. Unfortunately for Tye, both of these options are somewhat problematic. If he chooses to argue that Jim’s experience is not phenomenally unified, then he must answer two tough questions.
First, Tye must answer the question, “Why is Jim confused?” If each pair of adjacent specious presents is phenomenally disunified, then Jim’s experience never represents the world as being \(A \& B\), where A and B are qualities represented in specious presents that have temporally adjacent representational implementations, but wildly disparate representational characters. Since A and B never enter into the same phenomenal content, Jim is unable to make conscious comparisons between A and B. Since he would be unable to make comparisons, Jim would not be confused by the wildly disparate characters of A and B, for he would not be aware of the disparity at all.

Second, Tye must tell us why Jim’s experience is disunified, whereas Mixed-Up Mike’s is not. For given the close analogy between the two thought experiments, the labeling of Jim’s experience as ‘disunified’ seems arbitrary. In order to support the claim that Jim’s experience is phenomenally disunified, Tye would have to point to some relevant dissimilarity between the case of Mixed-Up Mike and Jim. And this dissimilarity must go beyond the mere observance that Mike’s experience is merely spatially disunified, whereas Jim’s is temporally disunified. Tye’s arguments depends on there being some relevant dissimilarity between spatial unity and temporal unity, but he doesn’t argue for any such dissimilarity.

On the other hand, if Tye opts to agree that Jim’s experience is unified, then he must find some way to justify the addition of his two diachronic unity theses over and above the synchronic unity thesis. For if the qualities experienced in Jim’s adjacent experienced presents do not fail to ‘flow’ or ‘continue on,’ it’s hard to see how any experienced qualities could, short of failing to enter into the same phenomenal content (same experience). If all it is for two conscious states to be phenomenally unified through is to enter into the same phenomenal content, then the diachronic unity theses seem unnecessary.
3 Splitting Brains and Dividing Minds

We’re lucky as human beings... If you were an amoeba, you’d split in two
and ask, “Was it good for me? Who knows!”

- Robin Williams on Sex, from A Night at the Met

3.1 Scalpel... Forceps...

A normal mammalian brain is composed of a lower portion and two roughly symmetrical upper hemispheres which are joined together by the corpus callosum, a large bundle of nerve fibers located ‘right in the middle’ of the brain (Parfit, 245). In most subjects, the callosum facilitates the transmission of electrical signals between the hemispheres. However, in some epileptic patients, the callosum facilitates electrical activity all too well. In order to reduce the number of or mitigate the severity of grand mal seizures in such patients, some neurosurgeons would quite literally cut the brain in half, severing the nerves that constitute the corpus callosum. Such an operation is called a commissurotomy, and was originally performed by Roger Sperry in the 1960s (Tye, 109).

Severing the callosum helped to localize seizure activity to one hemisphere or the other, and to discourage minor seizures from developing into grand mals. However, the surgery also had some puzzling effects concerning the consciousness of the patients. Splitting the brain’s lobes apart seemed to ‘split’ or ‘divide’ the mind as well. “The higher connections between the two cerebral hemispheres have been severed in men, monkeys, and cats, and the results have led some investigators to speak of the creation of two separate centers of consciousness in a single body” (Nagel, 148-149). The consequences of a commissurotomy are strange indeed, but it was not immediately obvious that “two centers of consciousness,” or more controversially, “two
minds" should be counted among the consequences of the surgery. In fact, it was not immediately obvious that commissurotomy had any effect on the patient at all. The only immediately apparent consequence was the surgery’s therapeutic effect with respect to epilepsy.

In most circumstances, commissurotomy patients are behaviorally indistinguishable from normal subjects. It is only when placed in very special experimental conditions that they display the kind of behavior that led Sperry, Nagel, and others to postulate that their consciousness had actually ‘divided’. “When someone’s hemispheres have been disconnected, psychologists can... present to this person two different written questions in the two halves of his visual field, and can receive two different answers written by this person’s two hands” (Parfit, 245). Such experiments capitalize on the fact that information is typically ‘crossed over’ when traveling between the brain and the sensorimotor organs. “By and large, the left cerebral hemisphere is associated with the right side of the body and the right hemisphere with the left side. Tactual stimuli [for example] from one side are transmitted to the opposite hemisphere- with the exception of the head and neck, which are connected to both sides” (Nagel, 149). This effect is not limited to tactual stimuli- it happens for visual stimuli and auditory stimuli as well. Outgoing motor signals are similarly crossed over on their path from the brain to the proper muscles. Psychologists exploited this fact in order to present information to either one hemisphere of the brain or the other, but not both.

Here is an illustration. A subject, S, is told to stare fixedly at the center of a translucent screen that fills his visual field. Two words are flashed onto the screen by means of a projector located behind, one to the left of the fixation point and one to the right, for example, the words ‘pen’ and ‘knife’ [respectively]. The words are flashed very quickly, (for just 1/10 second) so that eye movements from one word to the other are not possible. (Tye, 109)

A consequence of the this experimental setup is that ‘pen’ reaches S’s right hemisphere
only, and ‘knife’ reaches S’s left hemisphere only. Suppose the researcher then asks S, “What did you see?” S will answer, “I saw the word ‘knife’.” And try as he might, S will fail to produce the answer “I saw the word ‘pen’.” This is because linguistic production is typically controlled by the left hemisphere of the brain. But the word “pen” was only ‘seen’ by S’s right hemisphere and not by the left one, so the information ‘pen’ was never available to the language production center in the left brain. “As a result, if the word ‘hat’ is flashed on the left, the left hand will retrieve a hat from a group of concealed objects if the person is told to pick out what he has seen. At the same time he will insist verbally that he saw nothing” (Parfit, 246).

Although the right hemisphere is typically not very good at language production, both the left and the right hemispheres are able to understand language to a fair degree. So if the researcher were to ask S to use his left hand to retrieve the object corresponding to the word he saw, choosing from a ‘lineup’ of objects, S would select a pen while rejecting the knives. “Alternatively, if S is asked to sort through the group of objects using both hands, he will pick out a pen with his left and a knife with his right” (Tye, 110-111). Similarly, if S were to attempt to draw with his left hand what he saw, he would draw a pen (supposing that S is capable of doing so). Each hemisphere appears to be independently capable of indicating what it ‘saw’, so long as it has some means of so communicating. Further, each hemisphere appears to be unable to indicate what the other hemisphere ‘saw’, regardless of what means of communication are at its disposal.

These experimental results are undeniably strange, and scientists and philosophers have speculated much about about their implications for the mind-body problem, consciousness, and personal identity. Nagel, for example, thinks that we cannot non-arbitrarily decide whether a commissurotomy patient is one person or two persons, and hence concludes that our concept of person is in jeopardy. But the split-brain
cases have proven notoriously difficult to sort out. Other philosophers have offered other theories. Parfit, Dainton, Bayne and Chalmers, Lockwood, and Hurley have all given philosophical interpretations of the split-brain cases, and the list goes on. Unfortunately, to date there has been nothing like a consensus in the field. I do not wish to engage in a debate about which interpretation of the split-brain cases is true. Rather, I wish to examine Tye’s interpretation, with a keen eye toward his theory of phenomenal unity (rather than his theory of personal identity). It turns out that Tye’s interpretation of the split-brain data enhances the dissimilarities between his treatment of synchronic unity and his treatment of diachronic unity. We have already seen that where Tye’s view of synchronic phenomenal unity gave central importance to the closure of conjunction under experience, his theory of diachronic unity also includes more substantive elements: specious presents, the notion of qualitative ‘flow’, and so forth. Shortly, we will see that Tye’s interpretation of the split-brain data entails that synchronic unity is non-transitive, whereas diachronic unity is transitive. Finally, Tye’s interpretation of the split-brain cases threatens the view that the closure of experience under conjunction is important for phenomenal unity, which was his starting point in this theoretical venture. The widening gap between Tye’s two theories renders the divergence even more puzzling, and ultimately gives us reason to reject Tye’s theory of diachronic unity.

3.2 Tye’s View on Split Brains

In order to summarize the commitments entailed by his theory of phenomenal unity, Tye asserts that the following are all true of a commissurotomy patient $S$ (Tye, 121):

- **(T1)** $S$ has an experience of ‘pen’.
- **(T2)** $S$ has an experience of ‘knife’.
- **(T3)** $S$ does not have an experience of ‘pen knife’.
Figure 1: Consciousness Dividing and Merging

(T4) S can be aware via introspection that he is having an experience of ‘pen’.

(T5) S can be aware via introspection that he is having an experience of ‘knife’.

(T6) S cannot be aware via introspection that he is having an experience of ‘pen knife’ (for S has no such experience).

(T7) S cannot be aware via introspection (in a single act) that he is having an experience of ‘pen’ and an experience of ‘knife’.

“[S]plit-brain subjects are single persons whose consciousness is unified except in certain very special experimental situations” (Tye, 128). Tye holds that each hemisphere of an experimentally constrained commissurotomy patient is sufficient to give rise to phenomenal consciousness on its own. Further, he thinks that such patients are typically phenomenally *unified*. That is, Tye thinks that a split-brain patient normally undergoes just one experience, which is perfectly unified and qualitatively indistinguishable from your experience or mine (at least in terms of unity). It is only when the commissurotomy patient is placed in the experimental conditions that his one experience splits into two experiences. “On those occasions, their stream of consciousness splits into two [streams], which rejoin again once the experimental controls are removed” (Tye, 128). This reading of the split-brain data takes the analogy to a forking river of water quite seriously, for it allows both division and merging of streams. So long as the hemispheres are informationally isolated (i.e. so long as both hemispheres do not have perceptual access to the same external stimuli, and also
cannot internally pass information between hemispheres), each hemisphere gives rise to its own experience. The upshot is that the phenomenal qualities that go with each hemisphere are phenomenally disunified from the qualities that go with the other hemisphere, and the streams of consciousness are divided. To put the point about disunity in the language of Tye’s one-experience view, \( S \) does not have an experience that contains both ‘pen’ and ‘knife’. Instead, \( S \) undergoes two simultaneous (but phenomenally disunified) experiences. One such experience contains ‘pen’, and the other ‘knife’, but neither contains ‘pen knife’, or \( \text{pen & knife} \) (i.e. the conjunction content of ‘pen and knife’). When the experimental conditions are removed, however, the hemispheres are again able to access the same information (e.g. both have access to ‘pen’), and the two streams of consciousness merge back into one. \( S \) is thereby phenomenally reunified.

This seems like a strange theory, even taking into account the already-strange subject matter. How could one experience split into two experiences? How could two experiences merge into just one? After all, one thing is just one thing, not two. We might also wonder how \( S \), a single subject, could simultaneously undergo two experiences. If it were possible for \( S \) to undergo two experiences simultaneously, then what would it be like for \( S \)? Surely we cannot fathom what it would be like, if it is like anything out of the ordinary. On Dainton’s view, it is impossible to conceive of what it is like to undergo divided streams of consciousness (98-99). Relatedly, we might wonder what it’s like to undergo a division of consciousness, or a merging of consciousness. These questions are all very puzzling, but Tye believes that he can answer them reasonably. He states that “there is no special mystery about the mental lives of split-brain patients” (Tye, 121). Again, it is not my main interest here to examine Tye’s interpretation of the split-brain data \( \text{per se} \), and so I will not challenge his claims about split-brains and the mental lives of their bearers. Rather, I intend
to show that if we take Tye’s split-brain interpretation for granted in conjunction with his theory of phenomenal unity, counterintuitive and unacceptable consequences follow.

3.3 The Intransitivity of Synchronic Phenomenal Unity

Although Tye argues that placing a split-brain subject in the proper conditions can give rise to synchronic phenomenal disunity, Tye thinks that there is a special case in which such a patient would exhibit some degree of synchronic phenomenal unity, even holding the experimental conditions in place. Further, he thinks that this special case shows that the phenomenal unity relation is intransitive. This is something of a major conclusion. Not only has phenomenal unity been thought to be a transitive relation, but it is intuitively an equivalence relation. When, exactly, do these special cases occur? They occur when a commissurotomy patient dons a newly purchased shirt without having first removed the final pin from the collar.

Even after a commissurotomy patient has undergone the surgery, there are still some connections remaining between the two hemispheres. Recall Nagel’s above comment that “the head and neck...are connected to both sides [of the brain].” Although the collosum itself is no longer a viable neurological pathway after the surgery, subcortical pathways still connect the two hemispheres to some degree. Suppose, for example, that we flash an erotic, frightening, or otherwise emotionally evocative picture to the right hemisphere only. Since language production is typically controlled by the left hemisphere, the subject will not be able to tell us what he saw, but he will be able to report feeling differently (Tye, 129). So the hemispheres are still connected by at least some neurons. And it is plausible to suppose that sensations in the head and neck travel to both hemispheres by means of these common neurological pathways. Armed with this premise, Tye is able to show that at least some phenomenal
qualities can be counted among the phenomenal contents of each hemisphere, even with the experimental conditions held in place.

If a split-brain patient is asked to say where a pin is gently pricking him on his neck or face, he will report its location accurately. If asked to touch his left forefinger to the relevant spot after the pin has been removed, again he will do so accurately. Here, the split-brain patient's behavior is just the same as that of a normal subject. (Tye, 130)

Insofar as the pinprick on the neck is concerned, the commissurotomy patient shows all outward appearances of phenomenal unity. Both hemispheres are able to indicate that they feel the pain (either verbally or by ostension), and so it stands to reason that the phenomenal quality of the pin-prick must be unified with the phenomenal contents that go with each hemisphere.

The next step in Tye's argument is to reconsider the phenomenal disunity that commissurotomy patients typically display under the experimental conditions. His aim is to show that some qualities are phenomenally unified for $S$, while others are not.

Imagine now that as the neck of the split-brain subject, $S$, is pricked, he is presented with a red screen to the left, which he touches with his left forefinger, and a green screen on the right, which he touches with his right forefinger. $S$ has an experience of his left forefinger together with a red surface. He also experiences a connection between that forefinger and the rest of his hand and arm; and he experiences his arm as connected (via part of his upper torso) to his neck, in which he experiences the prick. The same is true for $S$’s right forefinger, except that now the relevant surface is the green one. (Tye, 130)

That is, one of $S$’s streams of consciousness has the momentary content red & pinprick, and the other stream has the momentary content green & pinprick, but neither stream has the momentary content red & green. So $S$ experiences the red surface as unified with the pin-prick, and he experiences the green surface as unified with the pin-prick. However, he does not experience the red surface as unified with the green surface. $S$ might verbally report, “I see a green screen and feel a pin-prick in my neck,” or he
might ostend both the red screen and the pinprick. But S would not communicate, verbally or otherwise, that “I see a green screen and a red screen.”

From all this we can conclude that the red screen is phenomenally unified with the pinprick, and the pinprick is phenomenally unified with the green screen, but the red screen is not phenomenally unified with the green screen. If the argument is sound, as it appears to be, Tye has shown that the synchronic phenomenal unity relation is non-transitive. This is something of a major conclusion. It has been thought by many philosophers that phenomenal unity is not only a transitive relation, but an equivalence relation. That is, phenomenal unity is reflexive, symmetrical, and transitive. We have already established that reflexivity is plausibly a property of phenomenal unity. According to common sense, phenomenal unity is also symmetrical (Lockwood, 89). That is, if A is phenomenally unified with B, it seems that B must be phenomenally unified with A. Intuitions about transitivity may vary. Lockwood denies synchronic transitivity for reasons similar to Tye’s (Lockwood, 88-89). On the other hand, some hold that phenomenal unity is transitive. Barry Dainton, for example, argues that the non-transitivity of phenomenal unity in the synchronic case is “incomprehensible” (168). Oddly, Dainton and Tye also disagree about the transitivity of diachronic phenomenal unity. According to Dainton, “diachronic co-consciousness is clearly not transitive,” and “experiences occurring at different times are separated in a way that experiences occurring at the same time are not” (Dainton, 168). So both Dainton and Tye offer separate theories for synchronic and diachronic unity, and those theories end up yielding different logical properties for each unity relation. I think that Tye is right to conclude that synchronic phenomenal unity is intransitive. However, this conclusion does not sit well with his theory of diachronic phenomenal unity.
3.4 Diachronic Phenomenal Unity Revisited: ‘The Wishbone’

Although Tye’s theory entails that the synchronic phenomenal unity relation is not transitive, it also entails that the diachronic unity relation is transitive. Indeed, the latter is so by definition; for Tye defines the indirect diachronic unity relation as the ancestral of the direct diachronic unity relation. But this is not a tenable view. If Tye holds that diachronic unity is transitive, he will fall prey to the “wishbone” argument. In his argument for the nontransitivity of synchronic unity, Tye argues that a split-brain person S’s consciousness can be phenomenally disunified. But in virtue of the indirect diachronic unity thesis, Tye’s theory yields the result that S’s consciousness is phenomenally unified even when the specious experimental conditions are in place. This may go some way toward mitigating Tye’s conclusion that unity is nontransitive. Because transitivity is built into diachronic phenomenal unity, phenomenal unity can obtain even in cases where synchronic phenomenal unity fails. The challenge to Tye: show that S’s consciousness is phenomenally disunified simpliciter.

Remember that Tye’s direct diachronic unity thesis says that two phenomenal qualities are directly unified through time if and only if (1) they are experienced in two temporally adjacent specious presents and (2) the qualities in the later specious present are experienced as “succeeding” or “continuing on from” the qualities in the prior specious present (Tye, 100). So far so good, with respect to transivity. Since temporal adjacency is non-transitive, direct diachronic phenomenal unity must be non-transitive as well. But Tye defines the indirect diachronic phenomenal unity relation as the ancestral of the direct diachronic unity relation. That is, two qualities are indirectly phenomenally unified if and only if they are “linked by chains of direct phenomenal unity” (Tye, 100). In other words, two qualities Q₁
and $Q_n$ are indirectly phenomenally unified if and only if $Q_1$ is directly unified with $Q_2$, ... and $Q_{n-1}$ is directly unified with $Q_n$. While the direct diachronic phenomenal unity thesis is not by itself transitive, the indirect diachronic thesis is transitive. Notice that this makes the disjunction of the two relations transitive as well. And indeed, Tye presents the two relations as a disjunctive account of phenomenal unity through time: either direct diachronic unity or indirect diachronic unity is sufficient for diachronic unity. So we might say that “diachronically phenomenally unified simpliciter” means, roughly, “either directly diachronically phenomenally unified or indirectly diachronically phenomenally unified.”

Although the transitivity of diachronic unity seems intuitively plausible, if we accept it we will also need to add some additional constraints to the relation in order to prevent strange unities between two branches of a stream of consciousness that divides through time. Consider again the case of our split-brain subject $S$. Suppose that $S$ has been placed in the experimental condition, and remains there still. That is, consider $S$’s stream of consciousness from a time before the experiment up until mid-experiment. According to Tye, $S$’s consciousness was synchronically unified before the experiment (and after), but is not synchronically unified during the experiment. Consider three phenomenally qualities A, B and C. Quality A and quality B both enter into $S$’s experience simultaneously, but in two synchronically phenomenally disunified streams of consciousness. We might suppose that A and B are the experienced redness and greenness of the screens from the previous examples, but any pair of phenomenal qualities will suffice. Now, consider the third quality C. C enters into $S$’s experience before his consciousness has divided (see Figure 2). A and B both sit ‘downstream’ of C, and as such they are linked by chains of direct diachronic unity. So A is indirectly diachronically unified with C, and C is also

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It is worth noting that A and B are also linked to C by memory. Tye rejects the idea that
indirectly diachronically unified with B. But it follow from this together with the transitivity of indirect diachronic unity that A and B are phenomenally unified. This is an extremely puzzling result. For A to be indirectly unified with B, there must be chains of indirect unity that run *backward* in time from A to C, and *forward* in time from C to B. This ‘change of temporal direction’ is highly counterintuitive. Stranger yet, A and B are *diachronically* unified on Tye’s theory, but the qualities are experienced *simultaneously* by S! Finally, notice that Tye’s theory also entails that A and B are synchronically *disunified*. Surely something must be amiss.

We are left with many unanswered questions, not the least of which is “Are A and B phenomenally unified?” If we construe Tye’s account as a theory of phenomenal unity *simpliciter*, this case is extremely problematic. Perhaps Tye would admit that there are really *multiple* kinds of phenomenal unity; synchronic phenomenal unity, diachronic phenomenal unity, and perhaps others. But I think that this option is not at all in the spirit of his theory. By all appearances, Tye’s theory of phenomenal unity is a singular one. Indeed, he dedicates the introduction of his book to this very point!

Tye might attempt to save the core of his theory of diachronic unity by adding additional constraints to prevent these strange cases (unity between two branches of a split stream of consciousness). We might accomplish this by either (1) imposing memory plays an important role in phenomenal unity through time, but it is a possible view that we ought to consider.
a 'direction-of-time' constraint on one or both of the diachronic phenomenal unity relations, or (2) denying that one or both of the unity relations are symmetrical. Going with option (1) would certainly get the job done, but this move seems rather \textit{ad-hoc}. We would need to find some independent motivation for making (1) seem plausible. Similar considerations apply to option (2). In addition, the symmetry of diachronic unity seems intuitively plausible. In ordinary cases, if A is unified with B then B is unified with A, whether A and B occur synchronically or diachronically. Even if we find a way to motivate (2), we might also need (1) in order to ensure that the unity relation runs in the \textit{correct} direction with respect to time. \footnote{It seems like the correct direction is backward in time (i.e. into the past). First, a subject’s memory links his present consciousness with past conscious events. Second, the future is beyond the epistemic limits of our consciousness. We just don’t know what we are going to experience until we experience it, so it’s hard to see how our present experience could be unified with a future one.} All in all, patching the theory seems like a sub-optimal strategy.

\section*{3.5 A Minimalist Theory of Phenomenal Unity}

The closure under conjunction of experience is the single important feature for phenomenal unity, whether synchronic or diachronic, and should be given singular importance in our theory of diachronic unity as well as in our theory of synchronic unity. The smooth ‘flow’ or ‘succession’ of phenomenal qualities is a qualitative feature of content, and not important to the structure of phenomenal unity. Defining diachronic unity in terms of qualitative aspects of experience leads to messy philosophical problems. Furthermore, postulating divergent theories of synchronic and diachronic unity is theoretically extravagant, in that it requires us to admit of two kinds of phenomenal unity rather than just one\footnote{We might also try the strategy of \textit{reducing} one kind of phenomenal unity to other. Perhaps synchronic unity is more fundamental than diachronic unity, or perhaps it is the other way around.}. Offering a ‘unified theory of unity’ is preferable on both counts.
Tye says that synchronic phenomenal unity is “a relation between qualities represented in experience, not between qualities of experiences” (Tye, 36). This way of presenting the phenomenal unity relation stresses the qualitative character of the qualities. It also suggests that experiences themselves play no important role in the relation. But this is not the case: experiences do play a role in the phenomenal unity relation. It is just as important for unity that an experience enter into the relation as well as phenomenal qualities. To see this, consider the following example.

Mike (this time not mixed-up) and Ike have spent the afternoon eating a large bag of tortilla chips, along with a bowl of red salsa and a bowl of green salsa. The snackers sit opposite from one another at the table, and too full to eat any more chips, they stare contentedly at the remainder of the salsas. Here is the twist: Mike is a normal subject, whereas Ike is a commissurotomy patient. To simplify the exposition of the thought experiment, let’s also suppose that the “the special experimental conditions” are in place with respect to Ike, the red salsa and the green salsa, in the same way the conditions were in place with respect to S, ‘pen’ and ‘knife’.

Intuitively, it seems that the red visual quality of one salsa and the green visual quality of the other salsa are phenomenally unified for Mike, but not for Ike (because Ike is a split-brain subject in the proper conditions). On Tye’s view, however, the qualities “are not qualities of experiences. If they are qualities of anything, are qualities of things experienced” (36). So the qualities in question do not belong to Mike and Ike’s experiences, but rather to the salsas themselves (provided the salsas exist). Now the question arises, are the qualities phenomenally unified or aren’t they? If phenomenal unity is merely a relation between phenomenal qualities, we are in trouble. For insofar as we fail to relativize unity in some way, it seems that the green visual quality of the one salsa and the red visual quality of the other salsa are both unified and not unified. We might pursue the intuitive option and say that they
are unified for Mike, but not for Ike. But Tye would not allow this, for he argues that subject unity is distinct from phenomenal unity (12-13). A more promising option would be to say that phenomenal unity is *experience-relative*.

Phenomenal unity is not a two-place relation between phenomenal qualities, but rather a three-place relation among phenomenal qualities *and an experience*\(^9\). This allows to say that the qualities are phenomenally unified for Mike because they both enter into his one experience. The qualities are not phenomenally for Ike, because even though he has two experiences, he has no experience into which both qualities enter. As we have seen, defining unity in terms of the closure under conjunction of experience has many advantages. So, phenomenal unity must be *experience-relative*. That is, the experience in or by which two phenomenal qualities are unified must enter into the unity relation in a substantial way. Thus, Tye is wrong in his claim that phenomenal unity through time is a relation between experienced qualities. Rather, it is a relation among experienced qualities *and an experience*. This point might seem rather obvious, but showing that experience must play a role in the unity relation serves to highlight the important role that closure plays. It is essential that two unified qualities enter into the same experience *because* it is the closure of experience under conjunction that secures phenomenal unity.

We would be well off to adopt a similar theory of diachronic phenomenal unity. Once we see that Tye’s ‘flow’-based theory of diachronic unity leads to absurd conclusions, and that it is the closure of experience under conjunction that is doing all the real work, we should abandon ‘flow’ as the root of phenomenal unity, and just stick with closure under conjunction. In other words, we should adopt a minimalist or deflationary theory of phenomenal unity. On this view, two qualities are phenomen-

\(^9\)We might also say that phenomenal unity is a relation between a *pair* of phenomenal qualities and an experience.
nally unified if and only if they enter into the same experience, where experiences are to be understood as extended through time. It might seem disconcerting to abandon the notion of ‘flow’ as important to unity through time. One might wonder, “What is the ‘glue’ that binds all the presents together into a unified stretch of consciousness, if not ‘flow’?” But the abandonment of ‘flow’ is analogous to our abandonment of the substantivity thesis for synchronic phenomenal unity. We again deny that there is anything beyond the inclusion of two qualities within a single experience that contributes to phenomenal unity. It is also analogous to the synchronic case in that it appears to require a holism about experience (in this case, about stretches of experience), but not a monism. This allows us to retain the “specious-present” terminology while denying that specious presents are ontologically primary to experiences.

A minimalist theory of phenomenal unity based on closure under conjunction is compatible with Tye’s conclusions about the non-transitivity of synchronic phenomenal unity. His argument is primarily an empirical one, driven by the facts about split-brain subjects and their behavior in the laboratory. Endorsing the non-transitivity of synchronic unity does not oblige us to adopt Tye’s monist metaphysical view. Again, a holism will do just as well as a monism. Similarly, insofar as we adopt a holist view of experience, we can also agree with Tye’s conclusions about the phenomenal consciousness of split-brain patients through time. By adopting a minimalist theory of unity, we lose none of the interesting conclusions about the unity of consciousness, but we are able to circumvent some of the tricky philosophical problems as well as simplifying our theoretical framework.

3.6 Disunified Consciousness and Self-Knowledge

Even though we have come rather far afield from consideration of Tye’s one-experience view, I shall offer one final argument for the conclusion that we should discard monism
in favor of a pluralistic holism about experience. Whether or not this final argument is successful with respect to that goal, it raises some interesting questions about knowledge of one’s own consciousness. Phenomenal disunity may turn out to be more commonplace than typically thought.

Suppose that while our split-brain subject $S$ is sleeping, a sneaky neuroscientist places $S$ in the special experimental conditions. The neuroscientist sets up the experiment so than upon waking, $S$’s left brain is presented with an audio recording of a detailed commentary on *Apparition of the Visage of Aphrodite*, a painting by Salvador Dali. Simultaneously, $S$’s right brain is presented with a graphical depiction of that painting. At the moment of waking, $S$’s consciousness is already disunified. $S$’s linguistic understanding of the narrative is disunified from his visual perception of the painting. The stream of consciousness that goes with $S$’s left brain might have trouble understanding the commentary in the absence of the image of the painting. Similarly, the stream that goes with the right brain might overlook some of the more subtle visual features of the painting in the absence of the commentary. After the presentation has run its course, the neuroscientist removes the experimental conditions and $S$’s consciousness is reunified. Suddenly the commentary makes much more sense to $S$, since he now remembers having seen the painting. Similarly, his appreciation of the painting is greatly enhanced once he gains access to his understanding of the commentary.

It should be clear that in this case, $S$ has *two distinct experiences* upon waking, whether or not we accept Tye’s monist metaphysics. Let’s suppose that the one-experience view is true, even though minimalism appears to be a superior alternative to a substantive theory of diachronic unity. It is also clear that $S$’s two experiences appear to merge into a single, unified experience (see Figure 3). Now, this just isn’t supposed to happen on the one-experience view. On Tye’s view, experiences are
not even the kind of thing that could be unified; for only experientially represented qualities can be unified. So if we are to take the one-experience view seriously, we must say that S still has two experiences after the apparent merging. Tye says of a relevantly similar case that the two experiences “differ in some of their stages and thus do not share all the same properties” (103). Hence, he would agree that they are not identical. But Tye would also say that after the merging, the two experiences are “identical-at-a-time,” “since every stage of E1 within that time period is identical with some stage of E2” (103). But this line of argument admits of stages of experience. Tye might go on to deny that experience-stages are themselves experiences (as he does in the case of non-maximal ‘experiences’ at a single time), but he would be loath to do so. He can no longer rely upon the the statue and clay argument, now that we have brought the fourth dimension to bear. For surely it would be absurd to suggest that a temporal slice of (e.g.) Rodin’s The Thinker is not a statue, properly speaking, but merely a non-maximal temporal stage of a statue. So it seems that even assuming the monist metaphysics, the multiplicity of experience still lurks in the experience-stages.

Even if the preceding argument ultimately fails, it raises some interesting questions about the phenomenal unity of a normal subject’s consciousness. It is interesting to consider the possibility that ordinary subjects have at least some degree of divided consciousness. To keep the speculation simple, let’s agree with Tye that all of the
following are true of a split-brain subject’s consciousness through time:

(P1) In normal circumstances, the consciousness of a split-brain subject is phenomenally unified in the same way that the consciousness of a normal subject is phenomenally unified.

(P2) Phenomenal unity only fails for a split-brain subject under special experimental conditions. Here his consciousness divides into two distinct streams.

(P3) When the experimental conditions are removed, the streams ‘merge’ back together and are phenomenally reunified.

(P4) Before, during and after the reunification, there is nothing particularly strange about what it’s like to be the split-brain subject.

If (P1)-(P4) are all true, then how does one know that one’s own consciousness is not continually dividing and merging in this fashion? Perhaps it is rather implausible that a normal subject’s consciousness divides in the same way that a split-brain patient’s does. Presumably, this kind of division would be detectable by existing empirical methods, if not by the subject himself. But nothing that has been said thus far disbars the view that one’s consciousness is continuously merging, just as S’s consciousness merges in the the Aphrodite example. This kind of merging is possible, and indeed plausible, so long as we suppose that such merges happen through time in the same way that a split-brain patient’s temporarily disunified consciousness reunifies through time. Such considerations as “the backward-looking nature of experience” make this an extremely plausible supposition (Tye, 91). Tye’s view about split-brains is amenable to a picture of consciousness on which the “streams of consciousness” metaphor runs very deep (pun intended). On such a picture, the sensory organs are the mountain pools from which phenomenal consciousness springs forth (see Figure 4). As the streams merge into rivulets, and rivulets into rivers, more complex phenomenal subjects emerge. We might identify ‘the’ subject of experience with the stream of consciousness that has the most (or most important) sub-streams merging into it. If Tye is right that “there is no special mystery about the mental lives
Figure 4: Merging consciousness in a normal subject?

...of split-brain patients,” then our own streams of consciousness might be disunified as well; and we wouldn’t even know it!
4 Concluding Remarks

I hope to have shown that the multiplicity of experience and the substantivity of unity are separate issues that come apart from one another. On my view, multiplicity might be true even if substantivity is false. It is the closure under conjunction of experience that does all of the useful work in Tye’s solution to the problem of phenomenal unity. We can enjoy virtually all of the benefits of Tye’s solution without adopting his one-experience metaphysical view. We need only to allow that experiential contents can be treated in a holistic manner. This gives us closure under conjunction, and with closure comes phenomenal unity.

A minimalist theory of phenomenal unity deserves a closer look. If the closure under conjunction of experience really is as important for unity as I have argued, one wonders whether it might be the only feature of experience relevant to phenomenal unity. Even if this turns out to be the case, one might legitimately worry that closure does little to explain phenomenal unity; perhaps it is merely a precise way of describing the problem. It may be the case that there is some more basic (mereological? neurological?) property of experience that explains both unity and closure. In the end, I think that we are left with more questions than we had at the outset, and that there are several viable paths of inquiry that we might choose to follow.

At the core of the issue rests the question, “What are the logical properties of the phenomenal unity relation?”\footnote{Assuming, of course, that we are correct in categorizing phenomenal unity as a relation. Although it is difficult to see how phenomenal unity could fail to be a relation, the assumption has gone unquestioned throughout this discussion.} Is unity an equivalence relation? Could it really fail to be transitive, as Tye appears to have shown? If so, might symmetry fail as well? Surely reflexivity could not fail, at least not insofar as self unity is an intrinsic quality. But we might question this as well. Uncovering the logical properties of unity
is an interesting project in its own right. However, illuminating the logical structure of the unity relation also promises to shed light on other aspects of the problem of phenomenal unity. For example, knowing more about the logic of unity may help to answer the questions, “What is the nature of phenomenal content, and how are phenomenal contents individuated?” and ”What do different combinations of logical properties imply about the individuation of experiential contents?” For example, a theory on which unity is an equivalence relation might require that we individuate experiences differently than a theory on which unity is merely reflexive, or reflexive and symmetric.

I also think that there are some interesting questions that remain about the epistemology of phenomenal unity. What is the nature of our evidence about unity? Intuitively, such evidence is largely introspective. Phenomenal unity obtains when two experiences or phenomenal qualities are compresent, and such compresence is often available for introspection. But in split-brain cases where S’s consciousness appears to be disunified, S lacks introspective awareness of the disunity. In cases where disunity obtains, the evidence appears to be empirical rather than introspective. This leaves us wondering whether there could be introspective evidence for phenomenal disunity (or empirical evidence for phenomenal unity). If phenomenal disunity turns out to be introspectively undetectable, the possibility that normal subjects are phenomenally disunified becomes considerably more plausible. We all seem to be phenomenally unified upon introspection, but this may be a mere illusion arising from a dearth of relevant evidence, and a tendency to overestimate the force of introspective evidence with respect to disunity.

Relatedly, we might want to further explore the implications that a theory of phenomenal unity based on closure under conjunction has for the nature of subjecthood. Tye seems to identify subjecthood with personhood, and I have followed suit in using
the terms more or less interchangeably. But there is work to be done in clarifying our concepts of subject and person, and their relations to experiential content. What role, if any, do experiential contents play with respect to personal identity? Relatedly, what is the relationship between an experiential content(s) and a subject? To emphasize the difference between these two questions, notice that a split-brain person may (at least occasionally) support more than one experiential content at a time, even in Tye’s monist sense of ‘experience’. So if we concede that a split-brainer is a single person, we are committed to the view that persons are not necessarily phenomenally unified. On Tye’s view, neither persons nor subjects are necessarily phenomenally unified. But we still might wonder whether there aren’t two subjects present in some sense of the word ‘subject’. That is, we might have some lingering intuitions that subjecthood is essentially bound up with phenomenal unity. These intuitions are not easily dismissed, and so warrant further investigation of the matter.

Another aspect of phenomenal unity that remains puzzling is the so-called ‘spurious present.’ For all that has been said, it is still not clear what the spurious present is, or what it contributes to phenomenal unity. Does the spurious present somehow help to fuse slices of synchronic phenomenal unity into a diachronically unified phenomenal whole? Are synchronic unity and diachronic unity two different kinds of unity? If so, is one kind primary? That is, can we reduce one kind of unity to the other? We might approach this question from several perspectives. We might ask the metaphysical question, “Can we eliminate one kind of unity in favor of the other?” Alternatively, we might ask the epistemological question, “Can we reductively explain one kind of unity in terms of the other?” Finally, we might ask the semantic question, “Is one concept of unity or the other primary?” There is, of course, the matter of locating spurious presents in our ontology, but this task may have to wait until we
clarify some more basic issues about the relationship between phenomenal unity at a time and through time.

Above all, my wish is to have awakened curiosity in the reader, and stirred his or her imagination. Thanks for reading!
5 References


