

Conceiving Simple Experiences

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That consciousness is composed of simple or basic elements that combine to form complex experiences is an idea with a long history. This idea is approached through an examination of our “picture” or conception of consciousness (CC). It is argued that CC commits us to a certain abstract notion of simple experiential events, or *simples*, and that traditional critiques of simple elements of experience do not threaten simples. To the extent that CC is taken to conform to how consciousness really is, therefore, the concept of simples must be treated in kind.

In this paper I discuss a topic that has arisen repeatedly throughout the history of thought about the mind. It concerns the fact that conscious experiences are often complex, and the question whether such complexity must ultimately be understood in terms of simple, basic, or atomic elements or parts that in some way contribute to form such complex experiences. Interestingly, in spite of the recent resurgence of interest in consciousness, this topic has hardly been broached, much less systematically addressed. No doubt that is due largely to the central role simple experiences have played in failed research programs such as introspectionism in psychology and phenomenism in philosophy. Attacks by the likes of James (1890/1983) and the Gestaltists (Köhler 1947/1980; Wertheimer 1922/1938) in psychology, and Austin (1962) and Chisholm (1957) in philosophy, among others, served effectively to bury the issue. However, the matter needs to be reexamined. For whether there are simples, and if so what they are, are questions that cannot so easily be put aside when faced with a complex structured phenomenon — of which consciousness is surely an instance. Indeed, one might join Russell (1914/1993) in insisting upon “the [logical] impossibility of explaining complexity without assuming

I would like to thank Hanoch Ben-Yami, Jonathan Berg, Joseph Goguen, and Ruth Weintraub for helpful discussions or comments on earlier drafts. Requests for reprints should be sent to Dr. Michael Antony, Department of Philosophy, University of Haifa, Haifa 31905, Israel. Email: antony@research.haifa.ac.il

constituents" (p. 152). If one does, then the question of whether there are simples becomes unavoidable, since each constituent itself, it would seem, must be either simple or complex. This paper is in part an advertisement for the importance of exploring this topic anew.

Methodology

I approach the matter of simples by focusing on what I call our *conception of consciousness*, or CC — a rich, largely pretheoretical, psychological structure that I assume is employed in much of our thought about consciousness. As such, questions about the nature of CC are empirical, though philosophical studies of concepts (e.g., those that evoke intuitions about concept application, or explore relations among concepts) can also contribute to the study of CC. Aside from assuming that CC exists, and that it is complex (syntactically and semantically), I assume little else about its nature. Such a noncommittal stance is common in the concepts literature, and would seem to be warranted given our impoverished state of knowledge regarding concepts (see Margolis and Laurence, 1999, for an introduction to that literature). I have argued elsewhere (Antony, 1999) that a methodology for studying consciousness that can lead to progress is one whereby we study CC, and this paper accords with that methodology: as a philosophical study it serves as a source of rough and informal hypotheses concerning CC, subject to correction or rejection in light of relevant theory or data.

To help fix ideas, CC can be thought of as the conception through the employment of which individuals who are disposed to find consciousness deeply puzzling, think of, conceive of, or "picture to themselves" conscious phenomena (both when puzzled and when not). I assume that in understanding Nagel's (1974) assertion that it is like something to be conscious, or Jackson's (1982) tale of Mary, one conceptualizes consciousness in a more or less characteristic way—whether or not one sympathizes with Nagel's or Jackson's conclusions. The same is true where one insists that there are qualia, is baffled by the mind–body problem, or simply reflects on James's (1890/1983) metaphor of consciousness as a stream.¹ Arguably CC has roots in the picture of mind that emerges from Descartes' (1642/1984) "evil demon" and "dreaming" thought experiments in his first Meditation (*before* he argues for dualism). Of course, materialists also conceive of consciousness via CC. Philosophers such as Dretske (1995), Lycan (1996), Rosenthal (1997), and Tye (1995) employ much the same pretheoretical conception of consciousness as do those more skeptical of materialism like Chalmers

¹The central intuition in the anti-functionalist argument in Antony (1994) is also generated by CC.

(1996), Jackson (1982), Kripke (1980), and Nagel (1974, 1986). It is just that the former believe whereas the latter do not that materialism can account for the phenomena CC represents.

As a working hypothesis I assume that there is a single conception of consciousness implicated in the above sorts of cases, as well as across individuals. That assumption is consistent with standard cognitive scientific practice according to which subjects who use a term univocally (e.g., the word “bird”) are ascribed the same concept (the concept BIRD), in spite of individual differences across subjects, as well as borderline cases of subjects who neither clearly possess nor clearly lack the concept (e.g., children at early stages of development). I have argued, contrary to what is commonly held, that the term “consciousness” is univocal within the current consciousness literature (Antony, 2001a; see also 2001b). If that is right, then ascribing a single conception of consciousness to researchers is justified in spite of individual differences and borderline cases.

My aim in this essay is to argue that an abstract conception of simple experiences, the details of which will emerge below, issues from CC. I have called such simples *simple experiential events* or *SEEs* (Antony, 1998), however in this paper I refer to them merely as *simples*. I do not argue that CC entails the notion of simples, since there appears to be an alternative to simples, given CC — though just one. I do argue that there is no reason to treat the alternative seriously, and so for the time being at least CC and simples should be seen as going hand in hand. If that is right, then to the extent that CC is taken to conform to how consciousness really is, the notion of simples must be treated in kind. I emphasize that because my preferred methodology for studying consciousness involves focusing on our conception of consciousness, I refrain from drawing metaphysical conclusions about whether or not there really are simples. The reader, however, may choose otherwise.

Brentano on the Elements of Consciousness

Historically, most attacks against simples have been directed at rather crude conceptions involving overly restrictive concepts of *parthood*. It has often been assumed, for example, that parts of experiences — *a fortiori* simple parts — if they exist, must enjoy a certain *independence* vis-à-vis any other parts with which they might be realized. One way of understanding such independence is in terms of unrestricted possibilities for recombination. Locke (1689/1975) held such a view regarding simple ideas: “When the Understanding is . . . stored with . . . simple *Ideas*, it has the Power to repeat, compare, and unite them even to an almost infinite Variety, and so can make at pleasure new complex *Ideas*” (Bk. II, Ch. 2, § 2). Hume (1739/1978) concurred: “[A]ll simple ideas may be separated by the imagination, and may be

united again in what form it pleases" (Bk. I, Part I, § IV). As we shall see, no such strong form of independence among experiential parts is necessary, so criticisms that assume otherwise fail against simples generally.

The concept of simples that issues from CC is a general, abstract notion that does not entail the kind of strong independence Locke and Hume presupposed. On the contrary, the concept allows a wide variety of dependency relations among simples. That various kinds of dependency relations among experiential elements are possible came to light largely through the work of Brentano and his students (e.g., Stumpf, Husserl, Meinong, and Ehrenfels, among others; see Smith and Mulligan, 1982).² As a preliminary to the discussion of simples that follows, accordingly, I shall first sketch some main themes in Brentano's (1890–1891/1995) theory of the elements of consciousness.

In lectures given in the early 1890s, Brentano (1890–1891/1995) distinguishes what he calls *actually separable* parts of consciousness from *merely distictional* parts. Among actually separable parts, some involve *mutual* or *two-sided* separability, while others are just *one-sided* separable. Brentano explains separability thus:

Our consciousness does not present itself to our inner perception as something *simple*, but it shows itself as being composed of many parts Yet, even though these parts never occur side by side like the parts of a spatial continuum, many amongst them can in some way be actually separated from one another like the parts of a spatial continuum. The sense in which one of these parts can be actually separated from another one is that the former, having existed earlier as belonging to the same real unit . . . as the latter, continues to exist when the latter has ceased to be. (p. 15)

We can thus imagine two experiential parts, A and B, simultaneously present in consciousness at a given time. If at a later time one of the parts ceases to be present in consciousness while the other remains, A and B are separable.

A and B are *two-sided* or *mutually* separable if A can be present in consciousness without B, and B can be present without A. A and B are *one-sided* separable if there is a one-way dependency relation between them — that is, if either (i) A can be present in consciousness without B, but not B without A, or (ii) B can be present in consciousness without A, but not A without B. As illustrations of two-sided separability Brentano offers (1) seeing and hearing, and (2) parts of seeing and parts of hearing, respectively (p. 15). The idea behind (1) is that where both visual and auditory contents are simulta-

²The roots of Gestalt psychology are closely connected to Brentano's school. For example, Ehrenfels's (1890/1988) seminal essay "On 'Gestalt Qualities'" was a major factor in the birth of the movement, and Wertheimer, Köhler, and Koffka all studied with Stumpf in Berlin (Smith, 1988b, p. 44). It is thus ironic that Gestalt psychology, which presented some of the most influential criticisms of simples, did little to threaten the more sophisticated notions of simples associated with Brentano's school, as we shall see.

neously present in consciousness, either can persist while the other terminates. Illustration (2) differs from (1) in that it involves distinct contents within a single quality space. Brentano's examples of one-sided separability draw on more idiosyncratic details of his theory: he suggests *seeing* and *noticing*, for example (p. 15). We might think of phenomenal contents corresponding to a part of the visual field to which a subject *attends* (notices), and contents corresponding to a part to which the subject does not attend, or attends less (is "merely seeing"). The claim would then be that while attended-to visual contents in consciousness (say, attended-to redness) depend on specific visual contents (redness), visual contents in consciousness need not be attended to. Whether or not one agrees with this, it should be clear how it is meant to illustrate one-sided separability.

Brentano believed there is a level of simplest separable parts:

[W]ithin [separable] parts one may be able to distinguish parts which are actually separable from one another, until one reaches parts where such one- or two-sided separation can no longer take place. These parts could be called the elements of human consciousness. (p. 16)

His analysis did not end there, however:

[E]ven these ultimate actually separable parts, in some sense, can be said to have further parts . . . Someone who believes in atoms believes in corpuscles which cannot be dissolved into smaller bodies. But even so he can speak of halves, quarters, etc. of atoms: parts which are distinguishable even though they are not actually separable. To differentiate these from others, we may refer to them as *distinctional* . . . parts . . . Such merely *distinctional* parts [are] . . . also . . . given in human consciousness. Thus, here we have . . . in a certain sense, parts of the elements. And as in the case of parts, so one may ultimately speak without contradiction of elements of elements (namely of the last merely *distinctional* parts of the last separable parts). (pp. 16–17)

Such bottom-level, merely *distinctional* parts are for Brentano the ultimate elements of consciousness, or simples.

Brentano illustrates his idea of *distinctional* parts with a fictitious example involving spots of different colors, lightnesses, and spatial extents and locations, within consciousness. The example is fictitious, according to him (see p. 17), since strictly speaking there are no real colors, spatial locations, etc., in consciousness (experienced colors, etc. are intentional objects, and as such need not exist). Pretend, then, that there are two blue spots and a yellow spot simultaneously present in consciousness.

[B]etween the two blue spots there is a spatial difference, while between the blue and the yellow ones there is a spatial difference and a qualitative difference . . . Concerning the blue spot, we will hence have to distinguish two things: the particular spatial determination . . . and the particular quality, i.e. the particular color. These particularities are thus actually contained in it, [they] are *distinctional* parts of them. (p. 18)

Imagine now, in the same experience, a gray spot of equal lightness to the yellow spot but lighter than the blue spots. This highlights a further element distinguishable in the spots: lightness. So each spot involves at least three merely distinctional parts: "(a) spatial particularity, (b) particularity of lightness, [and] (c) particularity of quality" (p. 18). These parts are *merely* distinctional because no two of the parts are separable in either a one- or two-sided fashion. Token colors (in consciousness) are inseparable from either their token lightnesses or spatial characteristics, and token lightnesses are inseparable from their token spatial characteristics.

Following his fictitious example, Brentano offers examples of real distinctional parts, drawn from his theory of consciousness. I shall not discuss them, however, since my concern here is not with the details of his theory, but just to show that distinct concepts of experiential parthood, involving different dependency relations, are available. Other theories could have sufficed: Husserl (1913/2000), for example, developed a related, and in many ways more sophisticated, set of distinctions regarding parts of consciousness, which also includes a category of non-separable, interdependent parts. My point, then, is just this: given that there are various concepts of experiential parthood, one can conceive of experiential part — and hence simple parts — in a way that abstracts away from different kinds of dependency relations, as well as other differences. It is such an abstract conception of simples that I shall argue CC forces upon us.

Some Features of CC

I turn now to descriptions of five features or elements of CC which taken together lead to the concept of simples.

1. *Phenomenality*. The first conceptual element can be viewed as the central or "core" feature of CC. I have in mind the idea of a phenomenal character or qualitative content, a raw feel, it being like something to be conscious, etc. (see, for example, Chalmers, 1996, ch. 1 for a discussion of such notions). That is not the whole of CC, since there are elements that represent how phenomenal contents are temporally located, how they combine to form complexes, to what degree and in what sense they are objective, subjective, and so forth. Such matters would appear to depend on a prior, more basic notion of phenomenal or qualitative content. What the core is will become clearer as additional features of CC are discussed, since the core can be approached conceptually by factoring out such features. That said, I do not assume that the core is a simple or primitive conceptual element, resistant to analysis (though it may be), for there is no reason to believe that we have access to all features of the internal structures of our

concepts. Arguably the core generates most of the puzzlement about consciousness, and is most in need of explication.

2. *Phenomenal distinctions.* The second feature is the obvious one that there are different kinds of phenomenal contents, phenomenal distinctions. Phenomenal-content kinds are to be understood broadly to reflect any and all distinctions in “quality,” or “what it is like.” Note that in speaking of phenomenal distinctions, nothing is entailed about particular dependency relations among experiential parts. Indeed, it has not yet even been assumed that phenomenally distinct parts ever occur together in a single consciousness (but see below). Nor, crucially, has it been assumed that there are simple experiences; just that there are phenomenal differences. The taxonomic question of which phenomenal differences there are is a difficult and important one, but one that need not be addressed here (see Clark, 1993, for an interesting study on the topic). Now beyond the basic idea that there are phenomenal distinctions, CC represents experiential types as structured hierarchically in relations of genus and species, and as involving relations of similarity and difference with respect to phenomenal content. Furthermore, as Nagel (1974, 1986) has emphasized, CC appears to license thought about the existence of phenomenal kinds that extend beyond our imaginative powers (in bats, extra-terrestrial creatures if such exist, and so forth).

3. *Temporal extension and temporal continuity.* Phenomenal contents are typically conceived as temporally extended — as persisting through time, as having duration. If CC allows for continuous experiential change along qualitative dimensions (e.g., in experienced brightness, pitch, pressure), as it seems to, that might be taken to show that contents can be conceived as being realized at instants, at durationless temporal points. The alternative, that continuous phenomenal changes over time are always and everywhere gappy, seems foreign to the way we do, and possibly even can, think of such experiences. Whatever one says about that, it seems no part of CC that phenomenal contents are *always* in flux along some qualitative dimension. On the contrary, we at least sometimes conceive of qualitative elements (e.g., color qualia) as persisting through temporal intervals, however briefly — as temporally extended.³ When we do, moreover, the temporal interval is usually conceived as “filled” by the phenomenal content; we imagine no gaps. How to unpack that is a delicate matter, but it seems to involve our conceiv-

³There are passages in James's (1890/1983) *Principles* (e.g., in ch. 9, subsections 2 and 3) suggesting that he wished to assert that phenomenal contents always *are* in flux, contrary to what I have claimed. Interpreting James on this matter is difficult, for at least two reasons: (1) he was hostile to the idea of phenomenal elements of experience (see below), and so it is hard to know just what is supposed to be in flux; and (2) he felt compelled to point out that he does not go so far as to insist that experiences lack duration altogether (p. 224).

ing time itself as continuous, and taking phenomenal contents as realized at each instant within the interval.⁴ Note, by the way, that temporally extended events need not be temporally continuous. Adapting an example of Thomson's (1977, ch. 4), consider the event that was my typing of the previous sentence: though temporally extended, it contained several pauses between words and letters and so was discontinuous. Returning to CC, the point is that when phenomenal contents are conceived as temporally extended, they are typically *also* conceived as temporally continuous.

4. *Complexity.* So far, according to CC, conscious experiences involve temporally extended, continuous phenomenal contents of different sorts. We now add that such contents are typically conceived as being realized "together," as forming phenomenally *complex* experiences, experiences containing phenomenal distinctions. I shall often call the constituents of such complexes "parts." In attempting to characterize phenomenal complexity, theorists frequently resort to metaphor and speak of parts as "bound" or "fused," invoking notions such as *center of consciousness, perspective, point of view, self*, etc. to distinguish bound from unbound elements (see, e.g., Lockwood, 1989, ch. 6). Still, however, in so speaking, no particular dependency relations are assumed, since even strongly independent parts like Locke's or Hume's, or Brentano's mutually separable parts, can be bound or fused in the above sense. (That said, it is an interesting question whether binding can be explained, at least in part, with the aid of something like Brentano's merely distinctional parts, which involve relations of *necessary* interdependence.) A sizable literature on the "binding problem" has arisen following Crick and Koch's (1990) influential paper on the topic. To the best of my knowledge, however, the question of what are the simplest bound elements has not been addressed.

Phenomenal experiences are represented by CC as complex in two ways. Parts are conceived as co-instantiated (1) *at a time (or at times)* — as temporally coinciding or overlapping, and (2) *over time* — as involving phenomenal changes over the duration of an interval. Both sorts of complexity are multileveled or hierarchical. With respect to complexity at a time, we can think of one's *overall* or *maximal* experience at a time — an experience that is not part of any larger experience (Lockwood, 1989, p. 88), or simply what it is like to be the individual at that time — as containing visual experience, which in turn might contain an experience of bright colors, which contains

⁴Continuity entails density — the idea that between any two points there is a third. Intuitively, what continuity adds is that there are no gaps. The set of rational numbers, for example, is dense because between any two rational numbers there is a third. The set is not continuous, however, since it excludes the irrationals — numbers that cannot be expressed as fractions. See Newton-Smith (1980) on density and continuity with respect to time. Other useful discussions are Brentano (1914/1988), Russell (1914/1993, lecture 5), and Capek (1991, ch. 4)

an experience of yellow, and so on. Regarding complexity over time, an experience of hearing a symphony might contain an experience of its second movement, which contains an experience of a certain musical passage, and so forth.

5. *Objectivity*. The idea here is that CC grants phenomenal contents an existence that is in a certain sense independent of our epistemological access to such contents. This is clearest in the case of our thoughts about *others'* phenomenal experiences: we conceive of them as existing and developing through time with whatever phenomenal properties they possess, entirely independently of whatever we might think of them. In our own cases, of course, such metaphysical and epistemological issues are not so easily teased apart. Still, however, there seems to be a point of view from which one can "step outside oneself," as it were, and treat oneself as just another conscious entity in a world of many, no different than any other. From that standpoint, any brand of objective existence one confers upon the conscious minds of others one also must accord to one's own (see Nagel, 1986, on "mental objectivity").

From CC to Simples

We can now trace the route from CC to simples and its alternative, and present the argument for simples. I begin, however, with a few words about how I conceive of simples. The notion of simplicity involved in the concept of a simple is to be contrasted with the notion of complexity discussed above. Two sorts of complexity were mentioned — at a time and over time — both of which were understood in terms of phenomenal distinctions or parts. In contrast, simplicity is construed, naturally enough, as involving an absence of phenomenal distinctions or parts. A simple experience will be a part of a maximal experience that does not itself contain phenomenal distinctions or parts: a part without parts. This notion of simplicity has much in common with those of Locke (1689/1975, Bk. II, Ch. II, § 1) and Hume (1739/1978, Bk. I, Part I, § II), but again it abstracts away from dependency relations. It can do so because questions about which phenomenally distinct parts exist are conceptually prior to questions about which dependency relations among phenomenally distinct parts exist. Now given that simples are experiential events, what will concern us are *temporally extended phenomenal simples*. How to conceive of simples will become clearer as we proceed.

We shall attempt to arrive at the concept of simples by traversing a conceptual path involving the five features of CC sketched above. I do not claim it is the only route to simples (or its alternative) from CC, just a relatively clear one. The route comprises four main moves: (1) conceiving a temporally extended and continuous "stream of consciousness"; (2) conceiving "time-

slices" of the stream; (3) determining whether any time-slice contains phenomenal simples; and (4) if so, conceiving the phenomenal contents of such simples as temporally extended.

Streams

Of the first move I have little to say, for it simply involves conceiving a complete, individual consciousness, temporally extended through some interval — a maximal phenomenal experience proceeding and developing continuously through time. This conceptualization employs all of the features of CC discussed above. In what follows, I avail myself of James's (1890/1983, ch. 9) metaphor of a stream, and I will often speak of such temporally extended maximal experiences as streams of consciousness.

One reason James's metaphor is striking is because, like a conscious mind, a stream involves temporal phenomena: flowing waters. That fact, however, also enormously complicates the metaphor's interpretation. (Try mapping the spatiotemporal features of a flowing stream onto the phenomenal-temporal features of a conscious mind; the task is not trivial.) For that reason, in addition to speaking of streams of consciousness, I shall also occasionally employ a simpler, entirely spatial metaphor — that of a static, cylindrical marble pillar. In this image, time is represented by the spatial dimension along the length of the pillar. For the image to be helpful, the marble must contain impurities of different colors, shapes and lengths running through the stone. Such distinctions in the stone at different points along the pillar's length will be taken as corresponding to phenomenal distinctions within consciousness at different points in time.

Slices

The second move is controversial. It involves conceiving time-slices of the stream of consciousness. We can appeal to the image of the marble pillar, and imagine cutting through it at an angle perpendicular to its length, resulting in two shorter cylinders. The idea then would be to treat the colored patterns on the flat surface of one of the newly exposed ends — patterns resulting from the impurities in the stone at that point — as analogous to the states, at some temporal point t , of the developing phenomenal parts in the stream of consciousness. A time-slice at t of the stream of consciousness, then, is simply *the states of the developing phenomenal parts of the stream at t* — no more and no less.

Here one might object that in conceiving of non-extended temporal points in the stream of consciousness, we are conceiving something wholly imaginary, something that could not be real. It is a mistake, in other words, to reify time-slices as if they were slices of bread. This objection touches on

deep issues concerning space, time, continuity, and abstract objects, and I cannot pursue the matter in depth here. However, I do wish to hint at one way of making the idea of real, non-extended temporal and spatial points more palatable. I appeal again to Brentano.

Brentano (1914/1988), influenced by Aristotle, considered non-extended points as *boundaries* of one-dimensional continua. Indeed, according to Brentano, "the concept of a boundary . . . is essential to the concept of what is continuous" (pp. 7–8). A line of finite length, for example, "has no boundaries other than non-extended ones, namely the spatial points" (p. 10). Such boundaries include the end points of the line, and also all points within it, since any internal point will be a boundary between two of the line's parts. One-dimensional lines, on the other hand, can be boundaries of two-dimensional surfaces, and two-dimensional surfaces can be boundaries of three-dimensional objects. The main idea to be emphasized, however, is that boundaries cannot exist independently of the continua which they bound:

. . . all boundaries, including those which possess no dimensions at all such as spatial points and moments of time . . . [are such that] a cutting free from everything that is continuous is for them absolutely impossible. (p. 10)

So, while boundaries are real for Brentano, they cannot enjoy the kind of independent existence bounded entities can. It is thus an error to think of a two-dimensional cross-section of a cylinder, or a time-slice of a stream of consciousness, or by analogy to a slice of bread existing apart from its loaf. Consequently it cannot be assumed without further argument that an experiential time-slice is unreal just because it lacks temporal extension and cannot exist independently of a temporally continuous experience.

Suppose, then, that we allow ourselves to talk of time-slices of the stream of consciousness. It thus becomes natural to speak of phenomenal contents in the stream *at that time*: phenomenal contents "in the slice," as it were. I shall call phenomenal contents in time-slices of streams of consciousness *contents_{ts}*. Having gone that far, we might also wonder whether in some sense there are *simple contents_{ts}* in time-slices of streams of consciousness. As we shall see, the simple experiential events, or simples, that issue from CC will be conceived as phenomenal contents of simple contents_{ts}, temporally extended. Before turning to those issues, however, I want to further clarify the idea of an experiential time-slice by considering a second, related objection to the idea, which can be expressed thus:

The idea of an experiential time-slice and its contents is thoroughly confused, since it allows talk of phenomenal contents at instants. The very concept of experience, and hence of experiential phenomenal content, is simply not applicable to very short intervals, much less to temporal points. Some minimal duration (related perhaps to the "specious present") is required before one can properly speak of phenomenal experi-

ences or their contents.⁵ Far then from CC licensing talk of experiential time-slices, it quite clearly precludes it.

What underlies this objection is the fact that from our first-person perspective we seem unable to “access” or “grasp” phenomenal contents or distinctions within intervals shorter than some minimal duration. Certainly we seem never to be aware of phenomenal contents at instants. However, if that is so, and if it is also agreed that the idea of unaccessed or unnoticed phenomenal features⁶ — call this *consciousness without awareness*, or *consciousness^{-a}* — is at best obscure and at worst incoherent, then talk of phenomenal contents within intervals shorter than the minimal duration must be rejected.

I propose to grant for the purposes of this paper — what seems plausible — that the intuition driving this objection (*viz.*, that we are unaware of phenomenal contents within extremely brief intervals) issues from CC (or is even part of CC). However, the notion of time-slices also issues from CC, as is easily seen. According to CC, phenomenal content is conceived as progressing continuously through time, filling at least some intervals. Which means that within such intervals experiential content is conceived as proceeding through each point in time. But then at each point there will be *some way that content is* — there will be facts about which contents are realized. And that suffices for time-slices. Attempt to see what remains of your intuitive picture of phenomenal consciousness developing through a temporal interval if you suppose that at every point in the interval there is *no way* your experience is phenomenologically. My picture collapses. If that is not an idiosyncratic quirk, then CC may be unsustainable without time-slices.

We thus have two apparently conflicting intuitions, both of which issue from CC: (i) we are unaware of contents within very short intervals, and (ii) there are phenomenal contents at temporal points: time-slices. Does that mean that CC is internally inconsistent? Above, we hinted at how the two intuitions might be reconciled: by attempting to make sense of *consciousness^{-a}*. If that were possible, time-slices might be consistent with our unawareness of phenomenal contents within very short intervals. For if time-slices were to involve *consciousness^{-a}*, that would *entail* our unawareness of them. In my view it is true that the idea of *consciousness^{-a}* is at worst incoherent, but I believe that what it is at best remains an open question. I shall now offer three reasons for attempting to reconcile (i) and (ii) by way of *consciousness^{-a}*.

⁵James (1890/1983), attributing the term “specious present” to E. R. Clay, explains: “. . . the practically cognized present is no knife-edge, but a saddle-back, with a certain breadth of its own The unit of composition of our perception of time is a *duration* [W]e seem to feel the interval of time as a whole” (p. 574).

⁶Or worse, inaccessible or unnoticeable phenomenal features.

First, *prima facie* at least, doing so seems to be the only viable option. Other possibilities are to give up CC, or one or both of (i) and (ii). I assume that abandoning CC is currently out of the question. For many, doing so would be psychologically challenging to say the least, and at any rate such a move would be premature given our present state of ignorance regarding consciousness.⁷ On rejecting (i) or (ii), neither alternative seems promising. For as was suggested above (ii) appears essential to the very integrity of CC, and (i) may be as well (in any case it is far from clear how it could be given up). That leaves reconciliation of (i) and (ii). Doing that, however, must involve some such notion as consciousness^a since (i) refers explicitly to *unawareness* of contents within brief intervals. Aiming at reconciliation of (i) and (ii) by way of consciousness^a would thus seem a reasonable tack to pursue.

Second, it has often been claimed, independently of considerations about time-slices, that some such notion as consciousness^a is needed to understand consciousness. Several arguments for notions similar to consciousness^a appear in the literature, some based on continuous features of consciousness, and some not.⁸ So there is reason to think that we might need the notion anyway. If we do, however, and if sense can be made of it, then (i) and (ii) would be reconcilable in the way we are suggesting, and there would be a solution to the current difficulty. That independent considerations point to the existence of a solution to the difficulty, however, provides some reason for thinking it is the solution — particularly given that there is nothing else in the offing.

Finally, when directed at phenomenal experience from a third-person perspective, CC comes rather close already to representing (i) and (ii) as reconciled. We have little trouble in conceiving both an individual's experience as progressing continuously through time *and* the individual's being unaware, or aware to different degrees, of at least some of the myriad phenomenal distinctions appearing within the stream of consciousness. Consider the varying kinds and degrees of epistemological access one has to the contents of one's experience over time — due, for example, to the brevity of the intervals involved, to subtle shifts in attention, to whether or not one is introspecting,

⁷Dennett (e.g. 1979, 1988, 1991) has insisted that the notion of qualia ought to be abandoned, and he would presumably say the same of CC (see also Harman, 1990). His many interesting challenges to the notions of qualia, phenomenal content, etc., I take to be of the utmost importance to the study of CC. Nevertheless those challenges (along with his alternative picture in Dennett, 1991) are in my view insufficient to justify, much less psychologically enable, giving up CC at this point.

⁸The general idea goes back at least as far as Poincaré (cited in Russell, 1914/1993, p. 148, who himself argues for the notion). More recent arguments and considerations can be found, for example, in Jackson (1977, pp. 115–117), Lockwood (1989, pp. 163–164), Nelkin (1989, 1995), Rosenthal (1991), and Tye (1995). A few skeptics among numerous others are James, (1890/1983, ch. 6), Köhler (1947/1980, ch. 3), Ayer (1954, pp. 66–104), Armstrong (1968, pp. 219–220), Dennett (1991, p. 132), and Everett (1996, p. 212).

etc. Though such cases do not all involve unawareness of phenomenal contents, and are not restricted to contents within brief intervals, they do seem to involve changes in *types or levels of awareness of phenomenal contents*. But reconciling changes in types or levels of awareness with a single, unbroken stream of consciousness is itself a thoroughly puzzling matter, and the puzzlement seems closely related to that surrounding consciousness^{-a}. And, yet, when conceiving another's experience, all such attentional and introspective fluctuations are smoothly factored by CC into a *single, continuous, phenomenal flow*. Now my claim is that this picture represents something tantalizingly close to a reconciliation of (i) and (ii) by consciousness^{-a}—albeit only for the third-person case. However, that in itself is a powerful reason for taking seriously the suggestion that (i) and (ii) are reconcilable by consciousness^{-a} in the general case, and so for trying to make sense of consciousness^{-a}. For CC is “pointing” in the third person case to the very sort of solution we are considering, and it is rational to allow ourselves to be guided by our pretheoretical conceptions so long as they have not been shown to be false, or supplanted by better ones. And more practically, CC's representation of this third person case may well serve as a useful model for the development of an account of the “inner,” first-person case.

Though there is much confusion and little clarity regarding consciousness^{-a} at present, I think it nevertheless can be concluded that the second objection to time-slices, though based on a sound intuition, provides insufficient reason for rejecting talk of time-slices. At a minimum, a more elaborate argument addressing consciousness^{-a} would be needed. Accordingly, I assume in the rest of the paper that talk of time-slices is legitimate, and turn to the third move in the route from CC to simples and its alternative.

Contents_{ts} and Simple Contents_{ts}

The stream of consciousness is frequently, if not always, phenomenally complex *at a time (or at times)*. Usually we experience in more than one sensory modality simultaneously, and within modalities there are often simultaneously realized qualitative elements. Whenever that is so of a stream, time-slices of it by definition will also be phenomenally complex. Consider a slice of a stream at some time *t*. As mentioned above, we can speak of phenomenal contents in a stream *at a time*, or contents_{ts}, in the slice. Like temporally extended experiences, contents_{ts} are structured hierarchically. The whole slice is a content_{ts} corresponding to the individual's maximal experience at *t*, parts of the slice will often be contents_{ts} corresponding to various sensory modalities, and so on.

Simples, we have said, are to be conceived as temporally extended phenomenal contents of *simple* contents_{ts}. To understand how simple contents_{ts} are to be conceived, I introduce the concept of a *narrowing*. Thinking of the slice in terms of the marble pillar's flat end, the idea would be to “narrow

down” to a smaller area of the end through a process of selection and exclusion of colors, patterns, etc. that appear on it. Suppose, for example, that there is a light-colored region appearing somewhere on an otherwise dark end. We could narrow down to that light region by selecting it and excluding the darker areas. If we like we might even imagine cutting away the excluded areas of marble, thus leaving a smaller surface. This process of narrowing could be repeated with the new smaller surface, based on distinctions of color and pattern appearing on it; and the process could be iterated further, generating a *sequence* of narrowings. For any given slice, we even could speak of the set of *all possible narrowing sequences* corresponding to it.

The move from marble to consciousness is straightforward. Since distinctions in the stone correspond to phenomenal distinctions in the time-slice, narrowings in an experiential slice will be based on selection and exclusion of phenomenal contents in the slice, or contents_{ts}. For example, we might narrow the slice corresponding to an individual’s maximal experience at *t* to just that part corresponding to visual experience, by excluding all non-visual contents. The process could then be repeated with the new, less inclusive or “smaller” content_{ts} by narrowing to the content associated, say, with bluish regions of visual space, and excluding all other visual contents. We could speak of a sequence of such narrowings to ever smaller contents_{ts}, and even of the set of all possible narrowing sequences associated with the slice, indeed with any slice.

This notion of a narrowing seems clearly to be licensed by CC, given that we have granted the legitimacy of time-slices. For so long as we have a notion of real phenomenal distinctions among contents_{ts} in a slice, wherever there exists such a distinction, we can select or narrow to a content_{ts} marked off by the distinction, and exclude all others from consideration. Notice, by the way, that it makes no difference which dependency relations exist between selected contents_{ts} and contents_{ts} that have been excluded. Although in the case of the pillar we spoke of “cutting away” the excluded parts of marble, with consciousness the selected contents_{ts} need not be capable of independent existence; they can be “merely distinctional” in Brentano’s (1890–1891/1995) sense.

It is also crucial to keep in mind that “selection” and “exclusion” in the current discussion are to be interpreted metaphysically rather than epistemologically — as saying something about contents_{ts} themselves, and not about our access to them (in our own experiences or in those of others). No claim is being made, for example, that one could, through introspection, focus on or attend to parts of a slice, selecting some, excluding others, carrying out narrowing sequences, etc. Slices do not stay put for examination, and there is nothing external to streams (and hence slices) that could “observe” them if they did. (As was mentioned above, all phenomenal features associated with

our acts of introspection must themselves be factored into the stream.) Rather, the idea is just that if we imagine there to be real phenomenal distinctions within streams and hence slices, such distinctions, parts, structures, etc. can be spoken of, thought about, referred to. If you like, phenomenal aspects of slices, if one knew what they were — and indirect knowledge of them does not seem inconceivable — could be selected or excluded as objects of thought. An omniscient being, at any rate, could do so. And that is partly a fact about slices. Having said that, I shall continue to speak as if slices could be laid out before us as we leisurely inspect their contents.

We now can say more clearly how simple contents_{ts} are to be conceived. If we consider for each possible slice the class of all possible narrowing sequences corresponding to that slice, and then consider the class of all such classes of narrowing sequences (thus giving us all possible sequences), the question can be raised whether any such narrowing sequences *terminate* — that is, *eventuate in a content_{ts} that contains no phenomenal distinctions, is phenomenally uniform*. Such a content_{ts}, since it contains no phenomenal distinctions, would be a *simple* content_{ts}. To illustrate, imagine that a content_{ts} corresponding to bluish regions of visual space contains distinctions among various shades of blue. We might then narrow to regions containing a particular dark shade of blue. Suppose those dark blue regions, however, involve a uniform color quale that contains no further distinctions of phenomenal color, thus not being subject to further narrowings. In such a scenario a simple content_{ts} will have been reached.

Are there simple contents_{ts}, according to CC? Do at least some possible narrowing sequences terminate? Consider the alternative: *all possible narrowing sequences corresponding to all possible slices are of infinite length*. Instead of the dark blue quale from the above example being uniform, it would contain further phenomenal distinctions or parts. We could narrow down to those parts, and they too would contain further phenomenal distinctions or parts that could be narrowed down to, and so on *ad infinitum*. That would be so no matter what was selected and excluded in the dark blue quale, or in its parts, or in its parts' parts, etc. And the same of course would be true not only of blue qualia, but of all possible contents_{ts}.

Before evaluating this alternative to simple contents_{ts}, notice that simple content_{ts} and the alternative are the sole options. Once we have admitted phenomenally complex time-slices, and understood the notion of a narrowing sequence, then either some sequences terminate and there are simple contents_{ts}, or all sequences are of infinite length and there are no simple contents_{ts}. The two possibilities exhaust logical space.

One might object that simple contents_{ts} and infinite narrowing sequences are not the sole options, and argue as follows. Consider *wood*. Cut a piece of

wood in two and you have two pieces of wood. It is not the case, however, that if you continue this process either you will end up with wood-simples, or wood will be forever divisible into smaller bits of wood. That is because there is no determinate point at which collections of molecules change from being pieces of wood into being mere collections of molecules. So why should consciousness be different? The answer is that our ability to understand the falsity of the simples-or-infinite-divisibility dichotomy for wood depends on our ability to understand that wood is constituted by a lower level of non-wooden parts (atoms, molecules, cells, etc.). Were such understanding absent, I claim, the falsity of the dichotomy could also not be understood.⁹ Notice that the same could not be claimed for matter (energy), since we do not conceive of matter as constituted by a lower level of non-material phenomena. Matter, it seems, must be either infinitely divisible or constituted by elementary particles (see Dehmelt, 1989, for a defense of the former option). I claim that phenomenal contents are like that, since they are not conceived (through CC) as being constituted by a lower level of non-phenomenal elements (which is not to say that they are not in fact so constituted). For the criticism to succeed, therefore, it must be shown that it is part of our *very concept* of phenomenal features that they are grounded in lower-level non-phenomenal elements — something that seems patently false.

So what is to be made of the alternative to simple contents_{ts} — that all possible narrowing sequences with respect to all possible slices are of infinite length? Though the alternative may be logically possible, it need not be treated seriously. To see that, notice first that the alternative leads directly to the idea of consciousness^{-a}, since we are clearly unaware of infinite narrowing sequences of contents_{ts}. Of course, time-slices also lead to consciousness^{-a}, so the problem is not simply that consciousness^{-a} is implicated. The difficulty, rather, is that as a proposal about *particular kinds* of phenomenal contents involving consciousness^{-a}, the alternative is no more than a *mere* logical possibility, entirely unsupported by argument or evidence. We have no more reason to suppose that all narrowing sequences are infinite than to believe that our national anthems always play backwards consciously^{-a} in our heads, which is also a logical possibility given that we have granted consciousness^{-a}. All positings of particular contents involving consciousness^{-a} thus must be supported by at least some argument. I have tried to do that for the case of time-slices, and as mentioned earlier, arguments for specific instances of consciousness^{-a} appear in the literature. Since there are no argu-

⁹Properly defending this claim requires an account of how vague boundaries are conceived, something I briefly sketch in Antony (1998) and develop in more detail in Antony (2001c).

ments for the specific contents posited by the alternative, however, it can be ignored.¹⁰

Are simple contents_{ts} better supported than the alternative? Consider the category of simultaneously realized, temporally extended, phenomenally distinct elements in our streams of consciousness *of which we are aware*. The number of such elements is never infinite; that much is supported by introspection. Hence it is always finite. Above it was argued that CC leads to the concept of time-slices. So far, then, any slice at a time *t* can be said to contain a finite number of contents_{ts} corresponding to the finite number of temporally extended elements of which we are aware around *t*. If the number of contents_{ts} is finite, however, no narrowing sequence can be infinite; the slices thus will contain simple contents_s. Now if the idea of consciousness^a is intelligible, we might anticipate arguments showing that slices sometimes contain phenomenal contents involving consciousness^a. We might even imagine arguments for specific non-terminating narrowing sequences.¹¹ In the absence of an argument that all possible narrowing sequences are infinite, however, simple contents_{ts} would remain supported. Given that there is no such argument, simple contents_{ts} are supported.

Simples

The last leg of the route to simples is short. As we have said, simples are the phenomenal contents of simple contents_{ts}, extended continuously through a temporal interval. I stipulate that the duration of a simple extends for the entire time that the content of a simple content_{ts} is realized unchanged and uninterrupted in a stream of consciousness — from beginning to end. This allows for certain natural questions to be raised, concerning, for example, the character of simples' temporal boundaries (see Antony, 1998). If the contents of simple contents_{ts} are realizable sometimes just for instants, and one wishes to treat those as limiting cases of simples, I have no objection. Nothing crucial rests on this stipulation.

So are simples licensed by CC? Assuming continuity of experiential content through time, and simple contents_{ts}, the only way for there not to be simples would be if all simple contents were at all times in flux, either con-

¹⁰A further possible difficulty with the alternative is as follows. Assuming there are elementary particles ("physical simples"), the infinitely complex structures of phenomenal experiences could not be mirrored in the structure of the physical world, for example, of the brain (but, again, see Dehmelt, 1989). If we take CC to reflect the nature of consciousness, that would rule out all versions of materialism and several versions of dualism, due to a kind of "grain problem" (see Sellars, 1965).

¹¹If, for example, a truly continuous change (of brightness, hue, etc.) is possible across a region of phenomenal visual space at a time.

tinuously along qualitative dimensions, or involving qualitative discontinuities of various sorts.¹² Both possibilities would involve consciousness^a since we are unaware of any such goings on. Since there is not the slightest bit of evidence for either possibility, however, both can be rejected immediately, just as we rejected ubiquitous infinite narrowing sequences. That phenomenal elements are sometimes temporally extended, unchanged through time, on the other hand, is supported by introspection, and does not require positing any new cases of consciousness^a.

The route from CC to simples is thus complete. Our conception of consciousness issues in a concept of simple experiential events.

Objections to Simples

We noted at the outset that the idea of simple or elementary experiences has come under frequent attack. If the argument in this paper is correct, then if any such attack threatens simples, CC may have to be abandoned. However, it is far from clear that such attacks touch simples. Though a proper study of this matter is beyond the scope of this essay, I shall offer thumbnail sketches of six criticisms, and briefly state why I believe they have little or no bearing on simples. It is my hope that this short treatment will at least block knee-jerk reactions to the effect that the idea of simples was shown to be hopeless long ago.

1. *The epistemological role of simples.* Within the empiricist tradition, from Locke to the sense data theorists of this century, simples have filled important epistemological roles: grounding empirical knowledge, constraining possible belief and imagination, being objects of direct perception, and so on. In the wake of failed epistemological programs it has often been concluded that simples (e.g., sense data) do not exist. Whatever is true of simple or elementary experiences posited within such programs, however, none of that applies to the concept of simples here considered. Our discussion has concerned only our conception of certain abstract features of the structure and content of phenomenal experience itself, not the role of phenomenal experience in knowledge, belief, imagination, or perception.

2. *Objects are given in experience, not phenomenal simples.* It has often been observed that consciousness presents us with a world of objects and events, not experiential elements (see, e.g., Husserl, 1913/1962; James, 1890/1983; Köhler, 1947/1980). That there are no simple elements, presumably, is meant to follow directly from that claim. At some level the observation rings true;

¹²Such possibilities were rejected earlier, but they are briefly reconsidered here because of consciousness^a. The discussion in this paragraph is relevant of course only to temporally extended simples, not to the special case suggested in the previous paragraph.

the trouble is making sense of it. One problem is that no sooner are such claims made than theorists go on to elaborate in great detail a wide range of purportedly "unanalyzable" experiences. The element of truth in the claim might be understood by reference to conceptual structures that get activated when we consciously experience the world: typically we do not conceptualize the structure and contents of our experience but rather the structure and contents of the world. In any event, all that matters for my argument for simples is whether experiences of objects and events in the world, as conceptualized by CC, *contain phenomenal distinctions*; and it seems undeniable that they do.

3. *James: Elements are never experienced alone, and are never repeated.* "The assumption that our mental states are composite in structure, made up of smaller states conjoined," James (1890/1983) remarked, "is one of the obscurest assumptions [in psychology]" (p. 148). One reason for thinking that assumption obscure, James maintained, is that simples are never experienced alone (p. 474). Here James appeals to a notion of *part* much like the part of a physical object. Just as a bicycle wheel can be disengaged from the bicycle, so simples ought to be realizable independently of the complexes that contain them. This, of course, is just Brentano's notion of two-sided, mutual separability. Now just why James believed that composite experiences must be made up only of mutually separable parts, he does not say: he provides no reason for thinking that experiences could not be composed of interdependent parts — in which case there could be simples that are never realizable alone. Another of James's criticisms involved the claim that no two Lockean "ideas" are ever the same (p. 229). That, if true, would count against theories that posit a finite stock of simples that get recombined to produce complexes. Nothing in this paper, however, excludes the possibility that simples (i.e., types) are rarely if ever repeated.

4. *Elements are interdependent.* James's first criticism in the previous paragraph raises the issue of dependency relations among experiential elements. That there are such relations is a point Gestalt theorists emphasized repeatedly. Phenomena such as simultaneous color contrast and figure-ground relations were employed to demonstrate complex interdependencies among elements. Such interdependencies were thought to exist at the level of underlying brain processes (Köhler, 1947/1980, p. 111). There was also a tendency to gesture toward phenomenal interdependence, which was wielded against the introspectionists' simples (for overviews of introspectionism see Boring, 1953; Danziger, 1980). Bergson (1911/1944) gestured similarly. Though I have stressed repeatedly that phenomenal interdependence is consistent with simples, I offer two final observations. First, if there are interdependent phenomenal elements, there are phenomenal elements; if such phenomenal elements are not qualitatively identical, they are qualitatively distinct; but that opens the route to simples sketched above. Second, that a

red patch looks as it does because it is next to a yellow patch, or that how a figure's shape is experienced depends on how the background is experienced — that is irrelevant to whether there are simples. What matters is just that there are distinguishable phenomenal elements (e.g., red and yellow qualia, figure and ground, etc.).

5. *Elements "belong together."* A further challenge to simples was raised by the Gestalt psychologists in their discussions of perceptual organization. They pointed out that perceptual elements in a visual field, for example, could be experienced as "belonging together." That would be true of three dots on a uniform background, near each other but removed from a second group of three dots. The conclusion was that the elements in a phenomenal field (the six dots and background), and their arrangement, could not be all there was to the contents of conscious experience. This was taken as damaging to the notion of simples.¹³ The idea of visual simples, however, requires only that there be phenomenally distinct visual elements, not that "spatially distributed color qualia" be the only visual simples. Indeed, since nothing has been said regarding the taxonomic question of *which* simples there are, other kinds might be possible. Ironically, Ehrenfels's (1890/1988) concept of a gestalt quality, treated as a simple, and James's (1890/1983, ch. 9) notion of the "fringe" of consciousness, which includes feelings of relations (like belonging to), might be just what is needed to account for the problematic cases the Gestalt psychologists presented (for more recent discussion of the fringe see Galin, 1994; Mangan, 1993).

6. *Consciousness^{-a} is problematic.* It has often been claimed that simples entail (something like) consciousness^{-a}, but that such an idea is problematic or worse (see James, 1890/1983, ch. 6; Köhler, 1947/1980, ch. 3; and references cited in note 8). Simples entail consciousness^{-a} because we are unaware of our experiences as being constituted by vast numbers of simples. This is the only traditional criticism I know that in any obvious way threatens simples. However, we have already admitted that the issue of consciousness^{-a} must be dealt with, and for reasons unrelated to simples. Both temporal and qualitative phenomenal continuity, for example, entail consciousness^{-a}. Indeed, as was pointed out, the very integrity of CC may depend on sense being made of consciousness^{-a}. Consciousness^{-a} is thus a problem for our understanding of consciousness generally. Until the concept is better understood, therefore, there can be no legitimate reason for employing it against simples in particular.

¹³See Köhler, 1947/1980, ch. 5. Essentially the same point can be made with other gestalt principles of organization, such as simplicity, similarity, and good continuation.

Conclusion

Above, five key features of our conception of consciousness (CC) were sketched, a route was made explicit from CC to simples, and six criticisms of simples were surveyed and shown to be inadequate. If the arguments of this paper are correct, then to the extent that one believes that CC reflects the facts about consciousness, the existence of simples must be taken seriously — as well as further matters, such as what a taxonomy of simples might look like, the principles of combination in accordance with which simples enter into complexes, dependency relations, the concept of consciousness^a, and so on. What will not do is just to insist that the elements of CC that were surveyed are implausible, without showing how a viable picture of consciousness could be sustained without them. Nor will it do to simply urge that CC be abandoned without explaining how such a psychological feat might be accomplished. As I made clear at the outset, my focus has been on CC, and not on drawing conclusions about consciousness. However, if the features of CC that give rise to the concept of simples have a place in a true theory of consciousness, so must the concept of simples. Since from our current perspective it is difficult to see how those elements of CC could be false, the topic of simples should once again occupy a central position in our theorizing about consciousness.

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