

effective by calling attention to the authority and power of the speaker. But an exaggerated whisper can amplify the force of the same content, too. The need for complementary isomorphism is not for the sake of representing per se; it is for an effective strategy with limited means. In any case, isomorphism need not work alone or have the final say. Given our repertoire of resources, it may be part of nature's best effort so far, a compromise solution.

Time and consciousness

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What is it for a mental representation to be conscious? It is a familiar Cartesian doctrine that being conscious is part of what it is for a state or a representation to be mental. Since being conscious is part of being mental, not only are all mental states conscious; being conscious must be an intrinsic property of mental states. A state's being intrinsically conscious captures the idea that, as Descartes put it, we are immediately conscious of all mental states; nothing mediates between a mental state and our being conscious of it.

Given these Cartesian assumptions, there is no room for the brain (or mind) to reinterpret or revise the way I am conscious of my mental states, since my being conscious of them is intrinsic to the states themselves. Once a mental state exists, its very nature fixes what my being conscious of that state can tell me about it. Because being conscious of mental states is immediate and is intrinsic to the states, what it tells us about our mental states is not only the final draft on that subject, but the only draft.

All this has consequences for subjective temporal succession. Suppose I first see event *a* and then event *b*. If being conscious is intrinsic to every mental state, both cases of seeing will, at the exact moment they occur, be conscious states; simultaneously with seeing each event I will be conscious that I do. I will be conscious of seeing *a*, and then conscious of seeing *b*.

Consciously perceiving temporal succession between *a* and *b* is part of the way my seeing *a* and seeing *b* are conscious perceptions. So if being conscious is intrinsic to those perceptions, there's no room for the mind (or brain) to adjust how I consciously perceive that temporal succession. Put another way, if a state is intrinsically conscious, then the state represents its own occurrence; so there can be no disparity between the timing of a state and that timing as the state represents it. There will be no alternative, then, to my seeing *a* as having occurred before *b*. Mellor (cited in D & K sect. 2.1, para. 11) will be right that we perceive the subjective temporal succession of two events simply by way of the objective temporal succession of our representations of those events.¹

If mental states were all conscious, being conscious might well be an intrinsic property of those states. But it's widely recognized that many mental states are not conscious. That they are not would be hard to explain if being conscious were an intrinsic property of mental states. So we must reject the idea that being conscious is an intrinsic property of mental states.²

The one thing that's uncontroversial about a mental state's being conscious is that it involves one's being conscious of that state in some way or other. Let us call our being conscious of our conscious states in the relevant way *transitive consciousness*, since it's a case of being conscious of something. If being conscious is an extrinsic property of mental states, our being transitively conscious of those states will also be extrinsic to them: A mental state will be distinct from our being transitively conscious of it.

The idea that mental states are distinct from our transitive consciousness of them fits well with D & K's Multiple Drafts model. When we are conscious of something, we are conscious of it under certain aspects and not others; we represent the thing we are conscious of in certain ways, and not others. So it is with our being conscious of our mental states. Being transitively conscious of a mental state means representing that state in a certain way, and how we represent it will determine what sort of state we think we're in. [See also Searle: "Consciousness, Explanatory Inversion, and Cognitive Science" *BBS* 13(4) 1990.]

How we represent the things we are conscious of, moreover, can change over time, and there is no reason why this too should not happen with our transitive consciousness of our mental states. Our being transitively conscious of our mental states involves representing them in certain ways. These representations can change, and as they do, corresponding changes will occur in what mental states we seem to be in. In effect, we'll have a series of drafts about the contents of our minds. Since how transitive consciousness represents our mental states is distinct from those states, these changes need involve no shift in the nature of the mental states themselves; all that has to change is the character that our transitive consciousness of those states represents them as having. Moreover, we will not consciously notice these changes, since it is only in virtue of how our transitive consciousness of our mental states represents them that we are conscious of those states at all. The latest draft will seem, for the purposes of consciousness, to be the only draft.

Things would be different if our transitive consciousness of our mental states were intrinsic to those states. How we are transitively conscious of them would then be part of their nature. Our transitive consciousness would occur simultaneously with the state, and the way our transitive consciousness represents the state could not change without a change in the very nature of the state itself. But apart from discredited doctrines about having infallible or exhaustive access to our mental states, we have no reason to think that our transitive consciousness of our mental states is intrinsic to them.

Let us turn again to subjective temporal succession. Consciously perceiving a temporal succession between *a* and *b* involves representing my perception of temporal succession in a particular way. Since my transitive consciousness of that perception is extrinsic to it, nothing about my perceptions of *a* and *b* fixes the way I represent my perception of their temporal relations. In particular, the objective temporal succession of my perceptions of *a* and *b* cannot fix how my transitive consciousness of my perception represents that perception of temporal succession.

Moreover, the way my transitive consciousness represents that perception can change over time.³ The way my transitive consciousness of my perceptions represents them determines what perceptions I seem to have; so the latest transitive consciousness will seem to be the only one I've ever had. This is so even when I am perceiving temporal succession. So if the way I represent my perception of temporal succession changes, it will seem that that is the only way I ever perceived things. This is just what is needed to explain the cutaneous rabbit and the phi phenomenon.

According to the foregoing model, one's transitive consciousness of one's mental states is distinct from those states and can change independently of them. And it is this transitive consciousness of one's mental states that determines what one takes those states to be. Is this model Stalinesque or Orwellian?

For the Stalinesque theorist, perceiving something fixes my memories, but I can edit my perceptions; for the Orwellian, I can eradicate the effect of my initial perception by rewriting my memories. If by "perception" we mean conscious perception, the model I have put forth may look Stalinesque. A conscious perception is a perception plus the transitive consciousness of it; so the brain can edit my conscious perception by altering how

my transitive consciousness represents the perception. But given the latest version of my transitive consciousness, my conscious perception may well fix subsequent memories.

We might instead mean by "perception" just the non-conscious perceptual state, apart from any transitive consciousness of it. The foregoing model may then seem Orwellian. Without transitive consciousness, perceptions don't by themselves determine subsequent memories, since memories will follow the way my transitive consciousness of my perceptions represents them. The model I have proposed gives us no reason to think we can edit these nonconscious perceptual states. But if we can edit our transitive consciousness of our perceptions, surely we can alter our memories of them.

The deeper issue, however, is whether whatever revising does take place should count as an alteration of memories or of initial perceptions. Here the foregoing model resists easy classification. The brain edits our conscious perceptions by changing the way our transitive consciousness of those perceptions represents them. This can happen earlier or later. The Stalinesque theorist thinks we edit our perceptions, while the Orwellian maintains that we rewrite our memories. So the brain's revising of our transitive consciousness of our perceptions will seem more Stalinesque the earlier it happens, and more Orwellian the later it happens. The line between Stalinesque and Orwellian is, as D & K insist, arbitrary. Since the revising of our transitive consciousness can happen earlier or later, at small time scales we won't be able to draw a principled line between what's "not yet observed" and what's "already observed."

If being conscious were intrinsic to mental states, it would be natural to fix the time each mental state occurs by the time at which it becomes conscious. Can we do that with those mental states that are conscious, even though being conscious is not an intrinsic property of them? We could not reliably fix comparative timing this way, since there is no single place in the brain at which the transitive consciousness of every mental state occurs. Still, we might be able to draw a nonarbitrary distinction between rewriting memories and editing conscious perceptions.

This move is unavailable. Our transitive consciousness of a perception can be revised; so which transitive consciousness should count for purposes of timing? Is it the first, which fixes when the perception initially become conscious? Or the last, after which no more changes occur in the way our transitive consciousness of the perception represents it? Or should we pick the time, possibly in between first and last, at which the way our transitive consciousness represents the perception becomes relatively stable? Since there is no principled answer to these questions, we cannot time mental states by reference to the time of their being conscious.

Finally, are Dennett and Kinsbourne right that there is no "fact of the matter about exactly when (in 'absolute' time . . .) a conscious experience happens" (sect. 3.1, para. 12)? That depends on what we mean. We have no reason to doubt that we can fix the time of whatever mental state we're conscious of, independently of our transitive consciousness of it. But the brain can revise the way our transitive consciousness of any experience represents that experience, and each successive transitive consciousness is subjectively no less authoritative than the preceding ones. So if by "conscious experience" we mean the experience plus our transitive consciousness of it, there is indeed no fact of the matter about its timing.

NOTES

1. Mind-body dualism plays no role in this line of thinking; as Kant in effect showed, the felt need to postulate mental unity is independent of such dualism.

2. For more on why being conscious is not an intrinsic property, see Rosenthal (1990; 1991).

3. Perhaps, as Dennett & Kinsbourne suggest, in order to find the best temporal fit among the contents of the representations of those events (sect. 2.1, para. 8).

Cinema 1-2-Many of the Mind

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One gets the impression that Dennett and Kinsbourne (D & K) are busily nailing the last few tacks into a big *Out of Business* sign stretched across the Cartesian Theater. However, upon closer inspection the sign discloses a far less definitive message: *Closed for Remodeling – Reopening Soon as Cinema 1-2-Many of the Mind.*

The stated goal of D & K's target article is to expose and dismantle the Cartesian Theater. Although we agree with much of their diagnosis, in particular their central conclusion that the neural events subserving conscious experience are spatially and temporally distributed and that there is no single "where" and no single "when" to look for them in the brain, we have serious reservations about the Multiple Drafts model proposed as an alternative. The Multiple Drafts model not only fails to close the Cartesian Theater as D & K intend, it retains and multiplies some of the deficiencies of that model by replicating the major mysteries of conscious experience across an indefinite number of ill-characterized Multiple Drafts. In effect, D & K are replacing the single Cartesian stage with a multi-screen Cinema 1-2-Many of the Mind.

The major virtues of the Multiple Drafts model are what it says about what conscious experience is *not*: (a) that there is no single where and when of conscious experience in the brain and (b) the temporal properties of conscious experience need not correspond with the temporal properties of the neural events that mediate conscious experience. However, when it comes to proposing what conscious experience *is*, the Multiple Drafts model is decidedly silent about a number of key issues:

1. Why do some neural processes constitute "drafts" having content that can contribute to conscious experience while others do not?

2. How do the various layers of D & K's mental palimpsest interact, compete, and gain primacy to produce the sense of a (quasi-) coherent series of perceptions, intentions, and actions that characterize our interaction with the world?

3. What constitutes "editorial revision" and who/what does the revising?

4. How is the metaphor of a "draft" an improvement over the metaphor of a theater in dispelling the "infinite regress of too-powerful homunculi"?

D & K are, of course, not alone in having a less than satisfactory account of conscious experience and its relationship to the brain. The chasm between the subjective and the objective has stumped thinkers since Descartes and we confess to finding ourselves in exactly the same muddle. So what are would-be theater-goers to do for entertainment in the faced of D & K's "Out of Business" sign? Are we to concede that the "where and when of consciousness in the brain" are totally outside the bounds of science-as-usual? Not quite, for there are directions to proceed in which considerable progress, albeit somewhat indirect, can be made.

One promising direction to proceed is down. Although investigations of the brain do not address the subjective-objective relationship head-on, any attempt to characterize this relationship will benefit from a more thorough understanding of either the subjective or objective component taken separately. Neuroscience has only begun to scratch the surface of the deep mysteries of the brain and we are convinced that science-as-usual will reveal that many puzzling phenomena, including some of the temporal paradoxes that D & K view as particularly problematic, are understandable consequences of neural structure and function. Just as visual spatial illusions have been treated as discrepancies between the subjective and objective

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Contents Volume 15:2 June 1992

Dennett, D. C. & Kinsbourne, M. Time and the observer: The where and when of consciousness in the brain 183

Open Peer Commentary

Antony, M. V. The where and when of what?	201
Aronson, J., Dietrich, E. & Way, E. Throwing the conscious baby out with the Cartesian bath water	202
Baars, B. J. & Fehling, M. Consciousness is associated with central <i>as well as</i> distributed processes	203
Block, N. Begging the question against phenomenal consciousness	205
Bridgeman, B. What is consciousness for, anyway?	206
Clark, A. Experiential facts?	207
Damasio, A. R. The selfless consciousness	208
Farah, M. J. The distributed pineal gland	209
Glymour, B., Grush, R., Hardcastle, V. G., Keeley, B., Ramsey, J., Shagrir, O. & Watson, E. The Cartesian Theater stance	209
Gregson, R. A. M. Nothing is instantaneous, even in sensation	210
Hurley, S. L. Some mistakes about consciousness and their motivation	211
Jeannerod, M. The where in the brain determines the when in the mind	212
Libet, B. Models of conscious timing and the experimental evidence	213
Lloyd, D. Toward an identity theory of consciousness	215
Lycan, W. G. UnCartesian materialism and Lockean introspection	216

McDermott, D. Little "me"	217
Reingold, E. M. Conscious versus unconscious processes: Are they qualitatively different?	218
Rollins, M. Content and conformation: Isomorphism in the neural sway	219
Rosenthal, D. M. Time and consciousness	220
Roskies, A. L. & Wood, C. C. Cinema 1-2-Many of the Mind	221
Shepard, R. N. Mental representation: Always delayed but not always ephemeral	223
Teghtsoonian, R. In defense of the pineal gland	224
Treisman, M. Does the perception of temporal sequence throw light on consciousness?	225
Van Gulick, R. Time for more alternatives	228
Velmans, M. Is consciousness integrated?	229
Warren, R. M. Global pattern perception and temporal order judgments	230
Wasserman, G. S. The psychoanatomy of consciousness: Neural integration occurs in single cells	232
Young, A. Closing the Cartesian Theatre	233

Editorial Commentary 233

Authors' Response

Dennett, D. C. & Kinsbourne, M. Escape from the Cartesian Theater	234
---	-----

Golani, I. A mobility gradient in the organization of vertebrate movement: The perception of movement through symbolic language 249

Open Peer Commentary

Allen, C. Why Eshkol-Wachman behavioral notation is not enough	266
Barlow, G. W. Is the mobility gradient suitable for general application?	267
Beck, C. H. M. The environment modulates the mobility gradient, temporally if not sequentially	268
Bekoff, M. Description and explanation: A plea for plurality	269
Byers, J. A. The mobility gradient: Useful, general, falsifiable?	270
Cools, A. R. Striatal structures, dopamine and the mobility gradient model	271
Eaton, R. C. Eshkol-Wachman movement notation and the evolution of locomotor patterns in vertebrates	272
Eilam, D. The mobility gradient from a comparative phylogenetic perspective	274
Fagen, R. Moving beyond words	275
Faulkes, Z. & Paul, D. H. Connecting invertebrate behavior, neurophysiology and evolution with Eshkol-Wachman movement notation	276
Fentress, J. C. Alternative taxonomies in movement: Not only possible but critical	277
Goldberg, G. Dynamical systems theory and the mobility gradient: Information, homology and self-similar structure	278
Harries, J. G. Shapes of behaviour	279

Klopfer, P. H. Structure and function in the CNS	281
Leyhausen, P. Animal motility: Gestalt or piecemeal assembly?	282
Lyon, M. Somewhere in time - temporal factors in vertebrate movement analysis	282
MacKay, W. A. Joint torque precedes the kinematic end result	283
Masters, R. D. Time-based objective coding and human nonverbal behavior	284
Newton, D. Human observation and human action	285
Pellis, S. M. The yin and yang of behavioral analysis	286
Powers, W. T. Testing for controlled variables	286
Rebec, G. V. From psychopharmacology to neuropsychopharmacology: Adapting behavioral terminology to neural events	287
Schleidt, W. M. Describing behavior: A new label for an old wine?	288
Thom, R. Sensorimotor reference frames and physiological attractors	289
Todt, D. & Hultsch, H. Birdsong: Variations that follow rules	289
Whishaw, I. Q. What are voluntary movements made of?	290

Author's Response

Golani, I. The natural geometry of a behavioral homology	291
--	-----