

# Mindmelding

Consciousness,  
Neuroscience, and the  
Mind's Privacy

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1 Chapter 11

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2 **Disentangling self**  
 3 **and consciousness**

4 **Introduction**

5 This chapter is devoted to untying the knot that lies at the heart of the idea of privacy:  
 6 the idea that conscious mental states are unbreakable metaphysical atoms, intrinsi-  
 7 cally containing a subject who is aware of them. If mindmelding is possible this con-  
 8 ception is mistaken, and the mind can be divided into parts: a conscious state, and a  
 9 subject. The mind–body problem itself can likewise be divided into two parts, which  
 10 can be treated separately. The first part is the problem of consciousness. How does the  
 11 brain produce unified conscious states containing bound qualia from all those differ-  
 12 ent sources? The answer to this, I argued in Chapter 4, is that it uses carefully control-  
 13 led synchronized oscillations to link all and only thalamocortical components of a  
 14 given conscious state (Crick and Koch, 1990; Llinás and Ribary, 1993; Singer, 1997).  
 15 The second part of the mind–body problem is the problem of the self, or subject of our  
 16 conscious states. How do we explain the presence of a sense of self in consciousness?  
 17 How do we explain the intimate relation the self bears to the conscious state? How do  
 18 we explain what appears to be a permanent asymmetry between your access to your  
 19 conscious states and my access to them? In short, how do we explain privacy? I have  
 20 treated this question by arguing that the asymmetry is only apparent, and that two  
 21 people can have the same direct access to one of their conscious states. The self is actu-  
 22 ally the ensemble of executive processes. They causally interact with conscious states,  
 23 but do not themselves appear in consciousness, something that again allows for a clear  
 24 separation between self and consciousness.

25 In Chapter 9, my goal was to show that there are some mindmelding experiments  
 26 that could begin to help us discern whether mindmelding is possible with our current  
 27 technologies. In this chapter, my goal is to show that mindmelding is metaphysically  
 28 possible, i.e., that it does not violate any laws governing the metaphysical nature of  
 29 reality. Metaphysical issues are fundamental and lie at the core of the most difficult  
 30 parts of the problems of privacy and the mind–body problem itself. I will show here  
 31 that there is nothing stopping us from placing the idea of mindmelding on clear,  
 32 unproblematic, and plausible metaphysical foundations. Indeed, I will attempt to turn  
 33 the tables by arguing that in fact the position of privacy is the one on shaky metaphysi-  
 34 cal grounds.

35 We will be examining two metaphysical theses, the thesis of privacy, and the idea  
 36 that all conscious states must have a subject, which I will call “inseparability” because

1 it posits that the subject is inseparable from the conscious state. Here are the two  
2 claims:

3 \*Privacy: One and only one person can have direct knowledge of a conscious state.

4 \*Inseparability: Conscious states exist if and only if a self or subject is aware of them.

5 In order to keep a clear distinction between claims of the defenders of privacy and the  
6 claims I endorse as part of my alternative conception, I will borrow a convention from  
7 linguists and put an asterisk by those claims and definitions that I do not endorse.  
8 I will disagree with both of the above claims, but they need to be unpacked and their  
9 constituent parts evaluated separately. We also need to understand the relations  
10 between the two claims taken as wholes. Does inseparability imply privacy, for  
11 instance, or vice versa?

12 The metaphysical picture presented here is intended to be uncontroversial, and  
13 most everything I say when sketching out my alternative view should sound common-  
14 sensical and even obvious. It will be phrased in everyday concepts such as *thing*, *prop-*  
15 *erty*, *process*, *cause*, *fact*, and *event*. I will also construct a set of definitions for crucial  
16 terms, such as “mind,” “mental state,” and “conscious state.” Then, using these terms,  
17 I will pose some of the foundational claims of both the defenders of privacy and my  
18 alternative framework in a way that will allow for careful examination of them. If we  
19 keep our account in everyday language, we can use our everyday knowledge of our  
20 minds, including that gained via introspection, in concert with knowledge supplied by  
21 the cognitive sciences, to understand the mind.

## 22 **Problems of the mental and problems of the** 23 **physical in general**

24 Even if the metaphysical problems involved in thinking of the mind as physical can be  
25 overcome, several difficult problems of metaphysics remain, more general problems  
26 involving matter itself. These problems are traditionally treated using examples of  
27 standard (non-mental) physical events, but most if not all of the problems also come  
28 up with mental events. For instance, philosophers of science study causality, attempt-  
29 ing to understand how exactly one event causes another, and when statements of the  
30 form, “x caused y,” are true. Causality occurs everywhere in the physical world, includ-  
31 ing the mind. There are also knotty problems involved in understanding time and  
32 space themselves, problems taken up by physicists along with philosophers of physics.  
33 My goal here is obviously not to solve all problems of metaphysics that the mind par-  
34 takes in by virtue of being, by our hypothesis, physical. My goal is just to understand  
35 the mental as well as we understand the physical and in fundamentally the same way.  
36 The physical realm contains its own mysteries, but if we can reduce the even more  
37 puzzling mysteries of the mental to the mysteries of the physical, my goals here will be  
38 met. My contention is that we can focus entirely on the metaphysical problems unique  
39 to mental events, and develop solutions to them without approaching any of the  
40 broader issues involving all physical events and states (unlike, e.g., Chalmers, 1996).  
41 I will argue that understanding consciousness does not require understandings of  
42 *causality*, or even *matter*, beyond our everyday concepts. Thus at different points in

1 our discussion, I will assume either that these more general metaphysical problems  
 2 involving matter itself can be solved later, by other branches of philosophy perhaps  
 3 coupled with branches of science, or that our folk conceptions are sufficient and  
 4 unproblematic.

5 If the issue must be put in terms of reducibility, conscious states can be “reduced”  
 6 in the sense that they can be understood using the ordinary metaphysical categories  
 7 one applies to standard external objects. The phenomena that we experience in our  
 8 ordinary mental lives are brain states. We, the experiencer, thought of as a self, consist  
 9 of another set of brain states. We experience certain properties of the brain. Other  
 10 properties of the brain, such as its color, consistency, chemical constitution, and so on,  
 11 are not accessible to us via introspection. In the sense of “reduction” that means there  
 12 will be fewer things when we are done, i.e. eliminative reduction, this should not hap-  
 13 pen with consciousness and is not currently happening in the research literature. I do  
 14 not see any evidence that neuroscientists or other cognitive scientists are ceasing to use  
 15 folk psychology, for instance, by ceasing to use terms such as “intention,” “belief,”  
 16 “mind,” or “consciousness.” If some crisis, some crucial failure or intractable anomaly,  
 17 is going to bring down this happy coalition of folk and scientific views, it is in the  
 18 future. So the prospect of what is sometimes called a theoretical reduction—eliminative  
 19 reduction of folk psychology into strictly third-person scientific brain terminology—  
 20 I do not believe to be a live one. The term “reduction” so strongly implies that the  
 21 higher level will be eliminated in favor of some lower level I prefer to avoid its use.  
 22 Some writers have tried to block this interpretation by speaking of non-eliminative  
 23 reduction, which preserves the upper level.

24 Another term sometimes used in this context is “correlation,” for example, Crick  
 25 and Koch (1995) speak of the neural correlates of consciousness. For a genuine mate-  
 26 rialist, however, speaking about neural states being correlated with conscious states is  
 27 like speaking about water being correlated with H<sub>2</sub>O, or the presence of Mark Twain  
 28 being correlated with the presence of Samuel Clemens. Conscious states need not be  
 29 identical with or correlated with anything else in order to be considered real. They  
 30 have their own existence, their own weight and force, just like all the other physical  
 31 properties. In general, the materialist needs to take care in how she describes the rela-  
 32 tion between states of the cortex and our mental lives, in order to avoid including an  
 33 unnecessary and problematic intermediary level. It is better to say, for instance, that  
 34 there are certain states of the cortex that *are* mental images, than to say that they cause  
 35 mental images or are correlated with them. Certain states of the cortex are memories,  
 36 mental images, and other representations. Higher-level mental events also occur in  
 37 the cortex. Some of these events are decisions, acts inhibition, or remembering, or  
 38 other mental acts.

39 Conscious states do not need to be translated into anything else, correlated with  
 40 anything else, or reduced into anything else more real, they are a type of physical state.  
 41 Thus in introspection, we are in contact with physical states. Granted, they do not  
 42 seem physical, and they have some curious properties that standard physical states  
 43 lack—they tend to fade away into non-existence when we cease attending to them;  
 44 they tend not to hold still very well when we try to analyze them. They can change with  
 45 a quickness, and they contain such detail, that for eons of our existence, until the

1 invention of movies and video, there was no known physical medium that could  
 2 duplicate the brain's screen of imagination. Well, almost nothing. McGinn's (1999)  
 3 metaphor for consciousness—a flame—is apt. With some effort, we can perhaps  
 4 rekindle the state of mind of the ancients as they ruminated about what fire might be.  
 5 It seems alive, it consumes matter and produces waste, greatly transforming every-  
 6 thing it touches. From the days in ancient China and Greece, where fire was treated as  
 7 an entirely separate metaphysical category (along with earth, water, air—and metal for  
 8 the Chinese), mankind has had trouble understanding fire, as evidenced as late as the  
 9 1700s when scientists posited the existence of a substance called “phlogiston” to  
 10 explain combustion. We later realized that phlogiston did not exist, and that combus-  
 11 tion could be understood using our existing categories of matter.

12 If we speak of the mental events we are consciously aware of and ask how they relate  
 13 to the physical events in our brains, our question commits the fallacy of false dichoto-  
 14 my. The question assumes that the mental and the physical are disjoint categories  
 15 (Searle, 1992). The conscious events that we are aware of are physical events in their  
 16 own right, just as much as the brain events observed in the lab by researchers. If we  
 17 allow the mental its own existence in a category disjoint from the physical, we will  
 18 never be able bring it back in.

## 19 The metaphysician's toolchest

20 Logic is the primary investigative tool of the metaphysician. It allows her to state and  
 21 test hypotheses in a clear and exact way, and it allows mistakes to be found more eas-  
 22 ily. The laws of logic are *truth-preserving*, in that they are designed to prevent one from  
 23 deducing a false claim from a true one. Typically, a metaphysical hypothesis takes the  
 24 form of a claim about a connection between two other claims. The primary tool for  
 25 describing this connection is the *conditional statement*. Conditional claims—or just  
 26 “conditionals,” for short—are expressed using if-then statements:

27 Conditional statement  
 28 If  $p$  then  $q$ .

29 In logic (and in philosophy), conditional relations are treated as being *necessary*,  
 30 meaning that if  $p$  is true,  $q$  *must* be true. For instance, If Jack is an uncle, then he  
 31 must be a man. As opposed to this, sometimes in ordinary speech we use conditionals  
 32 in a way that logicians would call *contingent* rather than necessary, such as when  
 33 we say, “If you tell Jan, then she will get angry.” We can explicitly signal those times  
 34 when a claim is to be treated as contingent by prefacing it with a word such as  
 35 “probably.”

36 Contraposition is an ancient law of logic:

37 Contraposition  
 38 If  $p$  then  $q$  = If not  $q$  then not  $p$ .

39 For example, it is true that If someone is a bachelor, then he is a man. To claim this is  
 40 the same as to claim that, If someone is not a man, then he is not a bachelor.

41 It is crucial that the person making a conditional claim only be held to asserting a  
 42 one-way relation. For instance, someone who claims that, If someone is an aunt, then

1 she is a woman, should not be held to the false claim that, If someone is a woman, then  
 2 she is an aunt (this is not contraposition, because we didn't negate the two claims).  
 3 The same holds for *categorical* statements, that is, statements that make claims about  
 4 relations between categories, rather than between other claims, as the conditional  
 5 does. Someone claiming that All  $x$ 's are  $y$ 's is not thereby also claiming that All  $y$ 's are  
 6  $x$ 's. However, if one desires to make a claim that goes in both directions, the tool for  
 7 that is the biconditional:

8 Biconditional  
 9  $p$  if and only if  $q = (If\ p\ then\ q)\ and\ (If\ q\ then\ p).$

10 It is a good idea to verify this for oneself by using a clear everyday example. It is true  
 11 that someone is a bachelor if and only if he is an unmarried adult male. This claim is  
 12 equal to two conditional statements: If someone is a bachelor, then he is an unmarried  
 13 adult male, and, If someone is an unmarried adult male, then he is a bachelor. The  
 14 categorical equivalent of this claim can be constructed by using the phrase "all and  
 15 only": All and only bachelors are unmarried adult males. Sometimes I will also use the  
 16 equal sign,  $=$ , to indicate numerical identity, i.e., if  $a = b$ ,  $a$  and  $b$  are the same thing.  
 17 "Numerical" means that there is only one thing involved. For example, Samuel  
 18 Clemens = Mark Twain.

19 As I noted, another form of claim is what logicians call a *categorical* claim. Some  
 20 examples are:

21 Categorical statements  
 22 No  $x$ 's are  $y$ 's.  
 23 All  $x$ 's are  $y$ 's.

24 We have already seen examples of these sorts of claims since the Privacy Argument in  
 25 Chapter 1 consisted of three of them. Categorical statements refer to categories, or  
 26 classes of things or events (abbreviated here with  $x$  and  $y$ ), whereas conditional claims  
 27 are compound statements that are about simple statements (abbreviated above with  $p$   
 28 and  $q$ ). To obtain the *converse* of a categorical statement, one simply reverses the cat-  
 29 egories. The converse of the two statements above is, No  $y$ 's are  $x$ 's and All  $y$ 's are  $x$ 's.  
 30 Notice that the original "No" statement and its converse are equivalent, but that this  
 31 cannot be said of the original "All" statement and its converse.

## 32 Categories of existence

33 We need to use these tools to address difficult problems about the nature of conscious  
 34 mental states. These are metaphysical problems about categories of existing things and  
 35 how they relate. Our language possesses resources for referring to all the kinds of  
 36 things that exist, their features, and their activities and interactions. Metaphysicians  
 37 regiment this vocabulary into a basic framework for talking about the world. There is  
 38 of course a basic problem here: What if our ordinary ways of thinking and talking  
 39 about the world are wrong? They seem to work well enough, though, and since our job  
 40 is not to solve every problem of metaphysics, but just to make the mental only as mys-  
 41 terious as the physical, we will press on with what we have.

1 The sentence is the perfect tool for describing facts, cases in which a certain thing  
 2 has a certain property. For instance, “The coin is smooth,” if true, refers to a fact.  
 3 A thing, the coin, has a property, smoothness.

4 Fact, or property instance  
 5 Fact = the having of a property by a thing.

6 “The coin fell,” describes an event, “The coin was minted” describes a process, and  
 7 “The coin glowed red-hot” describes a state. These are all types of fact. They are also  
 8 cases in which a thing has a property, or property instances.

9 Facts: events, states and processes  
 10 Facts, events, states and processes = unified collections of one or more property  
 11 instances.

12 Kim (1998) observes that “phenomenon” and “occurrence” can also cover both events  
 13 and states. Tye (1989) similarly notes that “event” can cover both states and processes.  
 14 Events occur when a thing gains or loses a property, i.e., when a property instance  
 15 comes into being. We also use entire sentences for talking about events and states.  
 16 Examples of sentences that refer to events are, John got angry, the water boiled, etc.  
 17 We tend to think of states as existing for longer than events, although events can last a  
 18 long time too, such as World War II. Examples of sentences that refer to states include,  
 19 the water is frozen, the bicycle is red, etc. “A process can be thought of as a causally  
 20 connected series of events and states,” says Kim (1998, p.6), “and events differ from  
 21 states only in that they suggest change whereas states do not.”

22 To avoid confusion, I should point out that the term “fact” is employed in two ways  
 23 that are crucially different. In one sense, a fact is more like a statement or a proposi-  
 24 tion. In the sense in which I will be using it, facts are concrete parts of the world. We  
 25 know about facts, and refer to facts, in this sense of “fact.” One serious problem with  
 26 using “fact” in the sense of “statement” is that there can be false statements, so this  
 27 would seem to commit one to the existence of false facts, a notion which is as meta-  
 28 physically problematic as it is verbally infelicitous. Hence I will avoid using “fact” in  
 29 this sense and only use it in the concrete sense.

30 Things  
 31 Things = unified collections of one or more property instances.

32 Facts are individual property instances, whereas things can be thought of as bundles of  
 33 property instances, in a way, bundles of facts. In speaking of things as unified collec-  
 34 tions of property instances, I am attempting to keep our use of “thing” within our  
 35 ordinary conception of it. We don’t think of disunified collections of property instanc-  
 36 es, for instance, the height of the Eiffel Tower, the color of hummingbirds’ wings, and  
 37 the sound of a gong, as a thing.

38 Is there a problem with circularity here? The definition of “property instance” pro-  
 39 vided above includes “thing.” The definition of “things” must mention properties and  
 40 vice versa; the two are inter-defined. There are no things without properties, and there  
 41 are no properties without things. Similarly, Heil (2003, p.11) says that “properties are  
 42 ways objects are; objects are property-bearers.” I do not think this is a problem, at least



1 not for us given our concerns. There are other examples of this sort of inter-definition  
 2 that are unproblematic. For instance, in mathematics, “point” and “line” are some-  
 3 times inter-defined: a point is the intersection of two lines, and a line is a collection of  
 4 points. There is no existing concept that we could use to reduce either things, proper-  
 5 ties, or facts to something more basic. Thus the most basic metaphysical units are  
 6 things with properties.

7 Even though, thinking metaphysically, it is difficult to find a principled distinction  
 8 between things and facts (especially events), it is likely that our ways of mentally rep-  
 9 resenting things and facts are different. We primarily represent things with concepts,  
 10 whereas we tend to represent facts with analog representations, at least when we rep-  
 11 resent them consciously. We tend to think of things as persisting unchanged over long  
 12 time periods, and moving through space, whereas we tend to think of events, proc-  
 13 esses, and states as indexed to definite times, or ranges of time, and located in restrict-  
 14 ed spaces. When we think of facts, we have one special property or relation in mind.  
 15 Not so when we think of things. This is why we describe facts with sentences, and  
 16 things with just noun phrases.

17 Noun phrases are useful for referring to things of all types. Examples include:  
 18 “John,” “the Eiffel Tower,” “Scandinavia,” and “the Pythagorean theorem.” Examples  
 19 of noun phrases that refer to things in the mind include, “mental image,” “belief,” and  
 20 “thought.” Adjectives are used to refer to properties. Examples include, “hungry,”  
 21 “red,” “tall,” “furious,” “disquieting,” “odd,” and “even.”

22 Properties

23 Properties are features of things or facts.

24 Properties themselves are mysterious. What exactly is the property of being straight,  
 25 or being curved, for instance? One way to clarify this is the hypothesis that two proper-  
 26 ties are the same if they give their bearers the same causal powers. According to Heil,  
 27 properties “contribute in distinctive ways to the powers or dispositionalities of their  
 28 possessors” (2003, p.11). Heil says that these powers or dispositionalities are intrinsic  
 29 features of the object. But might a difference in the bearers cause the same property to  
 30 give them different causal powers? For instance, a lion with courage has different  
 31 causal powers from a mouse with courage. On the other hand, property instances  
 32 seem much more graspable, and can be pointed to and thought about. They are con-  
 33 crete cases in which something has a property. What we perceive are really property  
 34 instances, rather than properties themselves.

35 These things, processes, and events then causally interact in a myriad of ways to  
 36 produce new things, processes, and events. Examples include: John boiled the water;  
 37 The impact broke John’s arm. Examples of causal interaction in the mind include:  
 38 John’s hunger made him grouchy; John’s smelling strawberries reminded him of sum-  
 39 mer camp; and John’s fear made him angry. Our understanding of the causality in the  
 40 world seems to be stratified into different levels. Biology is a level above chemistry, for  
 41 example, and chemistry is a level above physics. One can distinguish finer-grained  
 42 levels within disciplines, for instance between those scientists who study networks of  
 43 brain cells and those who study the activity of the cells themselves. One significant  
 44 feature of these levels is that each one tends to have its own sets of things, set of

1 properties those things can have, and set of causal relations those things engage in.  
 2 The things, properties, and causes one finds at one level may simply not exist at the  
 3 levels below or above. Hitting, for example, exists at our everyday level. People can hit  
 4 people, billiard balls can hit each other. But there is no such thing as hitting at the  
 5 atomic level.

6 As one moves up or down in the levels, property instances emerge and vanish.  
 7 Older-style TV sets used pixels of three different “primary” colors—red, blue, and  
 8 yellow—to produce all of the other colors. Green, for instance, seems to exist only  
 9 when we are a certain distance from the set. As we move closer, it disappears, and we  
 10 see only blue and yellow pixels, move back, and the green re-emerges. What is curious  
 11 is the way the properties *emerge* as one travels up or down in the system of levels. The  
 12 example of pixels might be taken to indicate that the properties at the different levels  
 13 are in some way indexed to our interaction with the object, since the existence of the  
 14 greenness seems to depend on the perceiver’s relation to the TV set. There are also  
 15 cases, however, where such relations do not seem to be present. The property of  
 16 being combustible, for instance, does not exist at an atomic level, but emerges at the  
 17 molecular level, whether the combustible material is being perceived or not.  
 18 Consciousness likewise emerges from the activity of neurons but emergence is not  
 19 unique to the mental.

## 20 **Basic metaphysical categories of mind**

21 Examples of conscious states include seeing a tree, thinking about where to have  
 22 lunch, and imagining winning the lottery.

23 Conscious states, events and processes

24 A conscious state, event, or process is a unified collection of property instances and  
 25 qualia instances.

26 Examples of conscious mental events are remembering an appointment, fantasizing  
 27 about winning a marathon, seeing a cat, and feeling a pain. Qualia are the properties  
 28 of our conscious states. As I plan to understand them, qualia instances are a subtype  
 29 of normal property instances. When I form a mental image of a red car, that redness is  
 30 a property of a brain state (as is all redness, see Chapter 5). It is a conscious property,  
 31 as opposed to the non-conscious properties of that brain state, such as the weight of  
 32 the neurons that embody it. Just as properties are properties of things, events, and  
 33 processes, qualia are properties of brain parts (which are things), brain states, brain  
 34 events, or brain processes. Normally we think of conscious states as consisting of sev-  
 35 eral qualia instances, but there can be conscious states that consist only of a single  
 36 qualia instance. For instance, someone meditating might have a conscious state  
 37 consisting only of the sound of her breathing.

38 Qualia

39 Qualia are conscious properties of brains, brain states, brain events, and/or brain  
 40 processes.

41 Qualia instances

42 Qualia instances = conscious property instances.

1 Mental states, events, and processes have both non-conscious properties, and con-  
 2 scious properties, captured in the definition above by the phrases “property instanc-  
 3 es,” and “qualia instances,” respectively. Examples of properties in the conscious  
 4 mind, or qualia, include red, painful, square, frightening, etc. Some examples of sen-  
 5 tences that describe qualia instances are: The mental image is red; the belief is upset-  
 6 ting; the thought is confusing. Some writers interpret the concept of qualia as much  
 7 more theoretically loaded. Dennett claims that qualia are by definition private, inef-  
 8 fable, and simple (1988). Given my goals, I am unable to use “qualia” in this way, since  
 9 it would beg the question against some of the views I am considering, including my  
 10 own. Since we do not know for certain what qualia are, we need to let our definition  
 11 of the term respond to what we learn. If we do that, we will be open to the possibility  
 12 that qualia are different from what we thought they were, as I argued colors are in  
 13 Chapter 5. The phrase “conscious property” is a bit awkward. It is more natural to  
 14 speak of conscious people or conscious states. The sense I have in mind is closer to  
 15 the sense in the phrase “conscious state.” Just as this designates a type of state, I am using  
 16 the modifier “conscious” to designate a type of property, in the same way one might  
 17 speak of texture properties, or shape properties. Qualia seem to all exist on a single  
 18 level, when experienced from the first-person point of view. By this I mean that we  
 19 cannot, in our normal consciousness lives, analyze qualia into property instances a  
 20 level down, as we can with standard physical property instances. Moving in the other  
 21 direction, it does not happen that, for example, several qualia get together and a new  
 22 property emerges (although new ideas, in the form of new conscious states, seem to  
 23 emerge from collections of existing conscious states).

24 There does seem to be good reason for having some sort of definitional connection  
 25 between the category of the mental and consciousness. Witness that oddness of claim-  
 26 ing that some creature has a mind but is not capable of consciousness, or the converse.  
 27 One way of handling the connection is to argue that a state is a mental state if it is  
 28 either a potential or actual conscious state (as in Searle, 1989). Beliefs, for instance, are  
 29 mental states even when we are not thinking about them, because they can be con-  
 30 scious states. And beliefs were conscious when they were formed. Much the same  
 31 might be said of our memories, which also are a type of mental state. One problem  
 32 with this approach, though, has to do with executive processes. It seems natural to put  
 33 them in the category of the mental, but what if it turns out that they can never possess  
 34 conscious properties? We can still honor the idea that there is an essential connection  
 35 between the concepts *mental* and *conscious*, as follows. States, events, and processes  
 36 count as mental if they either (1) are actual or potential objects of consciousness, or  
 37 (2) they have significant causal interactions with states, events, etc. mentioned in (1).  
 38 The second clause would cover the executive processes. Notice that this also allows us  
 39 to count certain drives, instincts, and motivations as mental, since they engage in sig-  
 40 nificant causal interactions with conscious states.

41 Mental states, events, and processes

42 A mental state (event, process) is either a conscious state (event, process), can become  
 43 a conscious state (event, process), or is causally related in the appropriate way to those  
 44 that can.

1 A person's mind is the set of mental states that occur in his brain during his lifetime.  
 2 A person's mind at any given moment is simply his set of current mental states.

3 Mind

4 A mind is an organized collection of mental states, events, and process.

5 The vagueness in exactly what counts as organized or unified gives us some necessary  
 6 wiggle room, since for one thing mindmelding opens up minds to one another, and  
 7 might make their individuation tricky. We cannot rely on the popular view that minds  
 8 are permanently closed to one another. The property instances of a thing are unified  
 9 by the nature of the thing itself. The qualia instances of a conscious state are unified in  
 10 a more complicated manner. The brain follows certain rules of unity as we saw in  
 11 Chapter 5. In general it unifies qualia into conscious mental representations of objects.  
 12 The brain unifies qualia caused by an object into a representation of that object.

13 Brain

14 A (living, functioning) brain is an organized collection of things, property instances and  
 15 qualia instances.

16 Brain states, events, and processes

17 A brain state, event or process is an organized collection of property instances and/or  
 18 qualia instances.

19 Now we can state the relation between conscious states and brain states:

20 Relation between conscious states and brain states

21 If something is a conscious state, then it is a brain state.

22 We can also state the relation between mental states and brain states (at least as far as  
 23 humans are concerned):

24 Relation between mental states and brain states

25 If something is a mental state, then it is a brain state.

26 While all mental states are brain states, there are brain states that are not mental states,  
 27 because there are brain states that have no qualia and have no close causal connection  
 28 to the executive processes. States of the brainstem, for instance, do not have conscious  
 29 properties. Are we being brain chauvinists? Can't there be creatures with mental states,  
 30 but without brains? Perhaps there can be, but we will deal with these creatures if we ever  
 31 encounter them; right now we have enough to wrestle with just understanding brains.

32 All materialists should agree on the principle of supervenience. It describes a mini-  
 33 mal relation that holds between the mental and the physical, if materialism is true.

34 Supervenience

35 If there is a difference in mental states, there is a difference in physical states.

36 Or, as it is sometimes put: No mental difference without a physical difference. Here  
 37 is how Kim phrases what he calls mind–body supervenience:

38 The mental supervenes on the physical in that any two things (objects, events, organisms,  
 39 persons, etc.) exactly alike in all physical properties cannot differ in respect of mental  
 40 properties. That is, physical indiscernibility entails psychological indiscernibility".

41 (1998, p.10).

1 Taking the set of conscious states as a subset of the set of mental states we can state  
2 a more specific version of supervenience better suited to our purposes:

3 Supervenience of consciousness on the brain

4 If there is a difference in a person's consciousness, there is a physical difference in that  
5 person's brain.

6 If something changes in your conscious state, something changes in your brain. The  
7 converse of this—if there is a difference in brain states, there is a difference in con-  
8 scious states—is widely thought to be false, since all sorts of things could change in  
9 your brain without anything changing in your mind. Right now, for instance, a neu-  
10 ron just died in your brain (too much alcohol last night) but you couldn't notice this,  
11 because that event happened in a part of the brain that never participates in forming  
12 conscious states.

13 For many materialists, however, me included, supervenience is trivially true, since  
14 we regard mental states themselves as a type of physical state. By this we do not mean  
15 that for each conscious state, there is some *other* state, a physical state, which the con-  
16 scious state is identical with. We mean that that conscious state is itself a physical state.  
17 For us, saying that a change in the mental is a change in the physical is similar to saying  
18 that a change in Mark Twain is a change in Samuel Clemens. Indeed, if there could be  
19 a mental change without a physical change, this would be miraculous and devastating  
20 from the point of view of the materialist. It would show that the mental has exactly the  
21 sort of independence from the physical that the dualist claims it has.

22 Kim argues that we need to add to supervenience the mind–body dependence thesis  
23 (1998):

24 Mind–body dependence

25 What mental properties a given thing has depends on, and is determined by, what physical  
26 properties it has. That is to say, the psychological character of a thing is wholly determined  
27 by its physical character.

28 Again, though, this is trivially true for materialist views like mine, since mental prop-  
29 erties are also physical properties, according to that view.

30 To claim that mental states just are a type of physical state is to appropriate the  
31 concept of the mental in a way that leaves no room for the dualist. As we have defined  
32 them, there is no thesis containing the concepts *mind* or *mental* that the dualist can  
33 deny, he must provide opposing definitions of those concepts. Supervenience, as  
34 defined above, leaves some conceptual room for dualists. Materialists affirm super-  
35 venience, while (at least some) dualists deny it. Similarly, talk of the neural correlates  
36 of consciousness (Crick and Koch, 1995) leaves room for dualism, since the dualist  
37 can assert that the neural activity and the conscious states are correlated but separate  
38 realms of existence. It might be, however, that in order to form concepts that are truly  
39 capable of capturing the relation between mind and brain, we need to do this in such  
40 a way that leaves no room for dualism. The concepts of physics, for instance, leave no  
41 room whatsoever for the idea of perpetual motion. We can describe the idea of per-  
42 petual motion, something must start moving and continue moving with no energy  
43 input. But we cannot express this in the current theories of physics, using those

1 theories properly. Theories not only describe what exists, they sometimes delineate  
2 what can exist. What the theory cannot express cannot exist.

### 3 **Empirical definitions**

4 Aristotle distinguished two activities, defining the word and defining the thing the  
5 word applies to. What I am calling empirical definitions are examples of the latter. The  
6 model of an empirical definition is water = H<sub>2</sub>O. Our definitions will be rougher and  
7 more tentative than this, however, since this investigation is in an early phase.

8 Conscious state = a state possessing the right sort of thalamocortical oscillations

9 It is important for my view to define “conscious state” in a way that is independent  
10 from any relation to the subject or to executive processes. According to our current  
11 theories, the right sort of states are states engaged in binding processes. These oscilla-  
12 tions will produce conscious states whether their qualia are organized or not. Conscious  
13 states are collections of qualia. Normally those qualia have been organized by percep-  
14 tual preparation processes, but they need not have been.

15 Quale = bound unimodal part of a conscious state

16 That covers state consciousness, but what about cases where a subject is conscious of  
17 something? Minimally, according to the alternative conception, a state in which a  
18 subject is conscious of something involves posterior and prefrontal cortical areas  
19 engaged in the right causal relationship. More specifically, when we say that Jo is con-  
20 scious of something, we might mean either something literally in her brain, as when  
21 we say, Jo is conscious of her anger, or we might mean something outside of her brain,  
22 as when we say, Jo is conscious of the tree. The empirical definitions of these states  
23 might run as follows:

24 States of subject consciousness

25 X is conscious of y (where y is in the mind/brain of x) = y is a conscious state located in  
26 posterior (or inferior) cortical areas related to executive processes (in the brain of x) in  
27 the right way.

28 X is conscious of y (where y is an external object) = y $\neq$  stands in the right causal relations  
29 to y, y $\neq$  is a conscious state located in posterior (or inferior) cortical areas and related  
30 to executive processes (in the brain of x) in the right way.

31 In the second type, in which X is conscious of an external object, y $\neq$  is a representation  
32 of y. The next chapter will further specify the sorts of causal connections a conscious  
33 state must have, both to the executive processes and to the object it represents, in  
34 order to be a representation. That chapter focuses on how we use conscious states to  
35 achieve the miracle of representation, or as it is sometimes known, intentionality.  
36 Searle may be correct in claiming that, “the ‘of’ of ‘conscious of’ is not always the ‘of’  
37 of intentionality” (1992, p.84). By way of example he offers, “If I am conscious of a  
38 knock on the door, my conscious state is intentional, because it makes reference to  
39 something beyond itself, the knock on the door. If I am conscious of a pain, the pain  
40 is not intentional, because it does not represent anything beyond itself” (Searle, 1992,  
41 p.84). Consciousness of pain would be our first type above, while consciousness of a

1 knock on the door would be our second type, involving an intermediary mental rep-  
 2 resentation of the knock on the door.

### 3 **Our knowledge of things, properties, and facts**

4 We need to undertake an analysis of what it means to be aware of or know about  
 5 something that can assist us with our questions about the nature of our awareness of  
 6 our conscious states. If the previous chapter is on target, since “know” and “aware” are  
 7 mental verbs, sentences containing them should have a two-level analysis. Building on  
 8 our results from Chapter 10, the “I” in “I am aware of x” refers both to the full person,  
 9 and (tacitly) to that person’s executive processes. To say that you are aware of some-  
 10 thing means that your executive processes are engaged in certain sorts of causal con-  
 11 tact with it, or a representation of it. “Jan is aware of the Eiffel Tower,” means that Jan  
 12 stands in a certain causal relation to the Eiffel Tower (objective level), and that Jan’s  
 13 executive processes stand in a certain causal relation to her representation of the Eiffel  
 14 Tower (notional level). Recall from the previous chapter that there can be also be  
 15 strongly notional uses of mental verbs, for instance, “Jo is aware of her mental image.”  
 16 When I am aware of the redness of my mental image of a robin in a tree, prefrontal  
 17 executive attentional processes are causally interacting with certain properties of the  
 18 mental representation. All of the properties (property instances really) on both sides  
 19 are physical properties. Some of the properties of the representation are conscious  
 20 properties, or qualia, such as the redness.

21 According to some defenders of privacy, Searle for example, the awareness that we  
 22 have of our conscious states is a metaphysical simple, without parts. Contrary to  
 23 that, on my alternative approach, awareness is a relation that always involves a subject  
 24 who is aware and a separate object of awareness, connected to the subject of awareness  
 25 via the appropriate causal relations. Awareness is always awareness of something,  
 26 unless there is an equivalent intransitive sense of “aware,” as in “Jan is aware.”  
 27 It sounds strange to speak of awareness without anyone who is aware. Consciousness  
 28 on the other hand, can exist without a subject, because there can be states of  
 29 bare consciousness.

30 Our concepts of knowledge and awareness contain parallel senses. For instance,  
 31 when we say “I know that x,” we can always say “I am aware that x” and vice versa. We  
 32 also say, “I am aware of y,” which we can transform into “I know of y.” “Know” is used  
 33 more often in the “that” construction, while “aware” is used more often in the “of”  
 34 construction. “Awareness” is more frequently used to designate conscious states with  
 35 a certain time span, as in, “I was aware of the sound of traffic until it faded into the  
 36 background.” “Know” is used more frequently to refer to dispositional states, even in  
 37 the knowing-that sense. We have a lot of knowledge contained in our semantic mem-  
 38 ories, for instance. Both *know* and *aware* allow for defeasibility: We can say I thought  
 39 I knew that x but I was wrong, or I thought I was aware of x, but I was wrong. Being  
 40 aware of something entails that one is aware of properties that thing has, and this  
 41 awareness is more naturally expressed with the “that” construction. If I am aware of a  
 42 car in the driveway, I can say I am aware that the car is green, that it is a convertible,  
 43 and so on. When we are aware of conscious states, we can naturally express our

1 awareness of the conscious properties, the qualia, of that state using the “that” con-  
 2 struction. When I am aware of my mental image of a blue triangle, I am aware that the  
 3 triangle is blue.

#### 4 **Attention versus consciousness**

5 We need to distinguish the current dominant bound thalamocortical state from what  
 6 is attended, which is a subset of what is in that bound state. Peripheral vision is, I sug-  
 7 gest, bound but not normally attended to. While attention tends to hover around the  
 8 visual focus, the conscious visual state extends out into the periphery. As Koch notes,  
 9 “The universe is not reduced to the area illuminated by the attentional spotlight”  
 10 (2004, p.163). Attention is attention to items that are already conscious: “Attention  
 11 can select between different objects and stimuli that are already consciously perceived”  
 12 (Bachman, 2006, p.28). The basic mechanisms and structures that underlie top-down  
 13 attention are different from those structures that are necessary for phenomenal con-  
 14 sciousness, although the two causally interact (Posner, 1994; Bachman, 2006). One  
 15 way to attempt to argue for the claim that the periphery of the visual field is still con-  
 16 scious is to show that people can be trained to detect stimuli in the periphery, while  
 17 they are keeping their eyes focused on a central point. Braun and Sagi (1990) trained  
 18 their subjects to identify peripheral target stimuli embedded in a set of non-target  
 19 stimuli. Koch says that, “trained observers can even distinguish two bars in the periph-  
 20 ery and name their color and orientation, all while successfully coping with the central  
 21 task. That is, with top-down attention pinned at fixation, subjects see one or two  
 22 objects quite a distance away as long as they are salient enough. In Braun’s words,  
 23 ‘observers enjoy a significant degree of ambient visual awareness outside the focus of  
 24 attention’” (2004, p.163). Those who do not believe in bare consciousness, however,  
 25 might give another explanation of the phenomena, perhaps saying that these subjects  
 26 learned how to extend subject consciousness further out into the periphery.

#### 27 **Direct knowledge**

28 What do I mean in speaking of direct knowledge of a conscious state? Austin (1962)  
 29 pointed out that our uses of the concept of directness are context-sensitive. But in the  
 30 cases described above, it is quite clear what “direct” means. You and I have direct  
 31 knowledge of Bernice’s slipping on the ice when we are both standing there and see her  
 32 slip. When we tell others later about the event, they have indirect knowledge of it.  
 33 When I ask you to think of a number from one to ten, and you think of seven, you  
 34 have direct knowledge that you are thinking of seven. When you tell me that you were  
 35 thinking of seven, I have indirect knowledge of your thought. If I look at an fMRI of  
 36 your brain activity as you are thinking of the number, I have indirect knowledge of  
 37 your thought. Indirect knowledge is knowledge removed by one or more causal steps  
 38 from direct knowledge.

39 We might call being aware of a quale instance ultimate direct knowledge of a fact,  
 40 where the fact is the quale instance. It is as close as we can get to a fact. We cannot get  
 41 any closer, because we lose the mental configuration required for knowledge: a mental  
 42 representation standing in the appropriate causal relations to the executive ensemble.



1 The existence of this sort of knowledge seems to open up the possibility of knowing  
 2 certain non-mental facts more intimately than we do, if they can somehow be made  
 3 into qualia. When we cannot epistemically contact a property, we create, or enlist a  
 4 property that is correlated with that property, that we can perceive. We use instru-  
 5 ments to detect the crucial property and produce a signal that is salient given our  
 6 senses. For any type of observer, and any fact, one could specify the most direct experi-  
 7 ence for that observer of that fact. Knowledge of our conscious states is the most direct  
 8 knowledge possible. Given that there are five sensory modalities, or six if we count  
 9 somatosensation, it seems there are six types of fact we can have ultimate direct knowl-  
 10 edge of. At least for now—it may be possible for us to expand this set, given certain  
 11 types of mindmelding with conscious animals who possess other sensory modalities,  
 12 such as sharks and fish who sense electrical impulses.

13 Then, is ultimate direct experience incorrigible? Searle (2004), for instance, says that  
 14 we cannot distinguish between the appearance and the reality of our conscious states.  
 15 But the person still has to conceptualize the experience correctly. Armstrong (1984,  
 16 pp.114–15) makes the point that direct awareness need not be infallible:

17 Introspective awareness is in some sense direct awareness, but such direct awareness does  
 18 not have to be infallible awareness. Once we recognize this point, we see that the special  
 19 authority that a person has about his own current mental states, by comparison with a  
 20 hypothetical (logically possible) “direct observer” of these same states, is of no great  
 21 moment for the following reason.

22 New ways of gaining knowledge of a certain range of phenomena must in the first  
 23 instance be tested by checking them against older ways of gaining knowledge of the same  
 24 phenomena which have already proven themselves reliable. Introspection is a reasonably  
 25 reliable way of gaining direct knowledge of some features of some of our own mental  
 26 states. Successful claims by other persons to have such direct knowledge, which we are  
 27 imagining to occur, would therefore have less initial authority than introspective aware-  
 28 ness. However, there is no reason why such claims by others should not acquire equal or  
 29 even greater authority after they had proved themselves.

30 For instance, what if we connect the brains of two people, one of whom is a person  
 31 known to have no interest in introspection, and who admittedly spends little time  
 32 engaging in it. The other is a master at introspection, a modern William James  
 33 perhaps. Could this expert introspect the other person’s brain and its conscious states  
 34 more accurately than he himself could? We would need to have established a prior  
 35 record of successful mindmelding results since, as Armstrong notes, initial discrepan-  
 36 cies are much more likely to be blamed on a faulty connection (or a faulty  
 37 hypothesis).

### 38 **Experiencing the same event**

39 In claiming that mindmelding is possible, I mean that two people can experience the  
 40 same conscious state in the ordinary sense in which two people can experience the  
 41 same presidential speech by standing together in the audience. There is no huge differ-  
 42 ence between knowing about conscious states via introspection and knowing about  
 43 everyday external objects such as tables and chairs. Here we run into one of those  
 44 larger metaphysical problems that occur both in the case of mental events and all other

1 physical events. Are two people ever aware of exactly the same property? It depends on  
 2 how we choose to individuate properties, of course. Another related question is, can  
 3 we sense the same property with two different sensory modalities? Can we sense the  
 4 same property internally, using introspection, and externally, using brain imaging or  
 5 some other purely external technique? Is the same event is contacted in two different  
 6 ways, via introspection and via the fMRI? Only in a rough sense. But this is the only  
 7 way that two people can ever experience the same event, roughly. Even if we take care  
 8 to specify that by “event” here, we mean solely the object of perception (or introspec-  
 9 tion), and not allow any features of the perceiver or the intervening environment to  
 10 count as part of the event, two people can never experience exactly the same event. We  
 11 might both look at the same persimmon tree, but we are seeing it from slightly differ-  
 12 ent angles. The photons hitting our eyes have bounced off different parts of the tree. If  
 13 we switch positions, things will have changed during that time. I won’t be seeing  
 14 exactly what you saw. The sun will have moved, the shadows will be different, the tree  
 15 and its leaves will have aged ever so slightly. If properties are simply features of object,  
 16 then theoretically, objects have an infinite number of properties.

17 There are cases in which we know about the same property instance in two different  
 18 ways, if we individuate properties in a rough way. There are also different ways one  
 19 can learn about an event. One might hear an explosion, or see it, for instance. We tend  
 20 to think about events from certain perspectives, typically visual. A thing’s property  
 21 instances are detectable via certain modalities, but not others. For example, I am shop-  
 22 ping at a department store and I see a perfumist spray some perfume. Seconds later I  
 23 also smell the perfume. If she changes the fragrance, the smell changes, but not the  
 24 sight. Each modality has property instances it is sensitive to and others it isn’t, but  
 25 there are also changes in the property instance that the epistemic modality is sensitive  
 26 to and others it isn’t. Sometimes two epistemic routes are equally direct, but one has  
 27 higher resolution than the other. Consider the difference between hearing a sound,  
 28 and feeling it, the auditory sense allows for finer-grained distinctions. When you see a  
 29 hand slap a table and hear it, apparently at the same time, are you experiencing the  
 30 same event via two different sensory modalities? What you see is determined by light  
 31 waves, whereas what you hear is determined by pressure waves. But the correct light  
 32 waves can be present without the correct sound waves, and vice versa. In the first case,  
 33 you could see a hand move toward a table and stop right when it reaches it, but not  
 34 hear any sound, because the hand never quite touched the table. What you see is a  
 35 hand move toward a table and stop when it is adjacent to it.

### 36 **Inseparability**

37 All materialists, including me, agree on supervenience. But notice that the principle of  
 38 supervenience makes no mention of our knowledge or awareness of our conscious  
 39 states. To find the root of the disagreement, we need to move to the next step in the  
 40 argument, and the point at which knowledge issues arise. Many theorists who believe  
 41 in privacy also believe in the thesis I will call *inseparability*, the idea that all conscious  
 42 states contain a subject that cannot be separated from them. Those who believe  
 43 in inseparability also believe that states of bare consciousness are not possible.

1 They argue that some sort of extra connection, to a metaphysical subject, the prefrontal lobes, a higher-order thought, a self, is needed before we have a case of  
2 consciousness.  
3

4 As we saw in Chapter 4, several scientists argue that in order for a state in the posterior cortex to be conscious, it must engage in causal interaction with a prefrontal process. Scientists tend to not be troubled by requiring involvement of prefrontal processes, because they don't think of that as positing a self. Two notable exceptions are Baars and Crick, but they are happy with metaphorical versions of the audience in the theater, or the unconscious homunculus. I believe that they are all arguing for fundamentally the same position, while tending to use the same evidence and arguments. The inseparability thesis is the same thing as the claim that prefrontal processes are necessary, which is also the same as the claim that all conscious states require a self or subject. All of these approaches are committed to the claim that all conscious states are states of which the subject is aware. Depending on whether the executive processes, self, or subject is metaphysically necessary or whether it is merely required in some weaker sense, we get  
16 metaphysical or probabilistic versions of the inseparability thesis.

17 When Searle says that a separation between the subject of a conscious state and the conscious state itself cannot be made, he is making a metaphysical claim. When Descartes believes that the mere existence of thinking or doubt proves that he exists, he is making a similar, metaphysical, assertion, from the existence of consciousness to the existence of a self or ego. Philosophers tend to believe or at least assume that the inseparability they assert is metaphysical. What scientists intend to assert is a more  
23 difficult question. When neuroscientists, such as Crick and Koch, and Baars assert that associated prefrontal activity is required in order for a posterior state to be conscious, they are making the empirical version of the inseparability claim. Whether they would accept its elevation to a metaphysical claim is not clear. There is some indication that Baars does intend that claim metaphysically. He asserts, for instance, that access consciousness and phenomenal consciousness are the same (1995). To equate the two is to assert that associated prefrontal activity (or what Block would call access) is always present when there is consciousness. Dennett also endorses an inseparability thesis, in that he thinks consciousness only happens when there is access, or "fame in the brain" (2001, p.227).

33 Even though some of the scientists might believe that prefrontal involvement is necessary, it seems less likely that they would believe that the subject of conscious states is metaphysically inseparable from the conscious state, given that they know these two entities are created by different parts of the brain. Since the prefrontal lobes can be separated from the temporal lobes, the subject of consciousness can be separated from the conscious perceptual state itself. Perhaps when we make this separation, consciousness ceases, if the scientific believers in inseparability are correct, but we can still acknowledge a basic separateness of the two components. If this is true, then one might give the following objection to Searle's view: What appeared to him from the viewpoint of introspection to be an indivisible simple is actually composed of several different brain processes. Perhaps once we see, by looking at the brain, that the event has constituent parts, we can turn again to introspection and begin to notice  
45 the parts.

1 It is also clear why anyone who tied consciousness to reportability would have virtu-  
 2 ally all conscious states necessarily being access conscious, since report is only possible  
 3 when there is access. Block (2007) describes a view he calls “correlationism”: The only  
 4 way that we can investigate qualia is by using subject’s reports and correlating what  
 5 they say with external, third-person scientific techniques. What Block calls a meta-  
 6 physical correlationist believes that qualia are metaphysically tied to reportability, so  
 7 that it is metaphysically impossible to have qualia without reportability. In contrast,  
 8 the epistemic correlationist, the only way we can ever know about qualia is via report,  
 9 however, reportability is not necessarily intrinsic to having qualia at all, as it is in  
 10 metaphysical correlationism.

11 Block (2007) describes a nice puzzle that shows the incoherence of metaphysical  
 12 correlationism, or making reportability a necessary condition for consciousness.  
 13 Suppose we were convinced that we had detected a conscious state in the (non-verbal)  
 14 right hemisphere of a split-brain patient. But the patient (or his left hemisphere really)  
 15 says that he does not see anything. We then restore the patient’s corpus callosum, at  
 16 which point the patient says that he remembers seeing something. The metaphysical  
 17 correlationist must say that restoring the patient’s corpus callosum caused that initial  
 18 state to be conscious, since it is now reportable, which would involve causality moving  
 19 backwards in time.

20 My primary response to the theorists who adhere to inseparability is that they are all  
 21 confusing the larger category of conscious states with states in which someone is con-  
 22 scious of something. In the empirical realm, the difference between the view that  
 23 consciousness requires posterior plus prefrontal activity, and my view that it can exist  
 24 with posterior activity alone, has important consequences for our understanding of  
 25 the function of consciousness. If consciousness is only generated when posterior and  
 26 prefrontal areas connect, then the function of consciousness becomes significantly less  
 27 clear. The function of consciousness as it exists in the posterior areas alone, I suggested  
 28 in Chapters 4 and 5, is to provide a unified and coherent representation of some aspect  
 29 of the world for the executive processes to interact with. If consciousness only occurs  
 30 when posterior areas interact with prefrontal areas, this suggests that a function of  
 31 consciousness is to make this interaction happen. It may also be the case that insepa-  
 32 rability of prefrontal and posterior activation is an obstacle to mindmelding, as I noted  
 33 in Chapters 6 and 9. The claim that a connection to prefrontal processes is necessary  
 34 implies that one might attempt something like mindmelding, but that it would not be  
 35 a case of one person being aware of the *conscious states* of another, because the thing  
 36 that is shared is not a conscious state but rather something like a pre-conscious state.

37 Let us examine the logic of the inseparability thesis in greater detail:

38 Inseparability

39 \*Conscious states exist if and only if a subject is aware of them.

40 Since the inseparability thesis is a biconditional, it can be broken down into two inde-  
 41 pendent conditionals, both of which defenders of privacy believe, while I only accept  
 42 the second one:

43 \*If a conscious state exists, then a subject is aware of that state.

44 If a subject is aware of a conscious state, then that conscious state exists.

1 The espousal of the first conditional typically takes the form of an assertion to the  
 2 effect that all conscious states must have subjects who are aware of the state. Here are  
 3 some assertions of this:

4 For it to be a pain, it must be **somebody's** pain; and this in a much stronger sense than the  
 5 sense in which a leg must be somebody's leg, for example. Leg transplants are possible; in  
 6 that sense, pain transplants are not.

(Searle, 1994, p.94)

8 Mental phenomena have a first-person ontology, in the sense that they exist only  
 9 insofar as they are experienced by some human or animal subject, some "I" that has that  
 10 experience.

(Searle, 2004, p.98)

12 In order for there to be consciousness, there must be something being that consciousness.  
 13

(Feinberg, 2001, p.146)

14 The reddishness of the experience is not merely a matter of an object occupying a state  
 15 that instantiates a certain property, but as we characterized at the start, the reddishness is  
 16 'for me,' or 'presented to me.' It seems very odd to think of the reddishness being present  
 17 without its also being 'for me,' or subjective, in this way.

(Levine, 2001, p.105–6)

19 It does seem impossible to really separate the redness from the awareness of it, yet it also  
 20 seems impossible to tell a coherent story about how this could be so. I wish I had the right  
 21 story to tell ...

(Levine, 2001, p.9)

23 Recall from Chapter 1 that Nagel believes that, "the subjectivity of consciousness is  
 24 an irreducible feature of reality" (1986, p.7). McGinn asserts the first conditional, and  
 25 connects it to a claim about epistemic infallibility. If there is a conscious state, you are  
 26 aware of that conscious state: "You are all-knowing with respect to what is presently  
 27 going on inside your conscious mind" (1999, p.139). "This is surely part of the reason  
 28 for the famed infallibility of introspection: you can't be wrong about your conscious  
 29 states because there is no sense in the idea of these states moving out of range of the  
 30 introspective faculty" (McGinn, 1999, p.114). According to this way of thinking, con-  
 31 scious states are the only states of which Berkeley's (1710/1975) dictum, "to be is to be  
 32 perceived" is true, according to this view (using "perceive" in the way that Berkeley  
 33 did, to include introspection). For a conscious state to exist is for us to be aware of it,  
 34 and vice versa. Conscious property instances must contain their own awareness, on  
 35 this conception, and in this respect they are quite different from all other property  
 36 instances we know of.

37 According to the thesis of inseparability, the subject, his awareness, and the con-  
 38 scious state itself are all necessarily combined in a single state. But by asking questions  
 39 about these three parts of the state, we can start to see that these three parts are genuine  
 40 parts, and are separable. Let us first ask about their subject. The subject mentioned in  
 41 the inseparability thesis is in a curious way empty, transparent, and without content.  
 42 Notice how strongly related this sort of claim is to the sense of puzzlement. No doubt  
 43 this curious emptiness is part of what makes some privacy theorists find the problem

1 of consciousness so unfathomable, or even insoluble. The subject seems to come out of  
 2 nowhere. But there is no room at all for the inseparability theorists to provide any real  
 3 content to their notion of a subject, since that would open the door to separating the  
 4 subject from the conscious state of which she is aware, as well as run counter to their  
 5 self-skepticism. The consensus position faces a dilemma: Either they have a content-  
 6 less, mysterious subject, or they have a separable subject. Sometimes authors will note  
 7 that the field of visual consciousness has a terminus, or is organized around a central  
 8 point, in an attempt to give content to the idea of a subject. But the idea that the visual  
 9 field is organized around a terminus, or that objects are visually represented from a  
 10 point of view is different from the idea that the qualia are for me, or only from my  
 11 point of view. Store window displays and screens in movie theaters are designed to be  
 12 seen from a certain point of view, but doing this does not put a subject into them.

13 What are the identity conditions for this subject of theirs? How do we know when  
 14 the subject has changed into something else? For instance, the conscious subject or self  
 15 seems different in dreams. Is it really the same one at work during the day? The  
 16 American philosopher W.V.O. Quine (1957) famously said, “No entity without iden-  
 17 tity,” meaning that if you really have an entity, then you can specify its identity condi-  
 18 tions. The identity problems of the defender of inseparability are twice those of  
 19 Wittgenstein’s (1955) private language argument. The man who Wittgenstein imag-  
 20 ines recording his private conscious sensations only had to provide identity conditions  
 21 for the object of consciousness. The defender of inseparability has this problem plus  
 22 the problem of providing identity conditions for the subject.

### 23 Questions about awareness

24 The inseparability theorists believe that in the human brain there are events that are  
 25 somehow aware of themselves. But being aware of something is a complex mental  
 26 state. Consider this example, in which Lois Lane and Clark Kent are conversing:

27 Lois Lane is aware of Clark Kent.

28 Clark Kent is Superman.

29

30 Lois Lane is aware of Superman.

31 Lois has two mental representations, one that contains the name “Superman” as one  
 32 of its aspects, and one that contains the name “Clark Kent” as one of its aspects. I  
 33 argued in Chapter 10 that our intuition that the conclusion is false comes from the fact  
 34 that our ways of thinking of other people honors the idea that different representa-  
 35 tions will interact differently with an agent’s executive processes. Notice that we could  
 36 do the same thing with a brain event:

37 Jon is aware of a mental image.

38 Jon’s mental image is activity in his temporal cortex.

39

40 \*Jon is aware of activity in his temporal cortex.

41 The conclusions of the above two arguments are objectively true, but notionally false.  
 42 But how would a defender of inseparability explain these phenomena? They cannot use

1 the sort of differential interaction with the executive processes I am appealing to here,  
 2 since that requires breaking the mental state into parts. Mental verbs such as “aware”  
 3 and “know” must operate at both the objective and notional levels, otherwise they are  
 4 not used correctly.

### 5 **Questions about the conscious state**

6 There are also several questions about the conscious state of which the alleged subject  
 7 is aware. What does it mean to say that I, for example, am aware of my current con-  
 8 scious state? I am aware of the whole state at once? This seems impossible, given for  
 9 instance the amount of information in the conscious visual field. Rather, I am aware  
 10 of certain parts of my conscious state. Certain parts of the state are salient to me, in its  
 11 focus, while the rest forms the periphery of the state. The parts of conscious states,  
 12 including those in the periphery, are themselves still conscious states (i.e., states of  
 13 bare consciousness, Chapter 6). Once we put the matter this way, experimental psy-  
 14 chology has counterexamples to offer to the first conditional. The clearest examples  
 15 involve visual perception, but any conscious state will do, because they all possess a  
 16 focus and a periphery. A driver can be looking at the road ahead, so that a crucial road  
 17 sign, while not in his visual focus, is well within his visual field, but he can still fail to  
 18 see it, or be aware of it. The sign was present in his conscious visual percept, but it  
 19 simply was not noticed, because it was not properly attended to. This can happen even  
 20 when the crucial item is within the focal area, as when a person looks directly at a rab-  
 21 bit in the brush, but doesn’t see it right away. The road sign and the rabbit are present  
 22 in these peoples’ conscious states, but there is no sense of the word “aware” in which  
 23 the driver and the person looking at the rabbit are aware of the sign and the rabbit.  
 24 In fact, this sort of failure is exactly what the concept of awareness is designed  
 25 to capture.

26 There are other difficult questions about these metaphysical/epistemic simples. Do  
 27 they change in any way when they become objects of attention? Does a conscious state  
 28 change when the subject switches from not regarding it as representational to regard-  
 29 ing it as representational? For instance, I might think that a moving red dot in my  
 30 visual field is merely an afterimage caused by looking at a bright light. When I come to  
 31 believe that it is actually caused by someone using a laser, is there a change in my con-  
 32 scious state?

### 33 **Does awareness imply existence?**

34 On the other hand, the converse of the claim that all conscious states possess a subject,  
 35 the claim that, If a subject is aware of a conscious state, then that conscious state exists,  
 36 must be correct, as long as the phrase “a conscious state” refers to something real.  
 37 There is a secondary sense of “aware,” as in the purely notional claim, “The drunk  
 38 became aware of a pink elephant in his living room,” in which we don’t intend to  
 39 claim that the pink elephant exists. It is hard to see how we might use this sense when  
 40 referring to conscious states, though, because it is hard to see how we might be wrong  
 41 that a conscious state exists. Can someone be wrong about there being something in

1 her mind that she is aware of? Even the drunk is aware of a conscious mental image of  
 2 an elephant, and this (as if) representation does exist. Error here seems even more  
 3 unfathomable. Note that the strength of this conditional is not due to there being an  
 4 intimate connection between the awareness and the existence of the state, as the inseparability  
 5 thesis entails. Its truth is trivial. It is of the same type possessed by statements  
 6 such as “Hillary climbed a mountain, therefore that mountain exists.” This conditional  
 7 still needs clarification as to who the subject is, though. It has all the problems  
 8 about what the subject is that the first conditional has.

### 9 **Privacy and inseparability**

10 Two people directly know about the same physical state when they see the same water  
 11 boiling, or hear the same bomb exploding, for instance. This is a broad sense of “state”  
 12 that also includes what we would usually call events and processes:

13 Private

14 A fact, state, process, or event is private if one and only one person can have direct  
 15 knowledge of it.

16 Privacy of conscious states

17 \*All conscious states are private.

18 Applied to human consciousness, privacy rules out two people having (ultimate)  
 19 direct knowledge of the same conscious state. In speaking of two people directly  
 20 knowing about the same conscious state, I do not mean the same *type* of state, as  
 21 would happen if you and I imagine winning the lottery. In that case, there are two  
 22 conscious states involved, one for each of us, and they might be quite different. I mean  
 23 it in the sense used with the physical states, where there is only one state that you and  
 24 I know about. In this example, this would happen if you imagined winning the lottery,  
 25 and I literally had direct knowledge of your imagining via mindmelding, perhaps  
 26 including an image of you standing in front of cameras holding a multimillion  
 27 dollar check.

28 There has never been a reported case of any standard, non-mental, physical event  
 29 that is private. A murder with only one living witness, the murderer, could have been  
 30 directly witnessed by others. Not so with conscious states, according to the privacy  
 31 theorists. If it is true that conscious states are private, this seems to make them quite  
 32 different from all of the other physical states we know of. If it is true that no physical  
 33 states are private, as I noted in the first chapter the following argument becomes a  
 34 powerful weapon against materialism:

35 **The privacy argument**

36 Premise 1: No physical states are private.

37 \*Premise 2: All conscious states are private.

38

39 \*Conclusion: No conscious states are physical states.

40 There are lots of odd phenomena that one encounters when one tries to figure out  
 41 how the mind might be physical, but the one that makes people say strange things and



1 attempt to invent new metaphysical categories is privacy. If you assume privacy, it  
 2 seems you have no choice but to admit that mental properties are quite different from  
 3 standard physical properties. This then prevents any simple sort of materialist  
 4 solution.

5 Let us restate the two theses, privacy and inseparability, and look at how they  
 6 relate:

7 Privacy

8 \*One (and only one) person can have direct knowledge of a conscious state.

9 Inseparability

10 \*There is a conscious state if and only if a subject is aware of that state.

11 One thing that makes it difficult to relate the two is that one speaks of a person while  
 12 the other speaks of a subject, and one speaks of awareness while the other is about  
 13 direct knowledge. If we allow ourselves to equate the person and the subject, and like-  
 14 wise equate awareness with direct knowledge, we can restate privacy in a form that  
 15 makes its relation to inseparability more clear:

16 Privacy (restated)

17 One (and only one) subject can be aware of a conscious state.

18 We can examine the relationship between these two theses by breaking it down into  
 19 these three possibilities:

20 \*1. There is inseparability if and only if there is privacy;

21 \*2. If there is inseparability, there is privacy;

22 \*3. If there is privacy, there is inseparability;

23 Inseparability is the claim that there must be a subject of every conscious state. Privacy  
 24 is the claim that there cannot be more than one. So in a purely logical sense, insepara-  
 25 bility does not imply privacy, since inseparability fails to rule out multiple subjects.  
 26 And likewise privacy does not imply inseparability, since privacy leaves open the pos-  
 27 sibility of conscious states that no one has awareness or direct knowledge of (because  
 28 it is stated in terms of “can”). One and only one person can have a given social security  
 29 number, but there are numbers that no one has. We could modify the statement of  
 30 privacy to include inseparability, then we would have a sort of super privacy claim:  
 31 \*One and only one subject is aware of a conscious state. Alternatively, we could add  
 32 privacy to inseparability and get super inseparability: \*There is a conscious state if and  
 33 only if one subject is aware of that state.

34 There seem to be good arguments against the idea that privacy implies inseparabil-  
 35 ity, and the demise of that thesis automatically rules out the first thesis (inseparability  
 36 if and only if privacy). There are practical cases where there seems to be a type of pri-  
 37 vacy without inseparability. For instance, you and I cannot see x from exactly the same  
 38 place at exactly the same time, but this does not mean that x’s existence depends on  
 39 our looking at it. Thus the third thesis, \*If privacy then inseparability, seems to have  
 40 counterexamples. The falsity of this claim shows that it might not be the case that  
 41 privacy is what makes the problem of consciousness insoluble for those who believe in  
 42 privacy. It seems that even if privacy is necessary, this does not imply anything meta-  
 43 physical such as the inseparability thesis. This would mean that it is the inseparability

1 thesis that makes the problem insoluble. Privacy is just a pointed way of showing the  
2 problem.

### 3 **Does inseparability imply privacy?**

4 I suspect that the believers in privacy first thought of privacy, and then this led them  
5 to the thesis of inseparability. They first formed the belief that I have a special access  
6 to my mental life that no one else has, then that led them to posit that conscious states  
7 constitute a special metaphysical category. But these theorists realized that their best  
8 position is not to structure their theory in this way. If they did, they would be drawing  
9 a metaphysical conclusion from an epistemic premise about our lack of knowledge, in  
10 this case of the mind of another. This is officially a fallacy, called appeal to ignorance,  
11 as in the following:

12 We have found no evidence of life on other planets.

13

14 Therefore, there is no life on other planets.

15 Not a good argument. This quotation from Searle indicates his awareness of this:

16 In the sense in which I am here using the term, ‘subjective’ refers to an ontological [i.e.,  
17 metaphysical] category, not an epistemic mode. Consider, for example, the statement, ‘I  
18 now have a pain in my lower back.’ That statement is completely objective in the sense  
19 that it is made true by the existence of an actual fact and is not dependent on any stance,  
20 attitudes, or opinions of observers. However, the phenomenon itself, the actual pain itself,  
21 has a subjective mode of existence, and it is in that sense which I am saying that conscious-  
22 ness is subjective.

23

(Searle, 1994, p.94)

24 Searle is careful to move inferentially from metaphysics to epistemology: “It is  
25 essential to see that in consequence of its subjectivity, the pain is not equally accessible  
26 to any observer. Its existence, we might say, is a first-person existence” (Searle, 1994).  
27 Thus of the three possible ways to describe the relation between inseparability and  
28 privacy, Searle prefers the second: If there is inseparability, there is privacy (see also  
29 Nagel, 1974).

30 The defenders of privacy in general tend to choose the second thesis (If inseparability,  
31 then privacy). But inseparability alone does not imply privacy. Suppose inseparability  
32 is true, and that there is a conscious state if and only if a subject is aware of it. But as  
33 we noted, as it is phrased, inseparability leaves room for more than one subject. Or at  
34 least, further argument is required to show that inseparability implies only one sub-  
35 ject. If inseparability does imply privacy, then they are both threatened by the possibil-  
36 ity of mindmelding. Using the law of contraposition, together with the claim that  
37 inseparability implies privacy, we can deduce the following, according to those who  
38 believe that inseparability implies privacy:

39 \*If not privacy, then not inseparability.

40 Thus if I can show that the thesis of privacy is false, by showing that mindmelding is  
41 possible, this should cause those people to also abandon the thesis of inseparability.

## 1 Creating metaphysical categories

2 One can see why someone committed to both theses, privacy and inseparability, might  
 3 feel he was faced with the frightening choice of either inventing a new metaphysical  
 4 category, or admitting that the problem of consciousness cannot be solved. A look at  
 5 history reveals, however, that there have been cases in the past when people mistak-  
 6 enly thought that the only way to solve a problem was to posit a new metaphysical  
 7 category. Since Plato had no idea that the brain develops out of a detailed plan con-  
 8 tained in our DNA, he found our ability to use concepts so early in our development,  
 9 and so accurately and consistently across a community, to be inexplicable without  
 10 postulating a previous life, in which our minds learned concepts by exposure to per-  
 11 fect examples of each type of thing. These perfect exemplars are Plato's forms. Our  
 12 most accurate use of concepts occurs in mathematics and logic. Truths there are truths  
 13 forever and are knowable with complete certainty. Plato believed that this level of  
 14 accuracy could not trace to anything in the world we live in, since nothing is perfect in  
 15 that world. So again, this seemed to support the idea that mathematical and logical  
 16 truths are justified by the presence of perfect exemplars or forms existing in some  
 17 other realm.

18 But any problem can be "solved" if we are allowed to invent a new metaphysical  
 19 category and populate it with new things. Aristotle could not imagine how terrestrial  
 20 matter could move in perfect circles as he thought the planets did, so he postulated a  
 21 new kind of matter, celestial matter, which if left on its own, i.e., not subject to any  
 22 outside forces, naturally tends to move in a circle. Introducing the substance phlogis-  
 23 ton seemed to solve the mystery of combustion. At least for a while, until the search  
 24 for it kept failing. Similarly, positing *elan vital* allowed the vitalists to form seemingly  
 25 workable and correct explanations of how exactly living animals are different from  
 26 dead ones. But in the end, we learned that *alive* is a functional concept, and not due to  
 27 the presence of a magic fluid of life. Scientists who have merely committed to an  
 28 empirical form of inseparability (as opposed to the metaphysical version we have been  
 29 considering) might take heed of how close they are to being forced to posit a new cat-  
 30 egory. For a scientist loathe to enter the game of creating metaphysical categories,  
 31 Searle's new category, known as ontological subjectivity, is a reduction to absurdity of  
 32 the Baars et al. position that consciousness must always have a subject. Baars et al. may  
 33 not realize that they have a Berkeleyan theory of introspection.

34 Privacy theorists are forced to distinguish two types of property instances that the  
 35 brain possesses, those property instances that contain their own awareness, as described  
 36 above, and other, more conventional property instances that do not contain their own  
 37 awareness. Properties in this second group include the electrical and chemical proper-  
 38 ties of neurons, such as the specific neurotransmitters they use, their rates of firing,  
 39 their numbers of dendrites, and so on. Each type of property instance has its associ-  
 40 ated ways in which we know about them. Those types that contain their own aware-  
 41 ness are known about via introspection, or simply by our normal awareness of what  
 42 goes on in our minds. The second, more conventional type is known about via all sorts  
 43 of scientific techniques, including brain imaging, EEG, and so on. The defenders of  
 44 privacy and inseparability I am addressing here believe that these two types of events

1 can causally interact, indeed, they have little choice but to. Brain events that we are not  
 2 aware of can cause brain events that we are aware of, and vice versa. But how do things  
 3 and properties existing in one metaphysical category causally interact with things and  
 4 properties of another metaphysical category? For instance, events in your hypothalamus  
 5 can begin as events you are not aware of, then, by causally affecting other parts of  
 6 the brain, bubble up into consciousness as an awareness of thirst. And, moving in the  
 7 other direction, when you intend to pick up your coffee cup, that conscious event  
 8 (contra Libet, 1996) gives rise to all sorts of non-conscious brain events that coordi-  
 9 nate the muscle activities involved. On the one hand, this sort of interaction isn't too  
 10 strange, since it frequently happens that events we are not aware of give rise to events  
 11 we are. A sound made by an elephant that is too low for us to perceive, for instance,  
 12 can make another elephant begin walking, and we can perceive this. In this sort of  
 13 case, however, it is possible for us to construct a sensor to detect the first event. When  
 14 a conscious event causes an unconscious event in the brain, however, it is impossible,  
 15 according to the defenders of privacy, for us to detect the causing event externally. But  
 16 what is their explanation for why the conscious event can cause standard physical  
 17 brain events, but cannot causally affect any of our detectors?

## 18 Conclusion

19 In my alternative view, there is always a way to separate the epistemology from the  
 20 metaphysics of a mental state or event. Events in which subjects gain knowledge of  
 21 something or become aware of something always have parts of some sort. If the argu-  
 22 ments and conclusions of this chapter are correct, there are no good reasons to believe  
 23 in privacy. We have removed anything special from conscious states, so that they can  
 24 be understood in exactly the same way that all other physical states are. The belief that  
 25 the privacy theorists had in the notion of the inseparability of the subject from her  
 26 conscious states caused them to claim both that these states are unique among all  
 27 states on earth, as well as that they are private. Their conscious states are remarkable  
 28 entities. They contain their own awareness. They belong to a different ontological  
 29 realm than the normal physical things we know. They are atomic and unbreakable, yet  
 30 they possess great complexity and appear to have parts. Despite occupying a different  
 31 ontological realm, their conscious states are able to causally interact with physical  
 32 states and events, except any physical state we might use to try to detect them.

33 Sometimes we mistake a flaw in our theories for a mystery in the world itself.  
 34 Something is unfathomable and mysterious, but it is not the world that is unfathom-  
 35 able, but rather the theory we are employing. For instance, suppose I believe that  
 36 Superman can jump over anything on earth. Since Superman is on earth, my belief  
 37 implies that Superman can jump over himself. Wow, I think, I have just discovered an  
 38 amazing, unfathomable, and deeply puzzling phenomenon, a man who can jump over  
 39 himself. No I haven't. I have just discovered that there is something wrong with my  
 40 belief. I need to change it. Perhaps conscious states that can be aware of themselves  
 41 (with no possible distinction between knower and known) are like beings who can  
 42 jump over themselves. The notion of this intrinsic self-awareness apparently struck  
 43 Armstrong as being ill-formed: "Nevertheless, although they are both mental states,

1 it is impossible that the introspecting and the thing introspected should be one and the  
2 same mental state. A mental state cannot be aware of itself, any more than a man can  
3 eat himself up” (Armstrong, 1968, p.324).

4 In the next chapter, we will examine the relationship between consciousness and  
5 representation. This will help us continue to separate my alternative view from the  
6 views clustered around privacy. It will also reveal several interesting connections  
7 between the executive processes and our ability to represent.