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The *Reductio* of Reductive and Non-reductive Materialism—and a New Start

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This chapter has two parts: a destructive part, which is also somewhat polemical, and a constructive part. In the first part, it is argued that materialism is not a tenable position in the philosophy of mind. In the second part, a dualistically conceived science and philosophy of mind is briefly described.

1. THE *REDUCTIO*

Once upon a time, in the not so long ago good old times, *materialism*—or *physicalism*—was a straightforward matter: in the philosophy of mind, it amounted to the thesis that every mental entity is physical, hence that every mental property, every mental event, every mental substance (if there is such a thing) is physical. That was clear enough, though hardly convincing to anyone. For some reason, materialism sounded much more convincing if, for example, the thesis that every mental property is physical was reformulated as the thesis that every mental property is *identical* to a physical property. The latter thesis is logically equivalent to the former—but no matter, the second thesis simply sounded more convincing than the first, and for that reason it was preferred by those who wanted to be materialists, and even came to be called a "theory": *the identity theory.*

It didn't take long and there was not just one identity theory but two of them: one was called the "type-identity theory" and coincided with what had formerly been called "the identity theory"; the other was called the "token-identity theory." That was the time when matters started to get complicated, since some of the people who wanted to be materialists believed

that the type-identity theory was wrong, but that they could be *perfectly good materialists* merely by believing in the token-identity theory.

Unfortunately, materialism didn't seem entirely convincing even if it was tuned down to the token-identity theory, that is, to the doctrine that every mental event is identical to a physical event, or in short: that every mental event is physical. Consequently, matters became more complicated. On the one hand, there was the, for some reason entirely non-negotiable, urge to be a materialist; on the other hand, there was the definite need to make the case for materialism philosophically more convincing than it had hitherto been. The outcome was that many who wanted to be materialists believed that they could be perfectly good materialists by merely believing that every mental event is *identifiable* with a physical event. One might have called this doctrine the "token-*identifiability* theory," but to my knowledge nobody ever called it that way.

Instead of characterizing their position in terms of identifiability, those who wanted to be token-identifiability materialists chose to characterize their position in terms of *reducibility*, and considered themselves *reductive materialists* regarding mental events. The difference is only verbal; for if mental event X is (ontologically) reducible[1] to physical event Y, then mental event X is identifiable with physical event Y, and conversely.

It didn't take long and not even reductive materialism regarding mental events seemed entirely convincing. However, since people still wanted to be materialists, they quickly invented non-reductive materialism, and believed they could be perfectly good materialists by merely being *non-reductive materialists* regarding mental events. This belief is illusory, as I will argue. But first my attention will focus on reductive materialism. In what follows, the phrase "reductive materialism" will be short for "reductive materialism regarding mental events," and analogously the phrase "non-reductive materialism" short for "non-reductive materialism regarding mental events." I am, of course, well aware that there is also reductive, respectively non-reductive, materialism regarding properties. I will stick to mental events, since if reductive materialism and non-reductive materialism are not tenable regarding mental events, then they certainly do not seem to be tenable regarding mental properties.

There is a fundamental dilemma at the heart of reductive materialism. The dilemma is this: Take mental event X and physical event Y. Either X is identical with Y, or X is not identical with Y. If X is identical with Y, then reducing X to Y (identifying X with Y) is superfluous (though trivially feasible); if, however, X is not identical with Y, then reducing X to Y (identifying X with Y) is false. Hence reductive materialism is false if the token-identity theory is false, and it is superfluous if the token-identity theory is true. Hence reductive materialism is either false or superfluous.

Proof: Suppose reductive materialism is true. Hence it is true that every mental event is reducible to a physical event. Hence it is true that every mental event is identifiable with a physical event. Hence it is true for every mental event that it is not false to identify it with a physical event. Hence it is true that every mental event is identical with a physical event. Hence the token-identity theory is true. Thus: if reductive materialism is true, then the token-identity theory is also true, or in other words: if the token-identity theory is false, then reductive materialism is also false.

Suppose, conversely, the token-identity theory is true. Hence it is true that every mental event is identical with a physical event. Hence it is true for every mental event that it is superfluous to identify it with a physical event (since it is already identical with a physical event). Hence it is true for every mental event that it is superfluous to reduce it to a physical event (since it is already a physical event). Hence reductive materialism, though trivially true, is a superfluous addition to the token-identity theory.

This dilemma puts reductive materialists in a rather uncomfortable position, since it was precisely the suspicion that the token-identity theory is false that made them think—given their urge to be materialists—that at least reductive materialism is true and, of course, non-superfluous. But that can't be. If reductive materialism is true, then the token-identity theory is also true, and reductive materialism is merely a superfluous addition to it. Thus, all that remains for reductive materialists, who believed their position to be an advance over the token-identity theory, is to ruefully return to precisely that theory—which means, however, that any real need to refer to *reductive materialism* vanishes entirely. There is no call for the reducibility of mental events to physical events (except in a trivial sense) if mental events are physical events to begin with.

But the greater problem for reductive materialists, and for materialists in general, is, of course, the fact that the token-identity theory does not seem to be true. This fact points straightway to dualism. What is to be done in this ominous situation? I will look at the main difficulty that throws doubt on the token-identity theory in a moment. But let me first remark that many who wanted to be materialists do seem to have been impressed by that difficulty. Did any of them become dualists? Hardly. Most of them, certainly, still wanted to be materialists, and either turned to non-reductive materialism or to *eliminative materialism*. I will consider non-reductive materialism below; here a few words need to be said about eliminative materialism, and about its variant, *eliminative-reductive materialism*.

Eliminative materialism (regarding mental events) is the doctrine that there are no mental events. If this were true, then the token-identity theory would be trivially true; this is just a fact of elementary predicate logic. The mentioned main difficulty of the token-identity theory, however, suggests

that some mental events cannot be integrated into the physical realm. Hence that same difficulty a fortiori suggests that *there are indeed mental events*, and at least this latter suggestion must be a very persuasive one.

Eliminative materialism can be combined with the idea of reductionism in the following way: Though there are no mental events, say the eliminative-reductive materialists, there are *ersatz* mental events, which can serve perfectly well as *ersatz* referents of the singular and general terms which, to date, are still intended to refer to mental events (in the usual sense) but really *do not refer* to such entities (since there are no such entities). Thus, *ersatz* mental events are, so to speak, *identifiable* with (genuine) mental events; more properly speaking, they fill the roles mental events were intended to fill, but which mental events never filled (since there are no such things). And there is no problem at all about the physical nature of *ersatz* mental events: they are *selected* in such a way as to be physical.

Eliminative-reductive materialism is no advance over (simple) eliminative materialism since the evidence against eliminative materialism is also evidence against eliminative-reductive materialism. That evidence is also evidence against reductive materialism in the normal sense (discussed above), since it is evidence against the good old, beautifully straightforward token-identity theory. What is that evidence? It is this: *There simply seem to be mental events which are not physical.* It is not difficult to produce examples of mental events which due to their intrinsic nature just cannot be fitted into the physical world. Here is one: consider your current visual experience. How could this experience—the experience that you can make go away by closing your eyes, but the existence of which you cannot doubt as long as you don't close your eyes—be a part of the physical world? It cannot be a part of what is physically going on outside of your body, since no part of that section of the physical world can be made to go away by simply closing one's eyes. And it cannot be a part of what is physically going on inside of your body, since no part of that organic section of the physical world is a manifold of perspectivally organized phenomenal shape and color which bears a complex intentional meaning for a subject of experience: *yourself*. In fact, nothing in the physical world seems to be identical with your current visual experience. But it constitutes part of the core of the mental phenomena that a self-respecting psychology must *save*; a self-respecting psychology cannot deny this phenomenon, it cannot ignore it, and it cannot replace it by something else. What remains for a self-respecting psychology but to acknowledge that at least part of its subject matter is of a *non-physical nature*?

These considerations seem entirely obvious. But instead of accepting them those who wanted to be materialists have, at least initially, tried to cast suspicion on the manifest image of the nature of experience and to reverse the natural allocation of the burden of proof. In doing so, they have, at least

implicitly, relied on some question-begging argument that is more or less like one of the following seven:

(1) *The argument from causation*
Only physical events have causal powers.
All mental events have causal powers.
Hence: all mental events are physical events.

(2) *The argument from causal closure (version 1)*
Every mental event causes some physical event, however tiny.
What causes a physical event must itself be physical.
Hence: every mental event is a physical event.

(3) *The argument from causal closure (version 2)*
Every mental event is a sufficient (meaning: *exactly* sufficient) cause of some physical event, however tiny.
Every physical event that has a sufficient cause also has a sufficient physical cause.
Every physical event has no more than one sufficient cause.
Hence: every mental event is a physical event.

(4) *The argument from the identity of causal role*
Every mental event has the same causes and the same effects as some physical event.
Events that have the same causes and the same effects (i.e. the same causal role) are identical.
Hence: every mental event is identical with some physical event.

(5) *The argument from complete explainability*
Every mental event is entirely explainable by physical conditions.
What is entirely explainable by physical conditions is itself physical.
Hence: every mental event is physical.

(6) *The argument from explanatory superfluity*
Non-physical mental events have no explanatory function.
There are no Fs if Fs have no explanatory function.
Hence: every mental event is physical.

(7) *The argument from knowability*
Each mental event is knowable.
X is unknowable if X is non-physical.
Hence: every mental event is physical.

Comments: (1) I have been told that criticism of the arguments (2) and (3) addresses straw men: allegedly, no reasonable physicalist ever proposed arguments such as (2) and (3). What is supposed to be responsible for this is, in each of the two arguments, the first premise, which, allegedly, is unnecessary for physicalism. This defense strikes me as due to an excessive attention to literal formulation. It seems to me, on the contrary, that arguments

like (2) and (3) are highly popular in the contemporary philosophy of mind. (Regarding (3), compare the presentation and reference given in Crane (1995), 481.) True, in such arguments the second premise is usually not spelled out, but merely ambiguously referred to under the designation "the principle of causal closure of the physical world." *And true*, in arguments that are *in the spirit* of (2) and (3) usually some ambiguous phrase such as "mental events cause—respectively, are sufficient causes of—physical events," "the epiphenomenality of mental events is not viable," or "causal interactionism is the only plausible position regarding mental events" is used as first premise (Are these phrases supposed to mean that *some* mental events cause—respectively, sufficiently cause—some physical event, or that *every* mental event causes—respectively, sufficiently causes—some physical event?), and the conclusion is formulated in a correspondingly ambiguous manner: "Mental events are physical" (Does this mean that *some* mental events are physical, or that *every* mental event is physical?). However, *reductive materialists* can hardly afford to reject the first premise even if it is formulated *precisely as it has here been formulated*—because a mental event that does not cause *any* physical event, or that is not causally sufficient for *any* physical event, seems suspiciously like a *non-physical event*. (For if it were a physical event, it seems it could not avoid causing, and being causally sufficient for, at least some physical event.)

(II) I have also heard the charge of being a straw-man argument raised against argument (4). But, in effect, it can be found in Davidson (1980), 179. Again, one should not allow oneself to be blinded by an excessive attention to literal formulation. *Functionalist* reductive materialists argue *in the spirit of* (4) when they point out that something physical fills a certain causal or functional role (the mental, according to the functionalist paradigm, being considered to be reducible to such roles), which role, it is explicitly or implicitly assumed (usually the latter), can only be filled *by one thing*; for an early example of such argumentation, see Lewis (1966). At first sight, the first premise of (4) may seem so outlandish to some readers that they can't believe that any physicalist will propose it. But, in fact, *reductive materialists* are forced to believe in its truth, whether they propose it or not. For if a mental event did not have the same causes and the same effects as some physical event, it would have to be *non-physical* (since it certainly has the same causes and the same effects as itself).

(III) Perhaps the argument that most people will consider to be the most forceful one among the above seven is argument (5). (I have gathered this impression from various conversations with physicalistically oriented thinkers.) Has not science—the science of the brain, in particular—already shown without any margin of reasonable doubt that every mental event is entirely explainable by physical conditions? If this rhetorical question demands assent to the assertion that science has already *effectively shown* that

every mental event is entirely explainable by physical conditions, then assent must be denied; for science has, to date, not effectively shown that every mental event is entirely explainable by physical conditions. Let's assume that what is meant by a mental event being entirely explainable by physical conditions is this: *it is predictable, regarding all its features, from given physical conditions.* It is unlikely, but perhaps not totally unrealistic, that science will, at some future time, effectively show that every mental event is predictable, regarding all its features, from given physical conditions. But if it did show this, would it establish that every mental is physical? Leibniz, in effect, assumed on purely speculative grounds that every mental event is predictable, regarding all its features, from given physical conditions. But this did not make him a materialist regarding mental events, though he certainly was a very intelligent man. Did he have a blind spot regarding the mental? I do not think so. Though one may perhaps deduce, say, that something has an *electromagnetic* nature from its being entirely explainable on an *electromagnetic* basis, there simply is *no* justification (physicalistic prejudice aside) for a general principle that allows one to deduce that an *X* has an *F* nature from its being completely explainable on an *F* basis *no matter* which descriptions are being substituted for "*X*" and "*F*." Rather, the matter has to be decided from case to case, and the case where "*X*" is replaced by "mental event" and "*F*" by "physical" does certainly not appear to be a favorable case.

Pronouncing oneself to be "convinced" by arguments such as the above seven, in the teeth of absolutely plain phenomena that show that the conclusion of each of the arguments is simply false, seems to me to be among the worst cases of metaphysical dogmatism masquerading as philosophical reasonableness in the history of ideas. The allegation that the premises of the arguments are required to be true *by science* is not true. *Materialism*, and materialism *only*, requires of at least one premise of each of the above arguments that it be true—*that's* certainly true, and this, precisely, is what makes each of those arguments *question-begging*. Accordingly, the argument for materialism that at some point in time *really* convinces those who will be materialists to become materialists is certainly not any argument which is like one of the above seven. Rather, what convinces them is likely to be the truly irrefutable "argument" that they *just want* to be materialists. For whatever non-philosophical reasons, they want to adopt materialism as their basic outlook on the world, as their pivot of opinion around which all their other views will revolve. It is not easy for me to understand, *as a philosopher*, how a person can, in this absolutely fundamental manner, want to be a materialist, given that the rich non-physical nature of experience must be as accessible to him or her as it is to me, or Descartes, or Edmund Husserl, or, for that matter, David Chalmers. How can, for example, Daniel Dennett schematically represent the activity of the conscious human mind as a bubble filled with the physical realizations of words (issuing from the head of a

cartoon character) and nonchalantly declare that this, basically, is the whole truth about it, as I witnessed him once do during a public lecture he gave at the University of Münster in Westfalen (in 2002).[2] What makes him do such a thing? Due respect for the results of science can't quite explain the matter, I am afraid, nor can it be explained, I hope (for Dennett), by an overly fervent veneration for Saint Ludwig (Wittgenstein), Saint Gilbert (Ryle) and Saint Willard (van Orman Quine) during intellectual adolescence.[3]

Later in the paper, I will offer some tentative sociological—not philosophical—speculations about why so many philosophers want to adopt such an inherently implausible position as is materialism. For the time being, however, I will accord close critical attention to the non-reductive materialists. Theirs seems to be a more plausible form of materialism, since unlike eliminative, reductive, or token-identity materialists, they do not seem to close, in various ways, their eyes to the phenomena and yet seem to be perfectly good materialists. I do not believe, however, that all of this seeming has something real corresponding to it. For one thing, non-reductive materialism is such a fluid position that some who call themselves "non-reductive materialists" will presumably insist that every mental event is physical. In that case, I wonder what is *non-reductive* about their allegedly non-reductive materialism; perhaps it's supposed to be "non-reductive" because it is believed that reduction is not needed, since mental events are taken to be identical with physical events to begin with? A more plausible hypothesis of interpretation is that the non-reductiveness intended is a non-reductiveness of the *non-ontological*—for example, linguistic—sort. In this sense Donald Davidson, a firm believer in the token-identity theory, was a non-reductive materialist. But no matter, those who call themselves "non-reductive materialists," but believe that all mental events are physical, are subject to the same charge of implausibility that reductive materialists are subject to (who, qua reductive materialists, *must*, ultimately, believe that all mental events are physical).

Comment: What can be gathered from standard literature—say, *A Companion to the Philosophy of Mind* (1995)—regarding non-reductive materialism and its delimitation against other forms of materialism? According to Horgan (1995), 474, non-reductive physicalism (which is nothing else than non-reductive materialism) does not assume that for physicalism (materialism) to be true "mentalistic psychology must be reducible to physical science via type/type psycho-physical bridge laws expressing either property identities or nomic co-extensiveness of distinct properties." According to Crane (1995), 482, non-reductive physicalists "think that identity theories are not essential to physicalism, and are objectionable even on physicalist grounds." However, also according to Crane (1995), the non-reductive physicalists' reason for rejecting the token-identity theory is quite different

from their reason for rejecting the type-identity theory: the type-identity theory is rejected because it seems false; the token-identity theory, however, is rejected not because it seems false, but because it "is considered too weak to explain the relation between the mental and the physical" (ibid., 483). I suspect that both Terence Horgan and Tim Crane would include the thesis that every mental event is physical in the setup of each and every form of non-reductive materialism. So, I believe, would Lynne Rudder Baker, who in a draft of her forthcoming piece on non-reductive materialism for *The Oxford Handbook for the Philosophy of Mind* writes that "[a]ccording to *any* materialist [her emphasis], every concrete particular[4] is made up entirely of microphysical items." Since mental events are necessarily concrete particulars and since what is made up entirely of microphysical items is necessarily physical, it follows according to Baker's characterization of *any* materialism that any non-reductive materialism includes the thesis that all mental events are physical. I, on the contrary, do not wish to exclude that this thesis can belong to one or another form of non-reductive materialism; but I urge that its invariable inclusion would invariably expose each and every form of non-reductive materialism to the above objection against the token-identity theory. Moreover (but secondarily), the thesis that every mental event is physical has a definite *reductive ring* to it (since one is prima facie inclined to believe the contrary)—no less so than the thesis that every mental property is physical. Therefore, to call a theory "non-reductive" that still includes the former thesis does not appear to be an entirely proper way of speaking.

If non-reductive materialism is to be a plausible form of materialism, it cannot, among other things, assert that every mental event is physical. *Prima facie*, this leaves two options for a plausible non-reductive materialism: (1) to deny that every mental event is physical; (2) to remain without a definite opinion regarding the question whether every mental event is physical. But no philosopher of mind and no philosophy of mind can afford to remain without a definite opinion regarding the question whether every mental event is physical.[5] And adopting agnosticism regarding the nature of mental events must certainly be out of place *in the highest degree* for anyone who wants to be a *materialist*, reductive or non-reductive. Hence there is only one option for a plausible non-reductive materialism: to deny that every mental event is physical, or in other words: to affirm that some mental event is not physical.

The central problem of non-reductive materialism has now become apparent. Most of those who want to be non-reductive materialists want to adopt non-reductive materialism because they think that non-reductive materialism is more plausible than reductive materialism. But this forces them to assert that some mental event is not physical. For otherwise the position they wish to adopt *would not* be more plausible than reductive materialism.

However, the assertion that some mental event is not physical *defines* a form of *dualism*—and more than just a minimal form of dualism is *implied* by it: it is asserted that there is at least one mental non-physical event; but if there is one mental event of the non-physical sort, then, we may take it, there are many. What more is needed for an interesting, non-negligible dualism regarding mental events? It follows that non-reductive materialism—if more plausible than reductive materialism—implies *non-negligible dualism* (regarding mental events; but I will leave this tag tacit in what follows).

If this is the case, why speak of non-reductive "materialism"? Why use that word? That the word sounds attractive to the average Western philosopher cannot be justification enough. Materialism, howsoever one may choose to define it, is an *ontological monism*. As such it is incompatible with ontological dualism. Clearly, those who want to be non-reductive materialists because they think that non-reductive materialism is more plausible than reductive materialism have a serious problem. How can they be the good materialists they want to be if their position is compatible with non-negligible dualism, even implies it?

The only way to get out of these straits is to deny that the assertion that many mental events are not physical constitutes a form of dualism. This denial is highly disputable; but I will let it pass for the sake of the argument. Instead, dualism is considered to be constituted only by a thesis of *independence* or *separability*: by the thesis that some mental event is independent of, or separable from, every set of physical events. It is *this* thesis that non-reductive materialism—in its reformed interpretation—is taken to be opposed to, being itself the thesis that, although some—even many—mental events are not physical, every mental event is dependent on, or inseparable from, some set of physical events. The invoked relation of *dependence* or *inseparability* can be variously interpreted. In recent years, it has mostly been interpreted in terms of *supervenience* relations of varying modal strengths. Others have spoken of *constitution*, others again of *realization*, asserting that every mental event is *constituted* by some set of physical events, or that every mental event is *realized* by some set of physical events. The supervenience of mental events on physical events, or the constitution, or the realization of mental events by physical events has been taken to be enough for mental events being "nothing over and above" the physical, which "being nothing over and above the physical" has, in turn, been taken to be enough for materialism, albeit materialism of the non-reductive sort.

Unfortunately, all this philosophical cleverness is not enough to remove the strong suspicion that so-called non-reductive materialism (*if* it is intended to be more plausible than reductive materialism) is not really materialism, but that it is, in fact, *dualism*. Consider Descartes, the paradigmatic dualist. Descartes did hold that many mental events are not physical. But we have seen that this much is believed by all non-reductive material-

ists who want to uphold a more credible form of materialism than is asserted by reductive materialists. Hence Descartes' belief that many mental events are not physical must not, by itself, make Descartes *a dualist* (by which, remember, I here mean: *a dualist regarding mental events*). For if it did, then those who consider themselves materialists and believe, like Descartes, that many mental events are not physical would have to be dualists, like Descartes, and would have a thoroughly mistaken self-image; they could not help but be hypocrites in calling themselves "materialists."

But what makes Descartes a dualist regarding mental events if it is not his belief that many mental events are not physical? Did Descartes assert that some non-physical mental event is independent of every set of physical events? Yes and no. It is common to bash Descartes, it is less common to read him carefully. The gist of his philosophy of mind, as articulated in the *Meditations*, his main work, is this: Descartes did believe, putting it in the modern idiom, that there is some possible world in which his (actual) *cogitationes* (and *he* along with them) exist without any physical event existing, and, in fact, without *anything* physical existing, which, note, entailed for Descartes that his *cogitationes* (and *he* along with them) are non-physical entities *in the actual world*.[6] But Descartes did not believe that this possible world is the real world, or that it is easily accessible from the real world: that it is *similar* or *close* to the real world. Descartes believed that the possibility of his *cogitationes* existing without any physical event existing is a possibility indeed—but only a very remote one. As he chooses to express himself, it is a possibility that might have been made real by God. Nothing in his writings suggests that he considers it a possibility which might have come about in the normal course of nature, or which is at least compatible with the laws of nature.

So, *in a sense*, Descartes did believe that some mental event is not only non-physical but also independent of (separable from) every set of physical events. But the notion of independence involved in this belief is very weak, logically speaking. Nevertheless, if Descartes is a dualist (regarding mental events), then it must be *this* belief, with that same weak notion of independence involved in it, which makes him a dualist. Nothing else could. Descartes is credited with various absurd beliefs, like that there is "mind stuff" besides material stuff, or that the mind is *in actual fact* (and not only in possibility) free-floating, without any physical basis, or that there are two kinds of substances that are *in actual fact* totally unrelated to each other. But Descartes didn't believe any such things. So, if Descartes is a dualist (regarding mental events)—and he *is* one, or no one is—the sufficient reason for his being a dualist must be found in his belief that some mental event is non-physical and such that there is some possible world, possible in the weakest possible sense, in which that mental event exists without any physical event existing. And, of course, what is sufficient for making Descartes a

dualist must also be sufficient for making anyone else who accepts it a dualist.

Those who want to be non-reductive materialists and consider their materialism to be more plausible than reductive materialism will be happy to agree, I take it. Although they do share with dualists the belief that many mental events are not physical, they do not believe that some non-physical mental event is independent of every set of physical events—and only believing the latter would make them dualists, they say. But they overlook *two* crucially important points: (1) already the belief that some non-physical mental event is in the weakest way possible independent of all physical events in total makes one a dualist; otherwise one could not consider Descartes a dualist on the basis of what is the essence of his philosophy of mind; (2) if one accepts that some mental event is not physical, then one must also accept that some non-physical mental event is in the weakest way possible independent of every set of physical events. Thus, non-reductive materialists who consider their materialism to be more plausible than reductive materialism are still in the position they wanted to escape from: they turn out to be dualists. Since they believe that some mental event is not physical, they must, in reason, also believe that some non-physical mental event is in the weakest way possible independent of every set of physical events, and this latter belief makes them dualists. Retreating to reductive materialism or even better, to the simple token-identity theory, to *honest materialism* (but thereby also accepting its inherent implausibility), or to become *honest dualists*—this, in the end, is the stark alternative non-reductive materialists are confronted with.

What must be at issue here is of course the thesis I labeled "(2)" above: *the thesis that if one accepts that some mental event is not physical, that then one must also accept that some non-physical mental event is in the weakest way possible independent of every set of physical events*. What is the justification for this thesis? Is it justified? Clearly, it would be justified if "some mental event is not physical" logically implied "some non-physical mental event is in the weakest way possible independent of every set of physical events." *Does* the former logically imply the latter? In answering this question, it must first be noted (what implicitly has been made use of already above) that the (complex) predicate "X is in the weakest way possible independent of every set of physical events" is logically equivalent to the (likewise complex) predicate "there is some world, possible in the weakest possible sense, in which X exists without any physical event existing" (or in other words: "X is in the weakest way possible independent of all physical events in total").

The proof of this assertion: *The direction from left to right*: Suppose X is in the weakest way possible independent of every set of physical events. Hence it is in the weakest sense possible that X exists without any set of physical events existing. Hence it is in the weakest sense possible that X exists with-

out any singleton set of physical events existing. Hence it is in the weakest sense possible that X exists without any physical event existing. Hence there is some world, possible in the weakest possible sense, in which X exists without any physical event existing. [In other words: X is in the weakest way possible independent of all physical events in total.]

Note that, by definition, a set *exists* (in the sense here relevant) if, and only if, it is non-empty and every element of it exists.

The direction from right to left: Suppose there is some world, possible in the weakest possible sense, in which X exists without any physical event existing. Hence it is in the weakest sense possible that X exists without any physical event existing. Hence it is in the weakest sense possible that X exists without any singleton set of physical events existing. Hence it is in the weakest sense possible that X exists without any set of physical events existing. Hence X is in the weakest way possible independent of every set of physical events.

Hence the question whether "some mental event is not physical" logically implies "some non-physical mental event is in the weakest way possible independent of every set of physical events" would have to be answered by "yes" if it is *logically inconsistent* to suppose *both* that X is a non-physical mental event and that there is *no* world, possible in the weakest possible sense, in which X exists without any physical event existing. Is it indeed logically inconsistent to suppose both that X is a non-physical mental event *and* that it is in the strongest manner impossible for it to exist without any physical event existing? While it seems entirely consistent to me to suppose both that X is a non-physical mental event *and* that it is *nomologically impossible* for it to exist without any physical event existing, the supposition of X being a non-physical mental event and being nonetheless *in the strongest manner* unable to exist without any physical event existing does indeed seem logically inconsistent to me. To save themselves from dualism non-reductive materialists will claim the contrary, but note that they must do so without benefit of the slightest shred of evidence, while I can point to the fact that thought moves quite automatically from X being a non-physical mental event to its being possible in the weakest manner that X exists without any physical event existing. This evidence is not entirely conclusive—this is the mere straw that non-reductive materialists may clutch at, if they will, to keep themselves from falling into dualism.

I believe that the preceding considerations show that there are no good philosophical reasons for the prevalence of materialism. Put in a nutshell, my argument has been as follows: Materialism is either reductive or non-reductive. Reductive materialism includes the thesis that all mental events are physical. This thesis, however, is contradicted by the phenomena. Non-reductive materialism, in turn, either includes the thesis that all mental events are physical, or it does not. In the first case, it is contradicted by the phenomena, just as is reductive materialism. In the second case, it is either agnostic about the thesis

that all mental events are physical *or*, on the contrary, includes the thesis that some mental event is not physical. The former alternative, agnosticism, disqualifies non-reductive materialism from being a full-fledged position in the philosophy of mind; the latter alternative, however, makes non-reductive materialism collapse into dualism in the end.

Thus, if intellectual justice—in other words: *reason and respect for the phenomena*—ruled among the philosophers in the way it ought to rule, materialism could not have the position that it has among the philosophers today. What, then, *are* the reasons for the prevalence of materialism among the philosophers? One reason, I believe, is that materialism has become, for reasons external to philosophy, a *paradigm* in philosophy, and materialist philosophers are doing, so to speak, *normal science* under that paradigm, which situation—since it finally seems to assimilate philosophy to a normal science, like physics or biology—fulfills the deepest cravings of scientifically oriented naïve philosophers and draws them irresistibly towards the paradigm of materialism. In my eyes, turning philosophy into something like a normal science is truly a perversion of philosophy, which ought not to have a paradigm in Thomas Kuhn's sense. Matters being as they are, however, materialist philosophers will hardly be moved by considerations of what philosophy should be like and will not be ready to relinquish their paradigm without severe *crisis*, as Kuhn taught us more than four decades ago. But although there are *anomalies* enough, crisis simply does not develop; instead, the anomalies are merely viewed as occasions for more, and ever more sophisticated, *puzzle-solving*—in a jargon that is increasingly impenetrable even for many who are philosophically educated. Though the complications have been piling up for decades, there is no pervasive sense so far that something might be wrong with the materialist philosophy of mind.

What are the reasons for this situation? For one thing, the contemporary materialists form the largest philosophical community with the same basic outlook that ever existed. Such a group is not easily shaken in that conviction which is the basis of its fundamental unity and, in consequence, of all the considerable professional advantages that accrue to group members from that unity. Moreover, materialism is regarded as a bastion in the struggle of liberal intellectuals against the powerful religious right. It cannot be given up, many of them feel, without relinquishing the cause of intellectual and moral liberty.

But that's a reason for *America*, not for *Europe* where the intellectual wars with religion have been over for a fairly long time and where there is no passionate political concern which obscures the quite trivial logical fact that one can be a perfect atheist without being a materialist. Why do European academics, especially the young academics, absolutely want to be materialists, given that materialism cannot be a beacon of light in a dark world for

them? I am truly puzzled by the fact that so many of them want to be materialists nonetheless. Perhaps they, for some reason, believe that they can't be analytic philosophers without being materialists—perhaps because famous authorities of analytic philosophy, like W. V. O. Quine and David Lewis, were materialists? But, like all philosophers, these father figures of modern materialism, too, are *merely cooking with water*, as one says in Germany. They have their basic convictions and what they build on them, and these can be reasonably criticized like everyone else's basic convictions and what he or she builds on them. Perhaps the attractiveness of materialism, especially for the young analytic philosophers, simply consists in the ominous feeling that they can't have careers as analytic philosopher if they are not materialists? There may be something to this, but I don't know, and I do not wish to dwell on this very pessimistic note. Therefore, I come back to more philosophical considerations.

Materialism is regarded as being identical with, or implied by, the scientific worldview. But it is never inquired whether there even is such a thing as *the scientific worldview*. Is not the developing of worldviews the task of metaphysics, not of science? And are there not more worldviews than one that are compatible with science? Indeed, are there not more worldviews than one that are not only compatible with, but actually *good for* science? Perhaps there is even a worldview that is better for science than the materialistic one? I submit that the dualistic conception of consciousness has done much more for the scientific exploration of consciousness than the materialistic conception ever will. Transposing a simile from Wittgenstein's *Tractatus* into the present context, one can fairly say that dualism is the ladder on which science climbs into the exploration of consciousness. But why, in the world, should science throw that ladder away if solely in a dualistic perspective the phenomena become visible that a science of consciousness must want to describe and explain? For a science of consciousness is not trying to correlate brain events with brain events, or brain events with behavior or behavioral dispositions; *it is trying to correlate brain events with conscious events*, two types of events which for this purpose must be considered to be on different sides of being—at least methodologically, and why, then, not also metaphysically? How can that which is methodologically good for science be metaphysically bad for it, or contrary to its spirit?

The esthetic ideas of *unity* and *simplicity* are presumably still the most intellectual motives for the materialist's urge to *simplify* and *unify*: to shove entities into categories they do not seem to belong to, to make them the same as entities they do seem to be different from, to eliminate them, if need be, altogether from the realm of being, although they plainly seem to exist—in one phrase: not to accept entities in the way they seem to be. But, as always, the duty of the philosopher is to *distinguish* where distinction is due. The ideas of unity and simplicity and the unifying, simplifying measures pursuant to

them have sometimes, in other contexts, been a guiding light in the quest for truth. These ideas and measures, however, cannot, in reason, be a guiding light regarding the truth of the mind if they run counter to *phenomenal seeming* (that is: to phenomenal seeming that is verifiable as being intersubjectively the same). With regard to the mind, if not in other areas of knowledge, the highest respect must be accorded to *phenomenal seeming* and to the distinctions inherent in it; for the life of the mind is *phenomenal seeming*: subjective intentional appearance in all its infinite variety. Take it ontologically seriously. Consider *it*—the thing itself, not just the *ersatz* for it that is intolerantly demanded by materialist metaphysical prejudice.

2. A NEW START[7]

If subjective intentional appearance is seen in its true, *non-physical* nature, where will this lead philosophers who formerly wanted to be materialists with regard to the mind (at least)? Normally, these philosophers are adherents of ontological naturalism—the doctrine that only the entities that are countenanced in natural science exist. But they can take comfort from the (often more than merely) methodological dualism of the sciences of the mind. For centuries, the world of the mental, considered to be non-physical, was treated as a part of nature, of the natural order. One simply thought that there is, beside its physical side, a non-physical side to nature—a side to be explored by the *natural science* of *psychology*. This idea must be taken seriously again—and one will duly acknowledge that there need not be any conflict between dualism with regard to the mental and naturalism. Although dualism with regard to the mental is compatible with supernaturalism, no former materialist is required to believe in entities that are not countenanced in natural science merely on account of having become a dualist.

If there is a non-physical side to nature, then it is natural to ask: what are the relations of the non-physical side of nature to its physical side? This is the subject of *psycho-physics*, conceived in the broadest manner to include all kinds of psycho-physical correlation research. With regard to the physical side, we have the situation that never before in the history of science psycho-physics has been in a better position to pursue its task, since so much more than in earlier times is known about the brain and the nervous system, which constitute the locus of psycho-physical relations. But with regard to the non-physical side, we are confronted with the fact that *mental phenomenology*—which can only be based on intersubjective comparison of introspective data—has been severely neglected. An *ideal* psycho-physics would have a complete mental phenomenology at its disposal, and it would be in the position to specify, for each non-physical mental phenomenon, *the physical correlate*. It remains to be seen whether nature is such that an ideal psycho-

physics is feasible (in principle: discounting accidental limitations). To find out about this is entirely up to empirical research. It might very well turn out to be the case that some non-physical mental phenomena do not have a specifiable physical correlate (which would mean one of two things: either they have a physical correlate but it is too complex for specification, or they just do not have *any* physical correlate). To repeat, to adjudicate this matter is entirely up to—dualistically conceived—empirical research.

But what is the nature of the relation that binds the physical correlate X to the non-physical mental phenomenon Y of which it is the physical correlate? A partial answer to this question can be given for non-physical mental events. Let X be a physical event and Y a non-physical mental event; X is a physical correlate of Y if, and only if, X is *causally equivalent* to Y, where *causal equivalence* means that X and Y have exactly the same causes and exactly the same effects.

Some things should be noted about causal equivalence. (1) Causal equivalence is an equivalence relation, restricted by stipulation to the domain of events (hence it is based on causation qua event-causation); it is therefore a symmetric, transitive and, in the domain of events, reflexive relation. (2) While causal equivalence is a causal relation, the relation of causation cannot hold between causal equivalents (otherwise, one of the causal equivalents would cause itself). (3) How many causal equivalents of a given event there are cannot be decided a priori; but what we know about physical events makes it *very likely* that there is just one *physical* causal equivalent of a *physical* event: the physical event itself.

Accordingly, any non-physical mental event has (very likely) at most one physical correlate. For if it had at least two physical correlates, these two physical events would themselves be causal equivalents of each other, and therefore be identical and *one* after all (see (3) above), and not two. Also, if epiphenomenalism were right and no non-physical mental event caused any physical event, no non-physical mental event would have a physical correlate, since, very likely, every physical event causes at least some physical event. This brings out the fact that, according to the above definition, a physical correlate of a non-physical mental event is a *causal* correlate of it; under epiphenomenalism, there could not be any *causal* physical correlates of non-physical mental events (though there still might be physical correlates of such events in a *non-causal* sense of "physical correlate"). But epiphenomenalism does not seem to be true. What makes some dualists believe in it is the circumstance that they uncritically accept physicalistic *a priori* assumptions about the causation of physical events (primarily, one or another principle of causal closure of the physical world). There is no good reason for a dualist to share these *a priori* assumptions. Moreover, non-physical mental events must have physical effects, or else there could be no observation of them by external observers (that is, they would not be

observationally accessible from the third-person point of view). In view of this, no construal of causation is acceptable—for a dualistic philosophy and science of the mind—that rules out non-physical mental causation of physical events. Fortunately, no such construal is rationally forced upon us: non-physicalistic, *metaphysically neutral* concepts of causation are readily available.[8]

It is important to note that research regarding the physical causes of a non-physical mental event is not quite the same as research regarding its physical correlate, though the former research certainly contributes to the latter. This is so because the causes of a non-physical mental event, none of which is identifiable with its physical correlate, will also be the causes of its physical correlate (if it has one). Likewise, the effects of a non-physical mental event, none of which is identifiable with its physical correlate, will also be the effects of its physical correlate. Thus, *correlation* research regarding non-physical mental events and brain-events is to be regarded as research on a prominent case of *causal convergence* or *causal parallelism.*

The (dualistic) psycho-physical causal parallelism has a *nomic* character: it is constituted by psycho-physical laws of nature, and the supreme aim of psycho-physics is to discover these laws of nature. In view of this, it is a misnomer to call the double causations that are essential for psycho-physical causal parallelism "cases of causal overdetermination," as if something untoward were going on. The truth of the matter is that a non-physical mental event which has a physical correlate cannot—*due to the laws of nature*—be a cause of event X without its physical correlate also being a cause of X, *and vice versa.*

Psycho-physical causal parallelism (to whatever extent it exists: perhaps only for some non-physical mental events, perhaps for all) is a possibility in nature that will be realized (indeed necessitated) under certain circumstances—in particular, under the circumstance of the existence of sufficiently complex brains, which are the loci and motors of psycho-physical causal parallelism. Psycho-physical causal parallelism, therefore, came about in the course of an evolutionary process that happened to favor precisely the coming about of psycho-physical causal parallelism and, by the same token, the development of brains that are capable of producing (non-physical) conscious experiences. It came about on a very broad scale. Hence, it is rather likely that there is a distinct survival advantage attached to having conscious experiences within the framework of psycho-physical causal parallelism. I now turn to considering the question of what this survival advantage may consist in, which, first of all, requires paying close attention to the nature of conscious experiences. (The word "conscious" attached to the word "experience" is a reminder that any experience is *per se* conscious; it is *not* a modifier of the word "experience.")

Intentional experiences are the most important non-physical mental events, and the most important experiences. The most widespread view regarding intentional experiences is that they are *representations*. But if this is their nature, it is far from being apparent to us, since, in having intentional experiences, it always seems to us that we are dealing directly with the intentional objects of these experiences (for example, with physical objects; note that the physicalness of the intentional object of an experience does not compromise the non-physicalness of the experience itself; for further explications, see the end of this paper). *If* they are representations, one should call intentional experiences, "transparent representations," *their transparency* meaning precisely that their representational nature is not apparent to us. But perhaps, indeed, this representational nature of intentional experiences is not really there at all.[9] In contrast, certain brain-events are undoubtedly representations, and as brain-events undoubtedly *non-transparent* representations.[10] (In view of this, it is hard to understand why intentional experiences could ever have been confused with certain physical events: brain-events.)

For X being a *representation*, it is required that the item that X *presents* is not directly accessible in X.[11] (If X is a *transparent* representation, then it *seems* that the presented item is directly accessible in X, though in fact it is not.) Whether or not intentional experiences are representations *in this primary sense*, they certainly can be representations *in a secondary sense*, namely, in virtue of their physical correlates being representations—in the above-described primary sense.

Why do we, or any other animal, have intentional experiences? Why do we have *any* experiences? The general answer is already clear: because it is advantageous, from the point of view of biological survival, to have experiences (and, of course, because the laws of nature are such as to allow the possibility of having experiences *in the first place*, and because the circumstances in the course of natural history were such as to start the actualization of that possibility *in the second place*). But *who*, really, is having the experiences? In a secondary sense, it is the experiencing animal (this usage is exemplified at the beginning of this paragraph). In the primary sense, it is the *subject of experience* that is present in any experience, whether that experience is intentional (that is, *object-presenting*) or not. The subject of experience is the intrinsic addressee of an experience, the entity that is intrinsically addressed by an experience. Thus, any experience turns out to be per se *information for someone*. As information for someone, an experience is always, and not only if it is an intentional experience, *about something*; but it is an *intentional* experience if, and only if, it is about something in the manner of presenting an object (or objects).

We can conclude: the evolutionary advantage of having experiences consists in the fact that each experience is *information* about something for the

subject of experience, and hence, derivatively, for the animal—*information* which more often than not is relevant for the survival (or at least the well-being) of the animal. But why do animals need *conscious* information which is, in the first place, addressed to a subject of experience? Would not blind—unconscious—reactive mechanisms, provided they can be adapted to varying circumstances (by dint of suitable meta-mechanisms), do just as well in steering animals around the pitfalls and to the resources of the meso-cosmos they live in? This is the remaining, deep question that must now be tackled.

Sometimes the concept of subject of experience is limited to *human* subjects of experience, since only human subjects of experience seem to be capable of self-consciousness. However, for being a subject of experience it is not necessary to have self-consciousness, let alone the conceptually explicit self-consciousness that is manifested in the spontaneous and sophisticated handling of the pronoun "I." For a subject of experience to be present, it is already sufficient that an elementary experience—an instance of pain, fear, or hunger—occurs; indeed, it is sufficient that *some* experience occurs, for, as was said above, every experience is intrinsically addressed to *someone*—the experience's subject of experience. As a consequence of this, a subject of experience is connected with every conscious animal (that is, with every animal that has experiences—because some subject of experience is the subject of these experiences).

A widespread attitude regarding subjects of experience, human or not, is this: *not* to take them ontologically seriously *in their own right.* Sometimes the subject of experience is identified with the animal that has experiences, for example, with the human being.[12] This is unobjectionable as long as it is not ignored that there is a more pertinent, *primary sense* of "subject of experience" in which the animal just isn't a subject of experience—since the animal is indeed *present* in its experiences as intentional object, but never, truly, as subject. A *genuine* subject of experience X—a subject of experience *in the primary sense*—is *connected* with an animal Y in virtue of the brain of Y producing (due to natural laws) experiences of which X is the (literal) subject—which entire fact of the matter is precisely the reason why Y, the animal, is a subject of experience *in a secondary, derived sense.*[13]

More often than the identification of subjects of experience with the experiencing animals—which is one way of not taking the subjects of experience ontologically seriously in their own right—one encounters, nowadays, the *epiphenomenalization* or even *fictionalization* of such subjects. The fictionalization of subjects of experience is incoherent, since it involves the incoherent idea that I, for example, am an illusion of myself. And while it cannot be ruled out logically that evolution took a course that, on a broad scale, produced subjects of experience (in the primary sense) for nothing more than to be innocuous biological superfluities, it does not seem plau-

sible to assume such a position. The alternative position, however, can only imply that subjects of experience have to some extent in some manner *causal powers*.

The most natural way to accord a causal role to subjects of experience is this: a subject of experience is also a *subject of action*—of actions that have the general purpose of ensuring the survival of the animal to which it is connected (via the brain), precisely in the informative light of the experiences of which it is the subject. This is the purpose (in the sense that evolutionary biology allows to speak of *purpose*) that experiences and therewith, ineluctably, subjects of experience have evolved for. Unconscious reactive mechanisms, even if they can be adapted to varying circumstances (by suitable meta-mechanisms), *do not* do just as well as experiences with an experiencing agent-subject in steering *mobile* animals around the pitfalls and to the resources of the meso-cosmos they live in (though such mechanisms are quite sufficient for plants and plantlike animals and, of course, do play a large role also in the biological economy of mobile animals). This is so because subjects of experience can, in a sufficient number of cases, act more efficiently to the advantage of the mobile animal than any reactive mechanism, even if the mechanisms concerned are capable of learning "from experience." This, naturally, leads to two further questions: (1) What must the course of nature be like to allow the causal influence (the action) of subjects of experience on behalf of the survival of their respective animals? (2) How do subjects of experience *act* (exert causal influence) on behalf of the survival of their respective animals?

No answer to these questions is *known* to be true. Nevertheless, I here offer some speculative suggestions. (1) If the *macroscopic* course of nature were to a considerable extent *indeterministic*—that is, if at many moments of time there were *several physically possible macroscopically distinguished* courses of nature, of which only one becomes the actual course of nature—then the causal influence of subjects of experience on behalf of the survival of their respective animals (*in addition* to the effects of reactive mechanisms) would fit into the economy of nature very naturally and would make perfect evolutionary sense. (2) The informed actions of subjects of experience on behalf of the survival of their respective animals would, then, consist in recognizing alternative physical possibilities (on the basis of their experiences) and in contributing to the actualization of one of these possibilities (the one considered favorable to the survival of the animal).[14]

Finally, there is a question that has not been treated in this paper at all so far: Are subjects of experience *material* or *immaterial beings*? Whether or not they are material beings, it is clear that they have a main trait of *substances*: they each figure as numerically the same entity in temporally separated mental events (i.e. experiences), or in other words: they are *temporal continuants*. But on the other hand, though they are capable of action (another

trait of substances), it does not seem to be the case that they are also capable (in more than a weakest sense) of independent existence: subjects of experiences appear to be entities whose existence depends not only on the existence of a corresponding brain, but also on the well-functioning of that brain. Nevertheless, subjects of experience can certainly be considered to be substances in a minimal sense.

It is not intrinsically absurd to hold that subjects of experience are material substances. Although they are embedded in something immaterial, experiences, this does not automatically make them immaterial, too—no more so than the peculiar embeddedness of, say, *certain stones* in experiences (as their intentional objects) makes these stones immaterial. Subjects and material objects of experiences are *constituents* of experiences (and differ from them in ontological category), not *parts* of experiences (precisely because they are not congruous to experiences with regard to ontological category); only if they were *parts* of experiences, they would be required to share the immaterial, non-physical nature of experiences. Nevertheless, in view of the fact that a material subject of experience cannot be located anywhere in the brain (the only place for it to be if it were quite literally the "mind-pearl in the brain-oyster" of Dennett (1991), 367), the conclusion seems unavoidable that subjects of experience are *immaterial substances.*[15]

NOTES

1. Ontological reducibility alone will be considered here. This restriction is justified, since other kinds of reducibility (explanatory reducibility, linguistic reducibility, theoretical reducibility) have been of interest to materialists only insofar as they considered these reducibilities to imply, or at least contribute to, *ontological reducibility.*

2. Dennett's illustrated assertion is, of course, only a concise graphic representation of his position in *Consciousness Explained* and elsewhere.

3. This is not a polemical invention of mine. "When I was an undergraduate, he [Wittgenstein] was my hero," says Dennett, who, moreover, acknowledges a debt to Wittgenstein that is "large and longstanding" (see Dennett 1991, 463). In fact, concerning pain (as distinguished from pain-behavior), Dennett declares himself to be "more Wittgensteinian than St. Ludwig himself" (see Dennett 1993, 143). He also sees himself ("a Dennett") as a cross of "a Quine with a Ryle" (see Dennett 1995, 242).

4. In conversation, Lynne has told me that "concrete particular" should here be taken in the sense of "concrete particular of the natural world."

5. The mysterian Colin McGinn and the so-called "neutral monists" have a hard time here. McGinn (1999), 230, says: "My whole point has been that mind and brain form an indissoluble unity *at the level of objective reality.*" (The emphasis is McGinn's.) But since McGinn is not an ontological idealist, this cannot be taken to imply that minds are non-physical, and brains non-physical, too; and since McGinn is a reasonable man, it also cannot be taken to imply that minds are physical and

non-physical, and brains physical and non-physical, too. For that same reason, it also cannot be taken to imply that minds are neither physical nor non-physical, and brains neither physical nor non-physical, too. But what, then, is implied by McGinn's assertion of mind and brain forming "an indissoluble unity"? That brains are physical, and minds physical, too? This would mean his return to the fold of the materialists. Perhaps McGinn's point is that the mind is, like the brain, physical all right, that therefore every mental event is physical, but that we just cannot know *how* this is possible? This would make him a materialist mysterian or, indeed, a mysterious materialist.

6. If it is a true tacit premise that everything physical is necessarily (i.e. in all possible worlds) physical, then the nexus of entailment that Descartes relied on is indeed there.

7. The ideas presented in this section are treated in much greater detail in Meixner (2004). See also Meixner (2006a).

8. For a rich survey, see Meixner (2001).

9. For more on this, see Meixner (2006b).

10. For an illustration of the contrast between a transparent and a non-transparent representation, consider a sentence in your mother tongue, and a sentence in a foreign language that you can decipher with more or less effort. In the former case, in reading the sentence, you are usually not aware of the sentence being a representation; in the latter case you are invariably aware of this. The extreme of non-transparency in representation is *opaqueness*, which occurs when something is known to be a representation, but not *of what*.

11. My use of "to represent" and "to present" (the latter being more general than the former in this use) is unrelated to the distinction in Searle (1983), 46, between *representation* and *presentation*.

12. A modified version of this view is proposed in Baker (2000): the *human being* (which, for Baker, is the same as the *human person*) is, among other things, the subject of experience, but the human being is not just the *human animal* (the latter being for Baker the same as the *human organism*); see (2000), 7, 68.

13. The relationship between human being and corresponding (primary) subject of experience has its own phenomenology, which manifests itself in the thought that the subject of experience is a *distinct being inside* the human being, chiefly inside the head, and, more indirectly, in every use of the first-person indexical that implies a *distancing* of what is being referred to by "I" from the rest of the human being (for example, the use of "I" in "I have to take more care of my body"—in contrast to the different use of "I" in "I have to take more care of myself").

14. Regarding the further description of the causality in question, see Meixner (2004) and Meixner (2007).

15. According to Lowe (1996), subjects of experience are *psychological substances* (ibid., 10). Lowe does not accept the view that subjects of experience are material substances and has "nothing to say in defence of immaterial substantivalism" (ibid., 8). He therefore appears to be an agnostic about the material or immaterial nature of subjects of experience, because, once it is believed that there are subjects of experience, and that they are all substances, and that it is not the case that *some* of them are material and *some* of them immaterial (beliefs I share with Lowe, I believe), the question "are subjects of experience material or, on the contrary, immaterial sub-

stances?" can only be answered in three (still logically permissible) alternative ways: (1) "All of them are material substances," (2) "All of them are immaterial substances," (3) "I do not know whether all of them are material substances, and I do not know whether all of them are immaterial substances (though I do know that either all of them are material substances, or all of them immaterial substances)." Lowe, it seems, does not accept (1) and does not accept (2), and therefore accepts (3); I do not accept (3) and do not accept (1), and therefore accept (2).

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