

# We Are Better Off Without Reflexive Monism<sup>1</sup>

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In this essay I shall discuss ‘reflexive monism’, the theory that Max Velmans defends in *Understanding Consciousness* (Velmans, 2000, ‘UC’ henceforth). In section 1 I will give a brief description of the theory. Then, in sections 2 and 3, I shall formulate what I take to be his two main arguments for the theory and show why they are both invalid. In section 4 I shall expand my critique of his arguments to a critique of the theory itself.

## 1 Reflexive Monism

### 1.1 *Phenomena and Noumena*

Reflexive monism builds on an idea that is probably best known from Immanuel Kant. It is the idea that the world we see around us is a *phenomenal* world, a world filled with objects *as perceived* by us, and that what this world looks like depends in part on the nature of human perception. Kant distinguished this phenomenal world from the *noumenal* world, by which he meant the world as it is *independent* of our perception. Velmans accepts this distinction, but he does not adhere to the Kantian mysticism that we cannot have knowledge of the noumenal world.

Velmans thinks we can have knowledge of the noumenal world because it is the world that the phenomenal world is *about*. I agree with this move, because it fixes one of the major deficits in the Kantian view: if the noumena are the things as they really are no matter how perceived, then all *referents* of assertive statements (‘knowledge claims’) must be noumena, which means that the Kantian view implies that *all* knowledge is impossible despite its pretension of showing how it *is* possible. As Velmans puts it:

Rather than the thing itself (the ‘real’ nature of the world) being unknowable, one cannot make sense of knowledge without it, even if we can only know this ‘reality’ in an incomplete, uncertain, species-

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<sup>1</sup> Thanks to Tjeerd van de Laar for advice and discussion.

specific way. Conversely, if the thing itself cannot be known, then we can know nothing, for the thing itself *is all there is to know*. (UC, 166, original italics)

The insight, that the noumenal is what our phenomenal experiences are *about*, can also be expressed by saying that we *see* phenomena when we are *looking at* noumena.<sup>2</sup> So when I am looking at a cat in front of me, it is the *noumenal* cat ('the cat itself') I am looking at, even though the *phenomenal* cat ('the cat as perceived by me') is what I see. This distinction becomes obvious when we consider illusions: if I have a hallucinatory experience of a cat sitting on the table in front of me, then I *see* a cat, but I am not *looking at* a cat, since all I'm looking at is an empty table.

### 1.2 Projection

Phenomenal objects raise a lot of philosophical questions. Do they really *exist*? And if so, would that mean that we could also talk about their existence *in themselves*, as noumena? *Where* are phenomenal objects, anyway? Are they in our heads or somewhere else? *How* are they produced and what is it that produces them?

Velmans proposes the idea of *projection* in order to answer these questions. According to his proposal, phenomenal objects are produced by the brain, but they are not located inside the brain. Instead, the brain 'projects' them outwards into the world around us. This projection is a *real* process, which Velmans means for psychologists to study, and the phenomenal objects that have been projected outside the brain *really exist* and are *really outside* and *not inside the brain*. Finally, do projections also exist noumenally speaking ('in themselves')? Velmans has to agree that they do, because he has argued that the thing itself is 'all there is to know'. Everything that is real exists noumenally, so if projections are real they too must have seats in the thing itself. But when Velmans says that projections are outside of us, he often adds the qualification "phenomenally speaking". Velmans is not very

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<sup>2</sup> This distinction is proposed by Van de Laar (2004). As he points out, Velmans is not consistent on this matter throughout UC, but what Velmans *should* say is that noumena are what we look at and phenomena are what we see.

clear as to how and where projections figure in the noumenal scheme of things. We shall return to this matter in section 4.

## 2 Why I Don't Tell My Doctor Where My Foot Is

### 2.1 *The Common Sense Argument for Projection*

According to Velmans, his theory is justified by the common sense intuition that we experience a lot of things to be not in our heads, but in other parts of our bodies and in the world around us. His leading example is that of a pain in the foot. The ordinary person, he claims, when his foot aches and you ask him where the pain is will reply that the pain is in the foot. However, if pain is a brain state, then it must be located in the brain, and if it is an unextended substance, then it cannot have a location at all. Thus, reductionism<sup>3</sup> and dualism cannot accommodate for common sense. The idea of projection is an alternative that does pay homage to common sense because it locates experiences there where we experience them: everywhere in our bodies and around us. Let us call this argument the 'common sense argument' for projection.

### 2.2 *Against the Common Sense Argument*

The common sense argument for reflexive monism is circular. Let us consider that famous cat again. I agree that it is common sense to say that you *experience the cat to be* in front of you when you are looking at a cat in front of you. But I do *not* agree that it is common sense to say that you would also *experience your experience of the cat to be* in front of you! In ordinary life, we rarely talk about our 'experiences of cats'. We usually simply talk about *cats*. So the only way the argument could be made to work would be by *assuming* that the cat in front of you already *is the experience* of the cat. But that assumption *is* reflexive monism, it is what the argument was supposed to establish!

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<sup>3</sup> Velmans uses the term 'reductionism' for those positions that identify phenomenal experiences with events that occur in the brain. Note that this includes the views of Davidson, Fodor, and 90% of all contemporary philosophers of mind who call themselves 'antireductionist'.

How about the pain example? If we make a distinction between the cat experience and the cat, and allow that they need not have the same location, can we then make a similar distinction between the pain experience and... and what? It seems you cannot distinguish the 'pain experience' from the 'pain', since the pain *is* the experience. Luckily, there is a simple solution to this. The pain is not an isolated experience; it is not a phenomenal atom. It is a part of the total experience of your body. For example, if your foot hurts, then you have a *foot* experience that is *painful*. And since you experience your foot to have a certain location in your body, or the specific part of the foot that is hurting to have a certain location in your foot, you experience the painfulness *at* that location. But this location is not, strictly speaking, the location of the *pain*, it is the location of the *body part* that the painful experience is *about*.

Does this mean that common sense is false when talking about the location of pain? Not necessarily. When I see a cat somewhere, it is perfectly normal to tell someone where that cat is. But when my foot is hurting, then it does not make sense to start telling my doctor where my *foot* is. He knows where my foot is, and if he doesn't then I'd better find another doctor. What he needs to know is that my foot *hurts*. I propose that it is simply a matter of *natural language semantics* that sentences like 'I have a pain in my foot' are normally used to express propositions about what body part is experienced to be hurting and not about the location of the pain experience itself. So in this matter common sense is compatible with any philosophical position on the location of pain experiences, including dualism and reductionism.

This is simply one of those cases where there is no superficial mapping of the grammatical form of a sentence uttered in a common sense conversation to the logical form of the proposition that the utterance expresses, which is not an exception in natural language, but is rather how it usually works anyway. Natural language is a very complex phenomenon, but this complexity is often ill considered by philosophers when they discuss 'common sense'.<sup>4</sup>

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<sup>4</sup> Velmans is not the only one who makes the mistake of assuming that in common sense phenomenology we talk about where we experience our *experiences* to be. His opponents often share the assumption but simply side *against* common sense. For instance, according to Dooremalen (2003, 84), "phenomenology is *wrong* about the location: the experienced location of experiences is not the actual location of experiences" (my italics). My account is much more attractive because I do not have

### 3 One Cat Is Never Enough

#### 3.1 *The Economy Argument for Projection*

When we look at a cat, for example, *a cat in the world* is all that we see. When we are asked to describe our visual experience, there is nothing to describe other than what we see. The notion that there is some other experience *of* a cat 'in the mind/brain' is, in my view, an unwarranted *inference* about what we experience, based on an implicit, dualist vision of the world. (*UC*, 133-134, original italics)

Velmans argues that reflexive monism is more economical than dualism and reductionism. The two traditional views postulate a 'cat experience' in the mind *in addition* to the cat 'out there'. But Velmans thinks he can manage without a second cat<sup>5</sup>, and he *identifies* the cat experience with that very cat out there. This move he advertises as an application of *Occam's razor* (*UC*, 111). I shall refer to this argument as the 'economy argument'.

Various diagrams in chapter 6 of *UC* illustrate the economy argument. At a first glance these diagrams promise an easy grasp of the differences between dualism, reductionism and reflexive monism, but in fact they are complicated and confusing. Complicated because they involve perception by *multiple observers*, and confusing because the longer you study them, the weirder they get.

That is why at this point I shall continue my discussion of the economy argument without reference to the diagrams, and without considering the matter of multiple observers. The issue of multiple observers is important, but it is best discussed separately. I shall get back to it, and take a look at the diagrams, in section 3.4.

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to choose sides: I can say that common sense phenomenology is *right* and *still* maintain that experiences are in the head.

<sup>5</sup> When counting the sum of the cat itself and the various cat experiences, cat percepts and so on that the different models employ I shall simply speak of the number of 'cats'.

### 3.2 Against the Economy Argument

According to reflexive monism there is no experience in my brain in addition to the cat I see 'out there', but we must not forget that the cat 'out there' is now the *phenomenal* cat in my *phenomenal world*. It resembles that which I am *seeing* and it is a *projection* of my brain. Of course, if I am not hallucinating, then there really *is* a cat in front of me. A cat that would still be there even if I were to shut down the projection of the *phenomenal* cat by closing my eyes, or by turning around and leaving the room. The cat that really is there regardless of the projection, is not the phenomenal cat, it is of course the *noumenal* cat. It is the cat that I am *looking at*. In other words, the reflexive model also uses two cats.

So all of us, not only dualists and reductionists, but also reflexive monists, allow that the phenomenal is *additional* to that which it *represents*. This has nothing to do with 'implicit dualism' or 'unwarranted inferences', but simply follows from the fact that what you see may not be the same as what you are looking at – in fact, it never is.

This means that the economy argument is either false or that Velmans has to show that dualism and reductionism actually employ *three* cats when we count the noumenal cat as well, so that he remains one cat lighter than the rest of us. That does seem to be the line that Velmans is taking, because he ascribes to dualism and reductionism the assumption that "physical objects *as perceived* are quite distinct from our percepts *of those objects*" (UC, 101, my italics). I shall call this assumption the 'perceived-percept distinction'. Since the physical objects *as perceived* are the phenomenal, and not the noumenal objects, dualists and reductionists would seem to need, switching back to cats, *three* cats: the noumenal cat, the phenomenal cat ('the cat as perceived') and the percept of the cat in my mind.

There are two ways for dualists and reductionists to respond to this. First of all, they can simply reject the Kantian distinction between the noumenal and phenomenal world. Not everybody is a follower of Kant, and it is unfair of Velmans to impose this distinction on dualists and reductionists in general. There is only one world, one may respond, the *real* world, and it is this world that the cat out there is part of. Of course, there is an additional cat percept in my mind, which makes for a total of two cats, exactly the same amount of cats as employed by Velmans. However, the cat percept is not really additional to any 'cat as perceived', because the entire 'as perceived' notion is part of the Kantian framework that such dualists and reductionists do not share. In other words, dualists and reductionists who

deny the Kantian distinction are not accurately represented by the perceived-percept distinction.

Secondly, for those dualists and reductionists who do happen to like Kant, the phrase 'as perceived' as used in the perceived-percept distinction *does* make sense, but there is no reason why such dualists and reductionists need to agree that the distinction is true! They can easily identify the phenomenal cat with the perception of the cat just like Velmans does. The only difference between them and Velmans is *where* they place the phenomena. Velmans begins with the assumption that the phenomenal cat is outside, and concludes from this that the experience of the cat must be outside as well. But dualists and reductionists can just as easily reason the other way around, starting from the assumption that the experience is in the head (or in the thinking substance), and concluding that, therefore, the phenomenal cat must be in the head as well! Which means that, once again, we are left with only two cats: the noumenal cat, which is in *front* of me, and the phenomenal cat, which is in my *mind*. So whether dualists and reductionists want to accept the Kantian distinction or not, they only need two cats, just like Velmans, and the economy argument is false.

Furthermore, we have seen that the perceived-percept distinction is false for 'Kantian' dualists and reductionists, and that it employs a concept that has no meaning for 'non-Kantian' dualists and reductionists. Considering the fact that Velmans presented this distinction as a fundamental assumption shared by reductionism and dualism in general, it should have been nominated for the straw man of the year.

### 3.3 *Phenomenal World Reductionism: Can There Be an Entire World inside My Head?*

As we have seen in the previous section, when you want to accept the Kantian distinction and defend reductionism against the economy argument, then you literally place the phenomenal world inside your head. Is this an acceptable move? Can an entire world be literally inside my head? Well, why not? Where is the world of your dreams? Where is the world you imagine when you read a book? If the brain is capable of running a virtual world for you to experience when you dream or read, wouldn't it be obvious to assume that conscious observation of the real world that you are part of is achieved through the same method, by means of the same machinery in the brain?

Velmans might reply, that this is not common sense. Dreams might be tricky, but at least as far as our experience of the real world is concerned it is clear where the things we experience are: all around us and not in our heads. However, that would be the *common sense argument* again and we have already seen that that argument is false. We do experience things to be around us, but that is precisely because those *things* are around us! However, we do not experience *our experiences* of those things to be around us and neither should we, because those experiences are in our heads. The *looking/seeing* distinction is again useful here. The reductionist can defend himself by arguing that what is around us is what we *look at*, which is *noumenal*, whereas the *phenomenal* is what we *see* and that is whatever the brain is *making* us see so it must be in the brain.

But isn't the phenomenal world spatially extended, and a lot bigger than could be fitted inside a human skull? Well, the phenomenal world is a *spatial representation* of the noumenal world. The best way to clear the confusion will be to stop calling the phenomenal world a 'world' and start calling it 'phenomenal *space*'. The human brain is capable of rendering a three dimensional spatial representation of the noumenal world (which we can now simply call 'the world') in such a way as to reach conscious awareness. This representation I shall call *phenomenal space*. The geometrical attributes of this space may be identical to those of noumenal space<sup>6</sup>, but contemporary science suggests otherwise.<sup>7</sup> However, even if they were, then 1 cubic centimetre of phenomenal space would not occupy the same amount of space in the noumenal brain, 1 cubic metre would not have problems

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<sup>6</sup> I dismiss the idea of Kant that the noumenal is not spatial (or at least that we cannot know) as another aspect of his mysticism. It goes together with his idea that all our 'knowledge' is about the phenomenal and not about the noumenal world.

<sup>7</sup> In order to make sense of Einsteinian astronomy, physicists sometimes speak of space as being 'curved', which is a geometrical notion that goes beyond human phenomenology. A second, far more radical departure from human phenomenal geometry is taken by string theory, which introduces the concept of spatial dimensions being 'curled up' at the level of microphysics in order to transpose our phenomenal world into 10-, 11- or even 36-*dimensional* spacetime, which is believed to hold the key in unifying einsteinian gravitation and quantum field theory. What it means for a *spatial dimension* to be 'curled up' is something we shouldn't even *try* to imagine within our familiar 3-dimensional phenomenal space.



fitting inside the skull and a cubic kilometre would not be ‘all around’ you – not around the noumenal you, that is. Instead, the brain *encodes* the spatial coordinates of phenomenal space and *stores* the contents of this space using its method of encoding. Note that ‘storage’ here does not mean we’re talking long term memory, it only means that at any time, if information is being experienced, it has to be kept *somewhere*. In the same way that it is not impossible to record a movie that takes places in several rooms on a video tape that fits into your VCR, write a story about a journey that encompasses half of the globe and publish it in small paperbacks, or have a computer that fits on your desk integrate astronomical observations into one spatial model of the solar system, it is also not impossible for your brain to keep track of your environment and represent it in a spatial way (the difference being of course that your VCR doesn’t experience the information it stores and retrieves, while you do).

Since phenomenal space is *stored* in your brain, and phenomenal representations of objects around you are stored as part of this phenomenal space, the location of these phenomenal representations must be in the brain as well. Thus, reductionism seems to be a reasonable option even if you want to honour both common sense and the Kantian distinction.

### 3.4 Multiple Observers

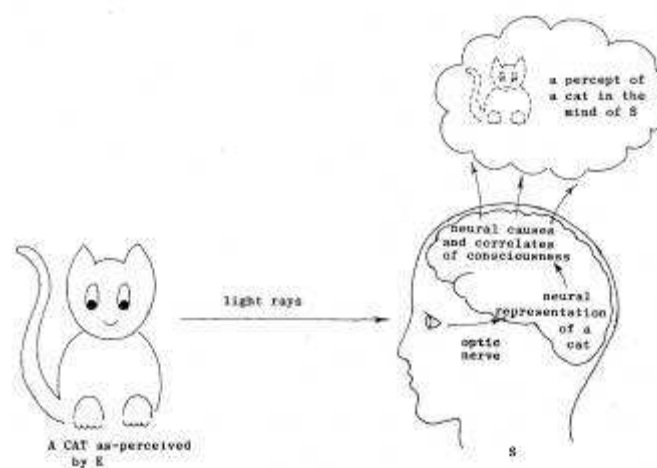


Figure 1: dualism. Taken from Velmans (1990). Equivalent to figure 6.1 from *UC*, page 106.

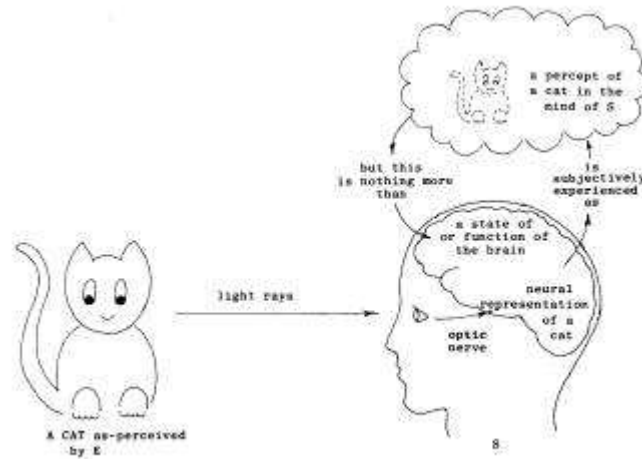


Figure 2: reductionism. Taken from Velmans (1990). Equivalent to figure 6.2 from *UC*, page 107.

Let's take a look at figures 1 and 2, representing dualism and reductionism respectively. As stated on *UC*, page 106, these figures present a situation viewed from the perspective of an external observer E. However, what the figures present *precisely* is a bit obscure. For example, it says 'cat as perceived by E' below the image of the cat on the left (this goes for both figures 1 and 2), which suggests that this is the phenomenal cat of E, from which it would follow that the figure is a display of the phenomenal space of E. As we have seen before, the phrase 'as perceived' is used by Velmans in the context of the Kantian distinction, which means that figures 1 and 2 are about 'Kantian' dualism and reductionism. But in that case, why doesn't it say 'subject S as perceived by E' below the image of the boy on the right as well? It simply says 'subject S' and because the line below the cat explicitly mentions the 'as perceived', it is suggested that the subject S is not 'as perceived' here. Furthermore, both figures show 'light rays', represented by an arrow from the cat to S, and I know that I never see light travelling around in my phenomenal space. Sometimes I can *witness* it when the light rays, from the sun for instance, are crossing a dusty atmosphere and the dust reflects the light into my direction, but that is something else. So even though S may still be 'as perceived' despite the fact that the figure does not explicitly mention this like it does in the case of the cat, the *light rays* simply cannot be 'as perceived by E'. And what about the cat percept in the mind of S, which is represented by an image of a cat floating around in a cloud in the upper right corner of both figures? Surely *that* is not something which E can see!

So although the figures are supposed to represent the situation from the *perspective* of E, they most definitely do not simply present what E is *seeing*. I propose to interpret them as showing what E is seeing *as well as* what E *believes* to be there. So the cat on the left is what E can literally see, which makes it a phenomenal cat. The subject S on the right is of course also visible to E, which means that it *should* read 'Subject S as perceived by E' and which makes it a *phenomenal subject S*. The light rays and the percept of the cat in the mind of S should both read something like 'as believed to be there by E'. They are not phenomenal as are S and the cat, but they *are* part of the interpretation that E is constructing from his perspective, and should this interpretation be false, then they might not correspond to anything that really exists in front of E. For example, S may be blind and E may not know this, with the result that E believes that S has a visual experience of the cat while in fact there is no such experience.

It is very important we keep this in mind when we study the diagrams. They show the situation from the perspective of E and *not* the noumenal cat, subject, light rays and percept in the mind of S!

Both diagrams feature two cats: the cat as perceived by E and the percept of the cat in the mind of S as believed to be there by E. If the interpretation of E is correct, then there must really be a cat in front of him that his phenomenal cat is representing, and therefore additional to, and there must also really be a cat percept in the mind of S that the belief of E is additional to. So in a way we have a total of four cats. Should S also have a belief about the percept of the cat in the mind of E, then there would be even five, and maybe we could arrive at a still larger amount of cats. Perhaps this is the point where it begins to sound too absurd to refer to all these percepts and beliefs as more 'cats', but what it does show is that even when we consider only two observers looking at the same thing, the matter of what is additional to what already becomes fairly complex.

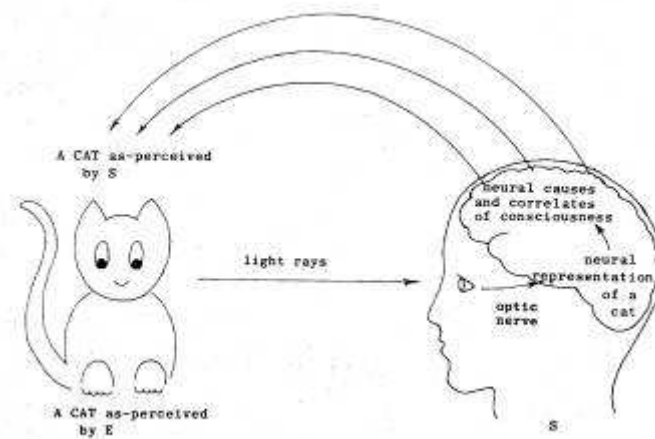


Figure 3: reflexive monism. Taken from Velmans (1990). Equivalent to figure 6.3 from *UC*, page 110.

Now let us take a look at figure 3. Whereas all images in the previous figures only had one description, there is now one image, namely that of the cat on the left, which has *two* descriptions, one written above it and one written below. Below it still reads 'cat as perceived by E'. But above it now also says 'cat as perceived by S'. What does that mean? Velmans writes:

The cat as perceived by S is the same cat as perceived by E (albeit viewed from S's perspective rather than from E's perspective). (*UC*, 109)

But that is complete rubbish! The cat *as perceived by E* is not something you can 'view' from different perspectives, because it is already a part of a view from a specific perspective, namely the perspective of E! It is the *noumenal* cat that you can view from different perspectives, and different perspectives lead to different *phenomenal* cats. Substituting 'looking at' for 'viewing', the statement quoted above turns out to be a blatant violation of the distinction between looking and seeing. S and E are *looking* at the same cat, but what they *see* is different, because they look at the cat from different angles, S may be colour-blind, E may be short-sighted and not wearing his glasses, and so forth. What if we consider a situation where the human observer E is not watching a human subject S, but a *bat* sending

sonic waves to the cat and receiving its echoes? Surely the cat *as perceived by the bat* can never be viewed from the perspective of E! It could never be the same as the cat *as perceived by E*.

However, it is the identification of the cat as perceived by E with the cat as perceived by S that allows Velmans to eliminate the image of the percept of the cat in the mind of S from the right side of the diagram and claim that figure 3 has only one 'cat' where 1 and 2 have two, thereby illustrating his argument from economy. Since the identification is outrageous, we must conclude that figure 3 is a total mess and that it is not going to make the situation any better for the economy argument.

Figure 3 is not just illustrating the economy argument though; it is first and foremost an illustration of the theory of reflexive monism itself. In *UC*, Velmans is not presenting his theory and his arguments for the theory separately. Instead, he sort of develops his theory and argues for it along the way. The identification of the observations of different observers seems to me to be part of the theory itself.

Is this then the end of reflexive monism? Let's take a look at the situation. Velmans rejects the distinction between an experience that an observer has of an object and an object as perceived by that observer. In other words, they are identical. Now we have also seen that he identifies an object as perceived by one observer with the object as perceived by another observer. From these two identity claims follows, by transitivity, that the experience that one observer has of an object is identical to the experience that another observer has of that object. And that is clearly nonsense, as we have seen above.

Maybe Velmans could reject the identity between objects as perceived by different observers and still defend some theory of projection. He might say that my phenomenal cat is 'out there', and so is yours, but that they are not the same. However, that means that there are in fact *two* phenomenal cats *out there*, at more or less the same location, 'on top of each other', we might say, and of course on top of the noumenal cat which must be there somewhere as well, because it is the only one that can reflect the light rays. It also means that if there are a dozen people in the room, all watching a cat sitting on the table, there are in fact twelve phenomenal cats on the table.<sup>8</sup> Pretty daring for someone who accuses reductionists

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<sup>8</sup> You may insist that each phenomenal cat has its own phenomenal table to sit on, but that doesn't really change anything, because the phenomenal tables must all be in (roughly) the same spot as well, so what is above one table is above the others too. We might say that all phenomenal cats are 'floating'

of unwarranted inferences and implicit dualism! At least, reductionists keep their different phenomenal cats *in different places*, because each phenomenal cat is part of a phenomenal space running on the brain of an observer. Furthermore, as reductionists try to *identify* that phenomenal space with a state of activity in the brain, they mean to avoid any ‘addition of being’ to the material of which the brain is composed. Which to me sounds a lot more economical than the postulation of twelve phenomenal cats on top of the real cat sitting on my table.

## 4 Serious Trouble

### 4.1 The ‘Everyday Physical World’ Has to Be the Noumenal World After All

Velmans uses the phrase ‘everyday physical world’ to denote the ‘world’ that people talk about in everyday life. Presumably, stones, trees, tables and cats are ‘everyday’ physical objects, while photons, quarks and leptons are not. Velmans writes:

The ‘experiential materials’ from which the everyday physical world is constructed are drawn from a very limited number of sources – five, to be precise. The world we perceive consists of what we see, what we hear, what we touch, what we taste and what we smell. (UC, 140)

Thus, Velmans identifies the everyday physical world with the *phenomenal* world. This means that when you tell me about a cat in front of you, according to reflexive monism, you are talking about your experience of the cat and not about the noumenal cat. In section 2.2 we have seen that this idea is presupposed by the common sense argument. That makes the argument circular, but it does not make the idea itself false. Could it be true?

One way to formulate the idea is to say that we *talk*, at least in everyday life, about what we *see*, and not about what we *look at*. Apparently, as far as common sense is

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above my table. Maybe one is floating a bit more to the right, but chances are they are floating a great deal *through* each other, all twelve of them, all above my table, and that’s still rather bizarre. For my cat’s sake, I’d never invite people to my house again.

concerned, Velmans did not depart much from the original Kantian scheme. He may allow that science reveals facts about the noumenal world, he even exclaimed that the thing itself is *all there is to know*, but now it seems he still wants us to accept that in everyday life we only talk about the phenomenal world.

I think that is ridiculous. When I talk about my cat, I talk about the *real* cat. I am not talking about a cat that only I can see; I am talking about the cat that you and I can both look at. Of course, Velmans wanted things to be that way for reflexive monism as well, so he claimed that the cat as experienced by me is the same as the cat as experienced by you, but we have seen in section 3.4 that this is something he has to give up. It is funny to see how Velmans started out advertising his position as an alternative that got rid of Cartesian traits common to both dualism and reductionism, while now his reflexive monism turns out to be a rather Cartesian structure itself. Velmans ends up with a position where every single person talks about things that are *private* to himself! The cat I talk about may be 'out there', but it's still private to me, as there is a different phenomenal cat out there for every other observer in the room.

And it gets worse. What if I am hallucinating? I might exclaim 'hey, there is a cat on the table' while the table is in fact empty. We would like to say that my statement is therefore false. However, Velmans has to say that it is true! Since everyday talk is about the *phenomenal world*, my statement must be understood as the claim that there is a cat on the table *as experienced by me*. And that is true, since I am having a hallucinatory experience of a cat on the table. Moreover, this does not seem like just another unpleasant bullet for Velmans to bite. When I say there is a cat on my table while there isn't one, I am simply *wrong* according to common sense. Reflexive monism therefore has implications for natural language semantics that are empirically *false*.

The situation is fairly simple. Since phenomenal experiences are private, and the things we talk about in daily life are public, the things we talk about in daily life cannot be phenomenal experiences. Instead, we talk about that which the phenomenal experiences are also *about*. Both phenomenal experience and common sense conversation are a means to *represent* the noumenal world. Unless you want to defend Kantian mysticism about the thing in itself, it is best to think of the noumenal world as the world of *referents*, as I have already pointed out in section 1.1. Noumena are the things that utterances, thoughts and experiences

are *about*. Since the 'everyday' physical world contains the referents of common sense conversation, it has to be the noumenal world after all.

#### 4.2 Ontological Problems

If there really is a phenomenal cat 'out there', on the table, in *addition to* the noumenal cat, then what kind of material is there on my table out of which the phenomenal cat is composed, and *how did it get there*? Of course, Velmans would not give a straight answer to this question, because he would not want to agree that there is *material* 'out there' in addition to the material out of which the noumenal table and cat are composed. For that would make him a substance dualist, and he wants to be a monist. Sometimes, Velmans says that the cat experience is out there, but that this is 'phenomenally speaking'. What could that mean? If it means that the experience is *not* there *noumenally speaking*, then where is it, noumenally speaking? He cannot say that it is in the brain, because that would be reductionism. He cannot say, as we have just seen, that it is 'out there' as an additional substance in the noumenal world, because that would be dualism. What does he say?

Velmans wants to defend a version of 'dual aspect monism', a view originally proposed by Spinoza. According to the Velmans version, a phenomenal experience is an 'aspect' that is correlated with the physical aspect of brain activity in the head of the observer, but the two aspects are not identical. Because they are not identical, Velmans thinks he can also say that they may have different locations. Furthermore, since they are now aspects and not substances, we have reached 'aspect dualism' but nothing commits us to substance dualism. Maintaining that the different aspects are aspects of the same substance, we can even defend monism and call the whole thing 'dual aspect monism'.

It is however totally unclear what the substance exactly *does* in this model, apart from giving Velmans a reason to call himself monist. And how can it have different aspects *at different locations*? Velmans draws an analogy from physics:

If one moves a wire through a magnetic field, this causes an electrical current to flow through the wire. Conversely, if one passes an electric current through a wire, this causes a surrounding magnetic field. But that does not mean that the electrical current is ontologically identical



to the magnetic field. The current is in the wire and the magnetic field is distributed in the space around the wire. They cannot be the same thing for the reason that they are in different places. (UC, 109)

If I understand the analogy correctly, then my brain is like the wire, and the phenomenal cat on the table is like the magnetic field around the wire. When a current is sent through the wire, a magnetic field suddenly appears, and in the same way, a phenomenal cat appears when certain neurobiological events take place in my brain. The important thing to note is that in both situations, the two related events occur at different locations.

However, there is an important characteristic of electromagnetic field theory that we should not overlook. Whenever there is an electric current, and the current remains constant, the magnetic field does not change. One might want to say that the current is still 'causing' the field, but in terms of events, that is not really the way to look at it. In terms of events, nothing happens because nothing changes, the field is already there, and it stays there. We should speak of an event when the current *changes*. And of course, there was an event when the current first *started*. Before that, there was no magnetic field.

Well, then. According to electromagnetic field theory, when the current changes, the magnetic field will change as well. However, the field will not be altered immediately! Instead, changes in the field *propagate with the speed of light from the location of the current change*. What happens is that every charged particle that changes speed sends out an electromagnetic wave, which 'updates' the magnetic field according to the new speed of the particle. This also means that when the magnetic field first appeared, it did not appear in its entirety at once. Instead, it was formed from the wire outwards, its 'front' travelling with the speed of light. Every event of magnetic field direction and strength change everywhere in the field is therefore not only separated from the event of the current change in the wire in *space*, but also in *time*!

So if the analogy must hold, then for my brain to be able to *cause* the phenomenal cat in front of me, there might be a time delay involved between the moment that my brain starts 'projecting' and the moment that I experience the cat to be where it is. But does that make sense? What if I am looking at stars light years away? I certainly do not have to wait years for the stars to light up when I look at the sky during the night. Moreover, when the magnetic field gets updated at a certain distance from the wire, the field change does not occur

spontaneously, out of nothing. Although it could have happened in a vacuum, the magnetic field itself does form a kind of 'medium' through which the change can travel. The change does propagate *as an electromagnetic wave*. Since we believe that electromagnetic waves exist, we have no trouble believing that the current in the wire can cause the magnetic field at a different location in space-time.

But the projection that Velmans is talking about does not use electromagnetic waves to deliver the phenomenal cat on my table. Nor does it use any other known physical mechanism to allow an effect to be realised in front of me that is caused by something in my brain. So the analogy is a misleading one, because the electromagnetism case relies on many elements of electromagnetic field theory that reflexive monism cannot use.

More in general, I think one should not too easily allow any cause to have an effect at a totally different location. Even contemporary field mechanics, through the principle that fields only get updated by waves that travel with the speed of light, seems to be obeying that old philosophical principle that you cannot have 'action at a distance'. More specifically, you cannot have *immediate* action at a distance, as all scientific observations we've done so far confirm that causal influence in space-time always has to remain within the cone of the speed of light: you can influence something at distance  $x$  only after a time elapse of  $x/C$ .

If there is a causal chain which involves both neural events in my brain and at a certain point the event of my having the visual experience of a cat in front of me, then that event simply *has* to be an event in my brain as well, because there doesn't seem to be any *time* nor any physical *mechanism* available to *get it anywhere else!* The idea of 'projection' simply cannot be implemented in any physically possible way.

#### 4.3 Conclusion

In sections 2 and 3 I have shown that two important arguments for reflexive monism are invalid. Now, we have seen that it does not only lack good arguments, but that it is also facing serious semantical and ontological trouble. Moreover, as we have seen in section 2.2, both dualism and reductionism can adequately deal with the issues of common sense conversation about the experienced location of cats and painful feet. And in section 3.3 I have given a sketch of a reductionistic account of phenomenal space that satisfies the Kantian distinction that Velmans wishes to build on as well as the relevant commonsense intuitions.

Finally, in section 4.2 I've drawn the reductionistic conclusion that the only place where phenomenal experiences can be, if they are to be linked up with neurobiological events, is in the brain. In other words, on all the topics that I have discussed, reflexive monism is in trouble and reductionism is safe. We are thus better off without reflexive monism.

## 5 References

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