Space and Sensibilia

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There is a reasonably common view, amongst proponents of causal-realist theories of perception, which says that objects of immediate perception inhabit a spatial realm that is totally cut-off from the one inhabited by material beings.[I] The reasons for this are two:

(i) Visual percepts are often described by causal realists as 'colour patches,' implying that they have shapes and sizes, and are extended. Also, non-visual percepts seem to be positioned; sounds can be *to the left* or *to the right*, for example. Since any being with extension must have a location, it follows that the objects of our immediate perception are spatial entities.

(ii) Since the causal realist posits that the objects of our direct perception to be *non-material*, it would be odd if percepts enjoyed some spatial relation to material things. Is the brown colour-patch caused by the table in the same location as the table? If so, then why does one directly perceive the former but not the latter? Such percepts cannot *all* be in the locations of their material causes since some (i.e. hallucinations) *have* no material causes. But if my table-shaped sense-datum is not at the table itself, then where is it? Is it swimming behind the cornea, or perhaps floating about the brain, haunting the synapses? How *big* is the colour patch (in meters squared/cubed?) All of these questions, which appear non-sensical, would be

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legitimate if we were to admit that immaterial per-
cepts inhabit the same space as material beings.

These considerations say that if causal realism is true, there is a 'phenomenal space' inhabited by percepts, one which is distinct from the space inhabited by material beings. There are dissenters, of course: not very long ago, O'Shaughnessy took sense-data to inhabit body-relative physical space, that is, the space inhabited by material beings.[II] There are others however, Smythies being to my knowledge the most recent example,[III] who *explicitly* postulate a second space, and it is against the latter sort of causal realist that I shall aim my objections. In what follows, we shall be looking at the consequences of the 'two-space' view, and arguing that such consequences are absurd.

1. Space Oddities
1.1. Preliminary

No matter one's view of the ontology of 'spaces,' one can say that, where x and y are spatially located entities and where xDy reads as 'x is some distance from y,' x and y inhabit the same space if and only if xDy.[IV] To define the class of inhabitants of a space A then, one need only identify some inhabitant x_A of A, and then define the class of A's inhabitants as $I(A) =_{df} \{y|yDx_A\}$. D is an equivalence relation, meaning that $I(A)$ is identical to the equivalence class $[a]_D$ where $a \in I(A)$. Thus, for any spaces A and B, either $I(A)$ and $I(B)$ are disjoint, or $I(A) = I(B)$. Since if there were some z in both $I(A)$ and $I(B)$, it would follow that $I(A) = [z]_D = I(B)$. Therefore, spaces are either completely disjoint, sharing no inhabitants, or completely overlapping, sharing all inhabitants.

There is one other thing which we should prove before moving on. Call any part of x which possesses a location a *spatial part* of x. What we shall prove is that it is impossible for a being to only *partially* inhabit some space, by which we mean that for any being x and space A, either every spatial part of x inhabits A, or no spatial part of x inhabits A. This follows from the fact that a being must be located at least partially wherever any of its spatial parts are, and so will bear the symmetric and transitive D relation to each. For example, if x has spatial parts a and b with a inhabit-
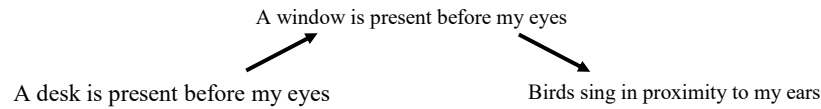
ing A, then we have xDa, so aDx by symmetry, and xDb, from which aDb follows by transitivity, so that b also inhabits A.
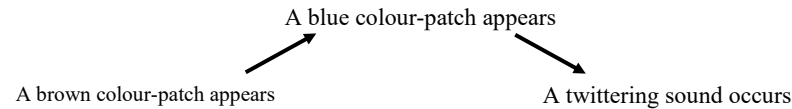
1.2. Causation

If material beings are not spatially related to percepts, then the space inhabited by material beings ('material space,' or 'M' for short) is totally disjoint from the space inhabited by percepts ('phenomenal space,' or 'P' for short). But a *causal* realist must say that the inhabitants of P and M enjoy some sort of causal relation. But what kind of causal relation could they possibly enjoy? Smythies suggests that the causal relations enjoyed by the inhabitants of P and M are 'Humean,' where a Humean causal relation is one of regularity: the Xs are Humean causes of the Ys only if there is a constant conjunction of Ys following Xs.[v] For example, Smythies might say that the table is a Humean cause of the brown colour-patch since the presence of the table in M is always followed by the presence of an appropriately shaped brown colour-patch in P. But to say that y follows x suggests that the occurrence of y comes after the occurrence of x. So if the inhabitants of M and P are related by Humean causal relations, then they must be temporally related.

The trouble with saying that inhabitants of P and M are temporally and not spatially related is that this implies that spatiality and temporality in the material realm are separable in a way that conflicts with the broadly accepted scientific view on the matter which says that the two are bound together quite inextricably. The physicist will say that it is, strictly speaking, wrong to think of material things as entering into spatial and/or temporal relations, rather they enter into *spatiotemporal* relations. Further, in order for two entities to be a defined spatiotemporal 'distance' from each other, they must be a defined spatial distance *and* a defined temporal distance from each other, since the total spatiotemporal distance will be a function of these values. If the two-space causal realist wants to take current science seriously, they will be pressured to say that the events of P and M cannot temporally relate. Material beings and sense-data, therefore, must inhabit disjoint *spacetimes*. This means that Smythies suggestion of Humean causation is something of a non-starter.

As a possible answer, Smythies might suggest something like the following: while it may be true that events in P and M share no temporal relations, the *order* of events in P matches up with the *order* of events in M. Thus, the sequence of events in M:

A window is present before my eyes

A desk is present before my eyes

Birds sing in proximity to my ears

Matches up appropriately with the sequence of events in P:

A blue colour-patch appears

A brown colour-patch appears

A twittering sound occurs

Perhaps what makes each relevant event in M the cause of an event in P is that each P-event matches up appropriately with some M-event in terms of its place in the ordering of the two sequences. The first problem with this picture is its symmetry. While it is true that the order of events in P appropriately corresponds to the order of events in M, it is also true that the order of events in M appropriately corresponds to the order of events in P. In other words, this kind of response leaves the causal realist without the resources to maintain that the causal relation is *from* M *to* P, and not the other way around. If this strategy is employed, could it not be possible that the occurrence of the brown patch causes the presence of the table?

One might reply by noting that, in isolation, P-events seem not to cause one another while M is causally closed. That is to say, each event in M is causally determined by other events in M. If one is against the idea of systematic overdetermination, this will be a good reason to suppose that P-events do not cause M-events, whereas the regularity that occurs among P-events demands an explanation which cannot be found in P alone. Granted that P and M's events correspond to each other, this gives us reason to suppose that M-events cause P-events in some way or another.

We should reply by saying that, since the causal relationship between P and M is *precisely* what is being questioned here, our opponent cannot assume to have any knowledge concerning the goings-on of M since, according to their own doctrine, we are only directly acquainted with the inhabitants of P, and to assume that this gives us even an indirect acquaintance with the inhabitants of M begs the question. If there is indeed no causal relation between the two, then how can acquaintance with the inhabitants of one give us even the vaguest knowledge of what is happening in the other? Thus, if the causal realist cannot appeal to any facts about what goes on in M, how can they appeal to the causal closure of M-events? In other words, to appeal to some difference between M and P, one must *assume* that we have knowledge of M. But if the causal realist is correct, this could only be the case if there really *is* the very causal connection between M and P which is here being called into doubt, and so any appeal to the causal-closure of M-events by the causal realist will beg the question.

2. Subjects

But there is a far more interesting problem for the causal realist: *us*. When one is presented with the two-space view, a very simple question arises. Where are *we,* the subjects of perception? Now the subject cannot be in *both* P and M, for then it would be the case that, where s the subject, $I(M) = [s]_D = I(P)$, which the two-space causal realist must deny. Thus, either the subject of perception is an inhabitant of P, or of M, or of neither. We now turn to consider each of these options.

2.1. Material Subjects

There are strong reasons to think that we, subjects of perception, inhabit the space of material things. We think of ourselves as sitting on chairs, standing in fields, and so on. If we are not mistaken in thinking this, it follows that we inhabit M. For fields and chairs are material things, and to be *in* a field or *on* a chair, one must be spatially related to them. But such a supposition is quite odd from the stance of two-space causal realism. If we are in M, then why do we perceive the inhabitants of P and not our fellow inhabitants of M? If we inhabit M, then to perceive even our closest neighbour, we must perform a kind of super-

perception of an inhabitant of a totally disjoint spatial realm. Personal incredulity aside, there is an argument to be made. Consider that the primary motivation for causal (or, more generally, *indirect*) realism is the argument from illusion, which goes as follows:

1. It appears as though there is some F thing here.
2. No material thing with which I am now acquainted is in fact F.
3. I must be directly aware of *something* which is F, else it would not appear that way.
4. Therefore, the F thing of which I am directly aware is a non-material entity.

Where F is some appropriate (i.e. sensory) quality, such as colour or shape. What now becomes clear upon considering this argument is that sense-data, being posited to account for the possibility of illusions, must always *actually* be as they *appear* to be with respect to sensory qualities, for otherwise we might run an argument as follows:

5. It appears as though some sense-data of mine is F.
6. But none of my sense-data are in fact F.
7. I must be directly aware of *something* which is F, else it would not appear that way.
8. Therefore, the F thing of which I am directly aware is not a sense-datum.

This conclusion contradicts causal realism altogether. Now, as we said at the beginning, some sense-data appear to be positioned relative to the subject. Auditory sense-data seem to be to the left or to the right, for example, and even visual sense-data appear to be closer or farther away. If this is the case for every sense-datum, then since sense-data must always actually be as they appear to be; sense-data must enjoy spatial relations with the subject of perception, which is impossible if the subject inhabits material space.

2.2. Phenomenal Subjects

Thus we are driven to consider the alternative, but this view is also fraught with difficulties. If the subject inhabits P, then she does not inhabit M, for disjoint spatial realms share no inhabitants. But then we, subjects of experience, are *not* on chairs, in

fields, or what have you. Rather, we are in a world of sense-ghosts, in which there are no material objects like chairs or fields, but in which it certainly appears as if there are. If this is the case, harking back to our remarks on inter-spacetime causation, the only promising way we might plausibly be said to interact with material beings would be through some kind of order-correspondence between P-events and M-events. With such a shaky 'causal' connection, what could possibly account for, among other things, the moral responsibility of subjects? Without robust, full-blooded causal influence on the world, subjects cannot be said to fulfill their duties, help or harm other subjects, and so on. The basic objection is that we cannot be in phenomenal space for we are also *agents* who act in the material world.

Perhaps a causal realist might reply that the acting agent and the perceiving subject are distinct beings, and so words like 'I' refer to different beings, depending on whether we are discussing perception or action. Of course this will not do, since what would 'I' refer to in the sometimes-true sentence 'I saw him fall over and helped him up'? Did the being that saw the man fall over help him up? Surely the answer is yes. Perhaps one could reply that 'I' refers to two beings, *taken together*: the perceiving subject and the acting agent. But this cannot be right either, for the subject and the agent still do not perceive *together* or act *together*; the agent alone acts and the subject alone perceives. Perhaps 'I' could be said to refers to some mereological sum of the agent and the subject. But from what we said before (in §1.1) there can be no sum of bodies inhabiting disjoint spaces. This line of questioning seems to be leading us towards a dead-end.

Finally then, if inter-spacetime causation cannot be defended, then is this two-space view, with a phenomenal subject, really a *causal realism* at all? Is this two-space theory not instead bound to collapse into idealism? For without a causal relation between M and P, we subjects have no good reason to inflate our ontology by supposing that there is some spacetime, M, utterly disjoint from the one we directly perceive, containing things called 'material objects.' Such a supposition would grossly inflate our ontology and so sufficient reasons to accept the existence of material things being absent, we would be obligated to reject

causal realism entirely and, indeed, collapse into a denial of the existence of material.

2.3. Constructed Subjects

So, given that the subject does not inhabit P *and* M, and can inhabit neither P *nor* M, we are left with the conclusion that the subject inhabits neither. Might the subject inhabit some third space? No, for such a view would be subject to the objections of *both* previous sections. The subject would be no distance from material objects, and so could not be in fields or on chairs. The subject would be no distance from their sense-data, despite it looking as if sense-data have subject-relative positions. More pressingly for the causal realist, if the subject of perception is in neither material nor phenomenal space, then the inhabitants of each are of equal status to her. The causal realist then cannot explain the fact that the subject directly perceives the inhabitants of P and not M, for under such a three-space view, there is no other connection the subject has to sense-data and not to material beings.

Now to my knowledge, no one *does* think of the subject as in some third space, but now we know that the two-spaces causal realist has only one alternative left. If the subject of perception is not in any space, then the subject must be in no space and must not be a spatial entity. But how might this be true? Does the subject not perform perceptive acts at times? Relating back to a previous point then, how can a thing inhabit time and not space, given that the two are so intimately linked? If we define a subject of perception as being anything which performs perceptive acts, and note that some such acts are performed at times, the idea of the subject as a non-spatiotemporal being is clearly absurd, and so the causal realist must instead conclude not that there is a non-spatial subject of perception, but that there is *no* subject of perception. If there is no subject, is there no perception either? For if perception occurs where there are perceptive acts, and acts are performed by beings, then if a subject of perception is just a being which performs perceptive acts, the occurrence of perception entails the existence of subjects of perception. Thus in order to preserve what one could call the fundamental axiom of the philosophy of perception, that *perception hap-*

pens, the causal realist must devise an entirely different notion of perception, one which will not construe perception as consisting of acts. Can this be done?

We have two spaces, M and P. Well really, we have many spaces, since my sense-data are not any distance from yours, and so the two also inhabit distinct spaces. So there are as many phenomenal spaces as there are, or as there were thought to be, subjects. Perhaps then we might try to regain the subject as a logical construction out of facts about these phenomenal spaces. Let us name the phenomenological spaces P_S, where 'S' is at least naively taken as the name of some subject, and then proceed as follows:

Construction 1

(C1.1) S directly perceives $x =_{df} x$ inhabits P_S
(C1.2) S indirectly perceives $x =_{df} x$ inhabits M, and there is some y such that S directly perceives y and $y\mathrm{R}x$.

Where R is some appropriate relation between the relevant inhabitants of P_S and M. The causal realist can rejoice for she can at once say that *perception happens* and that the truth of such locutions as 'S perceives x' do not entail that there is any being that performs a perceptive act. Now then, we must see what is wrong with such a response. First we shall raise some worries with the logical construction of the perceiving subject as it has been carried out here. We shall then examine some more general problems with the attempt to logically construct the subject generally, and see whether these problems spell a final defeat for the two-space view of perception.

3. Constructing Perception
3.1. Constructive Quibbles

Before continuing, we must remind ourselves that our objections relating to inter-spacetime causation, and its apparent impossibility (see §1.2), still apply to the logical constructivist position. For it is necessary under causal realism that, for it to be true that 'S' indirectly perceives some M-inhabitant, it must be true that 'S' directly perceives some P_S-inhabitant which enjoys some causal relation with the M-inhabitant. So the relation $y\mathrm{R}x$ in

(C1.2) must imply some sort of causal relation between x and y. While we have already objected to the possibility of such a relation under two-space causal realism, we will be putting this objection aside for the time being. I only mention it once more so that the reader does not mistake the following nitpicking as an implicit approval of the overarching project.

Now, consider again Construction 1. The major error with this construction is its atemporality. Perception is something which can occur at times, but how are we to make sense of expressions such as "S perceives x at time t" under such a construction? A straightforward translation of *direct* perception at a time from C1 yields:

(C1.1') S directly perceives x at time $t = x$ inhabits P_S at time t.

But does t refer to some time of M's, or of P_S's? Since M and P_S do not share a timeline, as it were, and since events in each are un-amenable to standard temporal comparison with each other (i.e. no P_S-event truly precedes or is preceded by any M-event), t cannot be some time at which both P_S-events and M-events occur. Now, since direct perception does not explicitly involve M, it is acceptable to say that in (C1.1'), t must be some time at which P_S-events occur. But then consider indirect perception, which involves both spaces. A mechanical translation of indirect perception at a time, from C1.2, yields

(C1.2') S indirectly perceives x at time $t =_{df} x$ inhabits M, and there is some y such that y inhabits P_S and yRx, at time t.

But this cannot do, for t cannot be a time at which M-events *and* P_S events both occur since then M and P_S would share a timeline. So perhaps we can sketch an alternate construction which avoids this problem. As a preliminary definition where X is some space, we will define an X-time as some time t to which events that take place in X bear some temporal relation (i.e. precedence, simultaneity, etc.) We shall denote X-times t_X, then proceed as follows:

Construction 2

(C2.1) S directly perceives x at $t_{Ps} =_{df} x$ inhabits P_S at t_{Ps}.

(C2.2) S directly perceives x at $t_M =_{df} x$ inhabits P_S at t_{Ps}, and $t_M \sim t_{Ps}$.

(C2.3) S indirectly perceives x at $t_{Ps} =_{df}$ x inhabits M at some M-time t_M, and there is some y such that S directly perceives y at t_{Ps}, and $y\mathrm{R}x$, and $t_M \sim t_{Ps}$.

(C2.4) S indirectly perceives x at $t_M =_{df}$ S indirectly perceives x at t_{Ps}, and $t_M \sim t_{Ps}$.

R is the same as-yet-unanalysed relation from C1, but we also introduce a new relation, □, which means something like 'corresponds to.' Through the use of this sort of correspondence between M-times and P_S-times, the causal realist might be able to solve the problem of temporal relation between M-events and P_S-events. So, while M-events and P_S-events cannot be *genuinely* temporally related, a sort of pseudo-temporal relation might still be thought to hold, and to ground the truth of statements such as 'S indirectly perceived the chair *while* she directly perceived the sense-data caused by the chair.' The relation □ might then be defined in terms of event-ordering (cf. §1.2). So, if sequences of M-events and P_S-events match up in some adequate way, we can say that the relevant members of one sequence are pseudo-simultaneous with those of the other. More precisely, let $\mathbf{p} = (p_1, p_2, ..., p_n)$ be an n-tuple of P_S-events arranged in chronological order, and $\mathbf{m} = (m_1, m_2, ..., m_n)$ be a likewise-arranged n-tuple of M-events. Then, if and only if $\mathbf{p}$ and $\mathbf{m}$ enter into an appropriate relation (such as the event sequences in §1.2), one can say that each m_i is pseudo-simultaneous with each p_i, so that the time at which m_i occurs 'corresponds to' the time at which p_i occurs. The main point of such a definition is that pseudo-simultaneity relations between events can be grounded by correspondences between event-sequences. I cannot think of a solid objection to this sort of approach, but regardless of whether this particular definition of pseudo-simultaneity fails, C2 appears to be the right way to go for the logical constructivist. For if locutions such as 'S perceives x' are true at times, which they are, then they must be true at both M-times *and* P_S-times, and such can be true universally only if these times can enter into some sort of general correspondence with each other.

3.2. Unconstructed Subjects

Now, pulling away from particular logical constructions of the subject, we shall now be criticising logical constructivism about the subject in general. First, we must stress that a logical construction is not a being of any sort. For it to be true that *x* is a logical construction, it must mean that there is no such being as *x* and that all true locutions which appear to imply the existence of this '*x*' can be restated in a way that preserves the logical content of the locution whilst removing the apparent ontological commitment. In the case of the subject then, to say that the subject of perception is a logical construction is first to say that the subject does not exist, and second to say that all meaningful locutions which appear to imply the existence of the subject are either false, or amenable to appropriate paraphrase. I mean to suggest here that this is not so for two reasons, the first of which was hinted at briefly in §2.2. Certain sentences such as the following are true. I saw the chair and went to sit down on it. I heard a loud noise and went to see what caused it. In both, the subject of perception is described as performing actions. But a logical construction cannot perform actions. In other words, it is unclear how a logical constructivist might deal with any sentence of the form

(α) S perceived *x* and consequently did φ.

It is clear that, for the causal realist, this cannot be read in the standard way, as synonymous with:

(α₁) S perceived *x* and consequently, S did φ.

For 'S' is not really a being, and so cannot perform actions. In other words, (α₁) entails that there exists some being which perceived *x* and did φ, which the constructivist will wish to deny, and yet the constructivist ought to allow that locutions such as (α) are sometimes true, for they *are* sometimes true. Perhaps then, the logical constructivist could read (α) as synonymous with:

(α₂) S perceived *x* and consequently, H did φ.

Where H is some being. So for example, the logical constructivist might say that 'John heard a loud noise and so went to see what caused it' is true if and only if (i) an appropriate aural sense-datum inhabits P_John and (ii) *some* being consequently behaves in an appropriate fashion. The problem with such a reading of (α) is

that it yields an explanatory gap. *Why* does the perception of *x* result in the consequent performance of φ? The reading (α_1) gives us a partial explanation, since under this reading the subject *is* the agent, and so the sequence of events is explained by the fact that the subject's perception of *x* influences that same subject to φ. But (α_2) leaves us with the question of why the perception of *x* (which is analysed merely as the occurrence of *x* in the spatially disjoint phenomenal realm) influenced any material being's behaviour at all, and specifically why it resulted in H, rather than some other being, performing φ. The second reason I have for doubting constructivist is that they would make all agents logically blind. If no subjects of perception are beings, then no beings are subjects of perception, and so agents are not subjects of perception. By necessity, they do not see, hear, feel, smell or taste anything. This point is similar to the last, but I think that it is worth highlighting it in its own right, seeing as it is particularly implausible.

The final reason I have for dismissing constructivism is that, without there being a real subject to act as intermediary, causation from phenomenal to material spaces is implausibly immediate. On a traditional causal realist picture, we can tell the following sort of story: the presence of the bus before my eyes causes the occurrence of a red colour patch in my phenomenal space. My perception of this colour patch then causes me to stand up and get on the bus. If we erase the subject from this story, the whole thing becomes quite wild. The presence of the bus before agent *x* causes, but does not precede or coincide with, the occurrence of a red colour patch in a spacetime utterly disjoint from the spacetime inhabited by *x* and the bus. This occurrence then causes, but does not precede or coincide with, *x*'s standing up and getting onto the bus. Again, even *if* inter-spacetime causation in defensible, the complexity of this explanation of events makes it repulsive in absence of good independent reasons to suppose that it is true. Because of this, along with my two previous points, I cannot imagine that the causal realist can take logical constructivism as a live option.

4. Recapitulation

So, the positing of a second spatial realm to serve as the abode of percepts must be mistaken. Firstly, it seems to make the requisite causal relations between material and phenomenal events impossible, in the light of our scientific understanding of spatiality and temporality. Secondly, the two-space causal realist cannot answer the simple question of where *we*, the subjects of perception, fit into their picture. And if the two-space causal realist denies the existence of the subject altogether, she runs into further absurdities. In light of these objections I take it as plain that the causal realist *must* take sense-data as being located in material space. For my own part, this serves as an enthymeme to the conclusion that causal realism *tout court* is untenable, for one-space causal realism (in which sense-data are taken to inhabit material space) seems to me even less defensible. My reasons for rejecting one-space causal realism go beyond the current scope, though they are essentially articulated in the introduction, under point (ii). At the very least, I hope that the points made in this paper serve to deter would-be two-spacers from assenting to what amounts to be an untenable position.

Notes

[I] cf. Henry Price, *Perception* (Methuen & Co. Ltd, 1954 reprint), 246 – 252. By 'causal realist', I refer to those thinkers who hold that one perceives material beings *via* the perception of non-material entities, whose existence is caused by material beings.

[II] Brian O'Shaughnessy, 'Sense-data' in: Smith (ed.) *John Searle* (Cambridge University Press, 2003), 173

[III] John Smythies, "Space, Time and Consciousness" *Journal of Consciousness Studies* **10**(3) (2003): 47 – 56

[IV] A substantivalist about space can admit this, and would say that it is true *of spaces*. A relationist, on the other hand, can take this to be a reductive paraphrase: *all it is* for things to be 'in the same space' is for them to be some distance from each other.

[V] Smythies, "Space, Time and Consciousness", 47 – 48.

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