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Article:

Richardson, Louise Fiona orcid.org/0000-0001-9484-7015 (2014) *Space, Time and Molyneux's Question*. Ratio-New series. pp. 483-505. ISSN: 0034-0006

<https://doi.org/10.1111/rati.12081>

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SPACE, TIME AND MOLYNEUX'S QUESTION

Louise Richardson

Abstract

Whatever the answer to Molyneux's question is, it is certainly not obvious that the answer is 'yes'. In contrast, it seems clear that we should answer affirmatively a temporal variation on Molyneux's question, introduced by Gareth Evans. I offer a phenomenological explanation of this asymmetry in our responses to the two questions. This explanation appeals to the modality specific spatial structure of perceptual experience and its amodal temporal structure. On this explanation, there are differences in the perception of spatial properties in different modalities, but these differences do not stand in the way of the objectivity of perceptual experience.

It has seemed obvious to many that perceptual experiences are transparent: when we turn our attention to them, it 'passes through' to the mind-independent objects and properties that we perceive. But it is equally obvious that in so doing we find those objects and properties presented to us in certain *ways*: seeing a lemon and the shape of the lemon is phenomenally unlike perceiving those things by touch, for instance. Here, I explore one respect in which this is the case. Though it may be that the only things to which we can directly attend, in reflecting on our perceptual experiences, are the lemons, tables and suchlike that we perceive, in thus attending we become aware of the sense-specific *structure* or *form* of our perceptual experiences of those objects and their properties. Furthermore, I will argue that whilst the spatial structure of perceptual experience differs across the senses, its temporal structure does not. Perceptual experience is in this way spatially modality-specific, but temporally amodal.

I will approach these issues via Molyneux's Question, a temporal variation on that question and an interesting asymmetry in how one naturally responds to the two. This will help to make apparent the nature of the structural features of perceptual experience with which I am concerned. In particular, it will help me to argue that these features do not stand in the way of the objectivity of perceptual experience—its presenting us, as we think it does, with a world of mind-independent objects and their properties. In fact, as comparison between the temporal and spatial structure of perceptual experience helps to make clear, those modality-specific spatial aspects of perceptual experience may have a positive role to play in its objectivity.

1. Molyneux's question and the temporal variation

In Locke's *Essay*, William Molyneux's now-eponymous question appears thus:

Suppose a man born blind, and now adult, and taught by his touch to distinguish between a cube and a sphere...so as to tell, when he felt one and t'other, which is the cube, which the sphere. Suppose then the cube and sphere placed on a table, and the blind man be made to see. Quaere, whether

by his sight, before he touch'd them, he could now distinguish, and tell,
which is the globe, which the cube?¹

This question has been subject to more than one variation. Evans' temporal variation asks:

[W]hether a man born deaf, and taught to apply the terms 'continuous' and 'pulsating' to stimulations made on his skin, would, on gaining his hearing and being presented with two tones, one continuous and the other pulsating, be able to apply the terms correctly.²

This is a temporal variation on the question in that the qualities 'pulsating' and 'continuous' are most naturally understood as temporal qualities. Something 'pulsating', for instance occupies an interval of time in a way that involves regular, rhythmic, change. Something continuous, on the other hand, happens or exists without interruption. The original question, of course, asks about spatial rather than temporal qualities: particular ways of taking up or extending into space.

2. Grush and the skills-based view

Evans believes that 'few of us have a doubt about the outcome' of the temporal variation on Molyneux's question (or 'TMQ').³ He is confident that the answer to TMQ is 'yes', and that we will share his confidence. If the newly-hearing man was unable to apply the terms 'pulsating' and 'continuous' correctly, we would 'feel obliged to interpret this as casting doubt upon his understanding of the terms which we thought we had introduced to him...'.⁴ Evans doesn't, however, say anything more about why he (and, he believes, we) would respond in this way. Rick Grush supplies an explanation on Evans' behalf. On Grush's view, Evans was formulating a theory of perceptual content based on the subject's possession of skills: a theory of a kind that Grush himself endorses. In his paper on Molyneux's question (or 'MQ'), unfinished and published posthumously, Evans went some way to defending such a theory of the perceptual representation of *spatial* properties, and would, Grush believes, have held an analogous view of the perceptual representation of *temporal* properties.⁵

Evans presents (via an imaginary philosopher, *V*) a view of conscious perceptual experience of spatial properties according to which it is partly constituted, in both vision and touch, by the having of information specifiable by saying things like 'up' and 'forwards', where these direction-terms 'derive their meaning from their (complicated) connections with the actions of the subject.'⁶ In this way, there is a 'common basis for the application of...spatial concepts' in both vision and tactile perception.⁷ It is for this reason that the answer to Molyneux's question is supposed, by *V*, to be 'yes'. Grush argues that from these materials 'a defense of Evans' conclusion concerning pulsatingness can be organized.' Experience represents

¹ John Locke, *An Essay Concerning Human Understanding* (Second edition) (Oxford: Clarendon, 1694), II, IX.

² Gareth Evans, 'Molyneux's question' in J. McDowell (Ed.), *Collected Papers: Gareth Evans* (Oxford: Clarendon, 1985) pp.344-399, at p.372.

³ Evans, 'Molyneux's question', p.372.

⁴ *ibid.* pp.372-3.

⁵ See Rick Grush, 'Skill and spatial content', *Electronic Journal of Analytic Philosophy* 6 (6) (1998).

⁶ Evans, 'Molyneux's question', p.384.

⁷ *ibid.* p.391.

pulsation, on this view, in virtue of its putting us in a position to ‘exercise a battery of skills’ in an ‘immediate and non-inferential manner’—skills such as nodding the head or waving a hand along with the pulsation. And this is reflected in how qualities such as pulsatingness are represented. It is, Grush says ‘part of the normal content of pulsatingness, for us, that it is something with which we can co-ordinate a number of sensory-motor skills’. The same skills will be involved in the representation of pulsation in all modalities, and thus, on this view, the perceptual representation of pulsatingness will be the same across modalities.

3. Explaining ASYMMETRY

I will not assess the merits of the skills-based view here. What is important for my purposes is that Grush’s account does not capture the asymmetry apparent in Evans’ responses to MQ and TMQ. As we have seen, Evans answers ‘yes’ to MQ via *V*. But that he takes this answer to be a great deal less obvious than the ‘yes’ he gives to TMQ is evident from his prolonged discussion of how *V* might defend his answer to MQ. In contrast, no argument is given for thinking that the answer to TMQ is ‘yes’. Why were Evans’ responses to the two questions, in this way, asymmetric? The significance of this question is not merely exegetical. We share Evans’ confidence that the answer to TMQ will be ‘yes’, and we are, at least, less certain of the answer to MQ. What is to be explained is why *we* respond to the two questions in this way, and not merely why Evans does. Call this difference in response to the two questions ASYMMETRY, for brevity. Our question now is: what explains ASYMMETRY?

We might expect an appeal to phenomenal character to play some role in explaining ASYMMETRY. As Kirk Ludwig remarks,

...if there is no phenomenal difference between perception of shape in sight and touch, then a man blind from birth whose sight is fully restored as an adult should, it seems, have no trouble visually distinguishing the globe from the cube.⁸

Conversely, if sighted subjects find, on introspecting, a phenomenal difference between the perception of shape in sight and touch, this might be an obstacle to their accepting that the newly sighted individual will recognise the shapes he sees. The confidence of hearing subjects reflecting on TMQ might likewise be explained by a phenomenal similarity in the perception of temporal properties in hearing and touch. But what phenomenal difference in the spatial case and similarity in the temporal case might play this role?

Plausibly, each modality has ‘special sensibles’ that go some way to explaining the distinctive phenomenology of experience in each. Seeing and feeling the shape of a lemon differ, you might think, because in the former and not the latter one experiences yellowness *with* the lemon’s shape. But experiences of temporal properties in different modalities differ in this way too. One is aware of yellowness *with* pulsatingness when one perceives a pulsating yellow light, for example, and not when one feels or hears something pulsating. It does not appear likely that we will find an appropriate spatial phenomenal difference for which there is no temporal analogue amongst the special sensibles. But there are other phenomenal differences

⁸ Kirk Ludwig, ‘Shape properties and perception’, *Philosophical Issues* 71 (1996), pp. 325-350, at p.326.

between experiences had in different modalities than those that are explicable by appeal to special sensibles.

For example, when I see a lemon, it appears to occupy a location at a distance from me, in a region of space of which I am also, in some respect, visually aware. When I touch the lemon, I am aware of no such region of space in just this way. The lemon appears, tactually, to be right at the boundaries of an object, namely my body. The spatial character of perceptual experiences in other modalities is different again.⁹ It is not immediately obvious why this spatial phenomenal difference would lead one to expect the answer to MQ to be ‘no’, for to explain that it is not enough merely to identify a phenomenal difference in seeing and feeling. One must pinpoint, more precisely, a phenomenal difference in seeing and feeling *shape properties*. Furthermore, for this phenomenal difference to play a role in explaining ASYMMETRY we must also identify a relevant phenomenal similarity in perceiving temporal properties in different modalities. In §4-6 I will consider two accounts of what the spatial difference between experiences in different senses amounts to, and argue that the second of these two accounts provides the better phenomenological explanation of ASYMMETRY.

There may be other, non-phenomenological ways to explain ASYMMETRY that the explanation I will offer will not rule out. My aim is to present some considerations about the phenomenal character of experiences in different modalities that, if true, would lead one to expect ASYMMETRY. These considerations are of independent interest in that they involve features of perceptual experience that are interesting, and somewhat overlooked.

4. The ‘different spaces, one time’ explanation

I noted, above, that visual and tactile perceptual experiences (and experiences in other modalities) differ in their spatial phenomenal character. The explanation of ASYMMETRY I sketch in this section accounts for this spatial, phenomenal difference just in terms of the objects and properties one perceives when having such experiences. The proponent of this explanation endorses a view on which the objects of each sense are located in sense-specific spaces.

Berkeley, for instance, and twentieth century sense-data theorists, described sense-specific spaces within which the immediate objects of just one sense are located. The expression ‘the visual field’ is sometimes associated with sense-data theory: therein, it denotes the sensational space within which all and only visual sense-data are located. Whatever tactile sense-data may be, they do not appear to be located in that same space. On C. D. Broad’s view:

The spatial characteristics of the sensa of one sense do not literally extend to those of another sense... My visual sensa have places in my visual field, and my tactual sensa have places in my tactual field; there is no place in which both are literally present.¹⁰

⁹ On the spatial character of auditory experiences see Matthew Nudds, ‘Sounds and space’ in M. Nudds and C. O’Callaghan (Eds.), *Sounds and Perception - New Philosophical Essays* (Oxford: OUP, 2009), pp.69-96. On that of olfactory experiences see Clare Batty, ‘Scents and sensibilia’ *American Philosophical Quarterly* 47 (2) (2010), pp.103-118 and Louise Richardson, ‘Sniffing and smelling’ *Philosophical Studies* 162 (2) (2013), pp.401-419.

¹⁰ C.D. Broad, *Scientific Thought* (New York: Harcourt, Brace and Company, Inc, 1923), p.345. Similarly Bertrand Russell, *The Problems of Philosophy* (Oxford: OUP, 1912), p.29.

Whilst Broad uses spatial location to illustrate his point ('place' in the visual or tactual field) the point itself is more general. The spatial characteristics of the objects we most directly perceive, are, on Broad's view, sense-specific. Shapes are, of course, spatial characteristics. They are ways of extending into or taking up space. Berkeley is explicit that shape properties are not common across the senses, and on this he bases his 'no' to MQ.¹¹ We should not see this claim about the diversity of spatial properties perceived across senses as additional to the claim that the visual and tactual fields are distinct. The 'Berkeley-Broad' view is that the visual and tactual fields are distinct just in that as far as the most direct objects of perception are concerned, no spatial properties are perceived in more than one modality.

On this view, the spatial phenomenal difference between seeing and feeling introduced in §3 can be explained by there being no common spatial properties of which we are aware in these modalities. And more specifically, on this view, one can see why there would be a phenomenal difference between seeing and feeling shape properties, specifically: there are no common shape properties of which we are aware in seeing and feeling. This difference in what we are aware of, or in what is represented across the senses, can then explain our doubting whether the newly-sighted subject would be able to recognise the shapes of the objects placed before him, since it is an account of how there comes to be a phenomenal difference for us (assuming we are sighted) to find when we reflect on our experiences of seeing and feeling shapes. Furthermore, it seemed to Broad at least, that objects of perception were not presented as located in different *times* in the way in which they are presented as located in different spaces. The quotation above continues, helpfully:

...it does seem to me that temporal relations do literally connect sensa belonging to different senses of the same observer. I can often judge quite immediately that a certain noise that I sense is contemporary with a certain flash that I sense... Here I seem to be using the names of these temporal relations quite literally...¹²

If Broad is correct then the phenomenal difference between seeing and feeling shapes currently under discussion has no temporal analogue. This being the case, we can see why we would not have the same scruples about TMQ as we do about MQ. Hence, ASYMMETRY. In the next section I introduce some difficulties for this 'different spaces, same time' (or 'DSST') explanation of ASYMMETRY.

5. Problems for the DSST explanation

Explaining ASYMMETRY need not involve answering MQ or TMQ. However, the view of perceptual experience that underlies the DSST explanation is often associated with answering 'no' to MQ, which has sometimes been thought a reason to want to defend a 'yes', instead. As Naomi Eilan writes,

...it is generally supposed that if the answer to the question...should be 'Not', on the grounds that our spatial perceptions are modality-specific, in some sense, this poses a serious threat to our access through perception to the world out there.¹³

¹¹ George Berkeley, *An Essay Towards a New Theory of Vision*, (Aaron Rhames, 1709), §135.

¹² Broad, *Scientific Thought*, p.29.

¹³ Naomi Eilan, 'Molyneux's question and the idea of an external world' in N. Eilan, R. McCarthy and B. Brewer (Eds.), *Spatial Representation* (Oxford: OUP, 1993), pp.236-255.

But as Evans points out, it is consistent with *B*'s view (*B* being another imaginary philosopher, with a view of perception somewhat like Berkeley's or Broad's) that the answer to MQ is nevertheless 'yes' because the connection between visible and tangible spatial qualities is 'pre-programmed into the brain'.¹⁴ The Berkeley-Broad account of the phenomenal difference between seeing and feeling shape that underpins the DSST explanation of ASYMMETRY is consistent with a 'yes' to MQ.

However, even if it doesn't entail 'no' to MQ, the DSST explanation of ASYMMETRY might still be thought to threaten perceptual objectivity. If the objects of sight and of touch are objects only of a single sense, with no shared spatial properties, then those objects are not objects in a world 'out there' to which we think that perception gives us access. Just as some have wanted to avoid answering 'no' to MQ for fear of threatening perceptual objectivity, so one might want to avoid having to accept the DSST explanation of ASYMMETRY, for the same reason. This is the first difficulty with this explanation.

The second, related, difficulty is that given the presupposition of a view on which the immediate objects of perception are other than the objects we generally take ourselves to perceive, the DSST explanation faces the challenge of explaining the purported transparency of experience. The transparency thesis, as M.G.F. Martin puts it, asserts firstly that introspection reveals 'less than the sense-datum theory predicts', in that it does not reveal sense data, and it asserts, secondly, that introspection reveals 'that there is more to the character of experience than one would anticipate on the basis of a pure sense-datum...view'—one finds, that is, mind-independent, everyday objects.¹⁵

Thirdly, the DSST explanation of ASYMMETRY might be thought inconsistent with the occurrence of experiences with cross-modal spatial content: at least, the defender of the DSST explanation owes us an explanation of the apparent occurrence of such experiences. Plausibly, we do not merely judge but perceive objects that are perceived at the same time in different modalities as standing in spatial relations to one another. For instance, at least on the face of it, the lemon I see perceptually appears to be above the floor that I cannot see but can only feel with my feet beneath the table. More generally, it is plausible to think that one way in which experiences in different modalities are 'unified' is that they are 'of a common spatial framework',¹⁶ and, arguably, such a framework is required to explain cross-modal cuing of spatial selective attention and the occurrence of certain cross-modal illusions. This sits ill with the supposition that the objects of each sense are located in distinct spaces.

I do not mean to suggest that the proponent of the DSST explanation cannot respond to these difficulties, by, for instance, explaining why we are wrong to think that perception gives us unmediated access to mind-independent things. However, in the next section I introduce a different explanation of ASYMMETRY that can respond to the difficulties without incurring what to many will look to be unacceptable costs. This structural explanation and the DSST explanation both begin by drawing one's attention to the same spatial phenomenal difference between

¹⁴ Evans, 'Molyneux's question', p.378.

¹⁵ M.G.F. Martin, 'The transparency of experience' *Mind and Language* 4 (4) (2002) pp.376-425, at p.384.

¹⁶ Casey O'Callaghan, 'Perception and multimodality' (2012) in E. Margolis, R. Samuels, and S. Stich, (Eds.), *The Oxford Handbook of Philosophy of Cognitive Science* (Oxford: OUP, 2012). pp.92-117, at p.96.

experiences of shape in different modalities: the difference introduced in §3. However, they rely on different views of what it is one's attention is thus drawn to.

6. The 'structural' explanation

6.1

At the heart of the structural explanation of ASYMMETRY is a notion of the visual field quite different to that endorsed by the proponent of the DSST explanation.¹⁷ To understand this notion, begin by thinking of the boundaries of the region of space that we are, in some way, aware of in visual experience. The boundaries in question are not best thought of as *objects* of awareness. They are not further things that we *see*, as we see the edges of objects in the field. And they are not the edges of some object or portion of stuff. Instead, they are boundaries delimited by our own visual, sensory limitations and we are aware of them as such.

To make this claim clearer, think how peculiar it would be for someone to be surprised, on turning their head far to the left, to find that space doesn't end behind their left shoulder. Before turning their head, they take the region of space of which they are aware with their head held still, looking straight ahead, to be all the space there is. We are clearly not in this subject's position, and more to the point, their visual experience is very unlike our own. Not only do we *know* that there is more space beyond our left shoulders, though we cannot see anything in that space without moving, but it *seems to us, visually*, as if there is more space beyond the boundaries. More specifically, it seems as if there is more space in which there may be more to be seen. The boundaries of the visual field are fixed by our visual, sensory limitations—by how far, and in what directions, we can see—and that is just how they seem to us. The visual field then, in Martin's distinctive sense, is the corollary of this awareness of boundaries beyond which one cannot see. It is a region of space in which things *can* be seen, and that is just how it seems to us. We are aware, in vision, of a region of space, in that we are aware of a region of space as that within which things can be seen.

Tactile perceptual experience is quite different, spatially, from visual experience. I have, here, space only to remark positively on the spatial structure of visual experience. But (I hope) it suffices to say about tactile experience only that its spatial structure is not like this. We are not, in touch, aware of a region of space within which we tactually perceive objects in just this way. We are aware of the things we perceive, tactually, as in contact with the boundaries of an object, namely, one's body. The difference between vision and touch thus described is, we have said, a *structural* one. Why is 'structural' apt? For two reasons.

First, the difference is in how experiences are built or configured, independently of what they are experiences of. The features in virtue of which vision has a spatial field, and in virtue of which there is not, in this way, a tactile spatial field are, as Matthew Soteriou puts it, 'relatively invariant'.¹⁸ They stay the same when we re-arrange, change or take away the objects (and properties of such objects) of which

¹⁷ See especially M.G.F. Martin, 'Sight and touch' in T. Crane (Ed.), *The Contents of Experience* (CUP: New York, 1992), pp.196-215. For detailed exposition of Martin's notion see Matthew Soteriou, 'The perception of absence, space and time' in J. Roessler, H. Lerman and N. Eilan (Eds.), *Perception, Causation and Objectivity* (Oxford: OUP, 2011), pp.181-206 and Louise Richardson, 'Seeing empty space' *European Journal of Philosophy* 18 (2) (2010) pp.227-243.

¹⁸ Soteriou, 'The perception of absence, space and time', p.194.

we are aware. And, across the senses, they can differ when all the objects and their properties are the same.

Second, we can understand these features of experience as a matter not of which things we perceive, but of *how* we perceive those things—these features *structure* our perceptual experience of the things we are aware of. Vision's having its spatial field, on this view, is not a matter of our being aware of another object, or property of an object, in addition to, say, the lemon and the table and their properties. So there is no appropriate additional object or property of an object to attend to, when reflecting upon these structural features of perceptual experience. Nevertheless, we find these structural features in attending to the worldly objects and properties. This reflects the fact that structural features are features of the *way* we are aware of the objects of experience and their properties: in the case of vision, we are aware of the lemon and the table as occupying and extending into a region of space within which things can be seen. In touch, we are not aware of the lemon, or of anything else, in this way.

The second way in which the spatial phenomenal difference between sight and touch can be thought 'structural' is that which allows for an explanation of ASYMMETRY distinct from the DSST explanation. (Part of) appearing shaped—square, or cubed, say—is appearing to extend into or occupy space in a certain (say, 'square-ish') way. With the idea of the spatial, structural features of perceptual experience in mind we can understand how something can appear to extend into or occupy space in that square-ish way differently, in different modalities of experience. Visually appearing (or looking) square is appearing to extend into or take up space that we are aware of as a space in which things can be seen. The same is not true of tactually appearing (or feeling) square. The phenomenology of feeling square is not that of appearing to occupy a space in which things can be seen in the square-ish way, or in any way at all. This difference in looking and feeling square, or otherwise shaped, is, according to the structural explanation, that which explains why we are reluctant to think that the answer to MQ is 'yes'. To explain ASYMMETRY one must also explain why it seems obvious to us that the answer to TMQ is 'yes'. We will see how the structural explanation achieves this second task, next.

6.2

The (Martinian) visual field is a sub-variety of the more general kind, 'sensory field'. Another sub-variety of sensory field is the temporal field.¹⁹ There is a temporal field in that

...the things we perceive are perceived as filling, occupying, or having some location within, an interval of time, just as the objects we see are generally seen as filling, occupying, or having a location within a region of space.²⁰

A defence of this claim instructs one to reflect upon differences in the phenomenal character of perceiving changes of different kinds (specifically, changes that occur at different speeds). Consider, then, the difference in one's perception of the movement of the second hand of an analogue clock, and one's awareness (such as it is) of the movement of the hour hand. In the former case, one sees the second hand *moving*. It

¹⁹ See Soteriou, 'The perception of absence, space and time' and *The Mind's Construction* (Oxford: OUP, 2013). See also Ian Phillips, 'Hearing and hallucinating silence' in F. Macpherson and D. Platchias, (Eds.), *Hallucination* (Cambridge MA: MIT Press, 2013), pp.333-360.

²⁰ Soteriou, 'The perception of absence, space and time', p.195.

doesn't seem right to say, though, that one sees the hour hand moving. It moves too slowly for that.

The imperceptibility of slow change, as of the location of the hour hand, can be explained 'in terms of the idea of an upper temporal limit, a maximum duration that acts of temporal experience can span.'²¹ This duration is clearly shorter than the 'minimum period that it takes for the hour hand to travel between two positions that you can visually discriminate.'²² That's why we cannot see the hour hand moving. This limited interval within which things can be perceived to be happening is the temporal sensory field. Whilst the comparison between slow and fast(er) change helps to make the existence of such an interval especially apparent, that there is such an interval might also be thought of as responsible for there being a limit to how much of an occurrence one can take in 'all together': a few seconds of a film, but not the whole thing, for instance.²³

There are ways in which the temporal sensory field is like the visual, spatial, sensory field (or visual field, for short): both involve there seeming, in some respect, to be limits in experience.²⁴ In the case of the visual field, these are boundaries beyond which one cannot see. In the case of the temporal field, these are the boundaries of an interval within which things can seem to occur, obtain or persist. Second, there being, in experience, a limited region of space or interval of time is to be understood in terms of structural features of experience. The visual field, as it features in the structural explanation, is not a distinct space, occupied only by that which is visually perceptible. It is not itself a distinct object of vision and neither does it imply the existence of any objects or spatial properties of objects accessible only visually. Likewise, there is not an additional object of awareness (an interval or stretch of time) that we perceive as we perceive the things that occur, obtain or persist during that interval. That there is a temporal field, understood in the relevant way, is discovered by attending to those occurring, obtaining and persisting things, and the temporal structural features of experience are to be understood as the form or structure of our awareness of them.

However, the visual field is specific to vision. Experience in other modalities has different spatial, structural, features. Touch, as we have said, does not have vision's field-like structure. The temporal field, in contrast, is amodal. For every sense, there is in experience a limited interval in just the same way as there is for vision. For every sense, one can identify examples of distinctions between slow and fast change, and between that which one can and cannot experience 'at once', to make this apparent: I leave it to the reader's imagination to supply these examples. There is no difference, across modalities, in what is thus made apparent. Thus, the temporal structure of perceptual experience is amodal.²⁵

According to the structural explanation of ASYMMETRY, when one reflects on what it is like to perceive pulsation (or continuousness) in sight and touch (or in another modality capable of representing this property) one does not find a

²¹ Christoph Hoerl, 'Time and tense in perceptual experience' *Philosophers' Imprint* 9 (12) (2009) pp.1-18, at p.9.

²² *ibid.* p.10.

²³ See Oliver Rashbrook, 'Diachronic and synchronic unity' *Philosophical Studies* 164 (2) (2013) pp.465-484, at p.474.

²⁴ For discussion of some differences in the way in which we are aware of these limits or boundaries see Soteriou, *The Mind's Construction*, p.133.

²⁵ It is consistent with the temporal structure of perceptual experience being amodal that there are differences in temporal representation across modalities (for instance, in fusion thresholds) that do not show up in the conscious character of experience.

phenomenal difference in how those properties are experienced that corresponds to the difference we do find in how spatial properties are experienced, and which was introduced above, in §6.1.

6.3

The structural explanation, like the DSST explanation, explains our tendency to doubt that the answer to MQ can be ‘yes’ in terms of a phenomenal difference between seeing and feeling shapes. The structural explanation and the DSST explanation rely on competing accounts of this difference. The former accounts for the difference not in terms of different objects and properties apparently perceived but in terms of a different way of experiencing the same objects and properties. For this reason, the structural explanation avoids the three difficulties to which the DSST explanation is subject.

First, the structural explanation is consistent with a plausible version of the transparency thesis. The explanation enthusiastically agrees that when we turn attention from the mind-independent objects of perception, to the experience we have of those objects, the objects remain the focus of attention.²⁶ But in thus attending, according to the structural explanation, we find those phenomenological differences that can, we have argued, be understood as a matter of the form or structure of the experience. Unlike the DSST explanation, the spatial phenomenological difference between sight and touch is not explained in terms of awareness of or attention to any objects other than the mind-independent ones we take ourselves to perceive.

The structural explanation is also, for similar reasons, consistent with the idea that perceptual experiences across the modalities share a common spatial framework. Because it does not appeal to distinct, modality-specific spaces but only differences in the spatial structure of experience of objects, it can allow that those objects occupy a single, worldly, space. It is also no part of the explanation that differences in structural features *need* make cross-modal spatial relations opaque to the sighted, feeling subject. It is consistent with this explanation that such a subject can tell that object O^1 perceived in modality M^1 is to the left of O^2 perceived in M^2 , for example. The structural explanation does not take experiencing an object and its properties in different modalities to be closely assimilated to *thinking* about the same thing under different modes of presentation. When one thinks in this way, sameness of reference *is* obscured: the possibility of such obscuring is plausibly constitutive of difference in (Fregean) sense. But it is consistent with the structural explanation that the phenomenal differences between seeing and feeling the objects and properties in a scene leave relations between those objects and properties, perceived in different modalities, apparent to the perceiver.

Doesn’t this undermine the structural explanation? One might worry that it does, since it suggests that the explanation is consistent with our also being able to tell, perceptually, that O^1 perceived in M^1 is the same shape as O^2 perceived in M^2 . In fact, the defender of the structural explanation need not deny that the sighted, feeling subject can recognise shapes cross-modally. She does not, after all, set out to argue that the answer to MQ is ‘no’ but only to explain why the sighted subject, on introspecting, might doubt that the answer is ‘yes’. According to the structural explanation, on introspecting one’s experiences of the shapes of O^1 and O^2 , one will find a phenomenal difference between them which is to be understood as a structural difference, though it is not, as the availability of the DSST explanation makes clear,

²⁶ See Martin, ‘The transparency of experience’, p.380.

obvious to introspection that it *is* a structural difference. Our noticing this phenomenal difference explains why we are uncertain about whether the newly-sighted subject will be able to recognise shapes perceived with their newly-acquired modality. Since the difference is a structural difference, it may turn out be that this uncertainty is misplaced: maybe the newly-sighted subjects will be able to ‘see through’ structural differences to the common properties represented by sight and touch. But since the proponent of the structural explanation is not, as such, interested in the answer to MQ, this is no concern of hers.

For the same reasons that the structural explanation doesn’t conflict with the transparency thesis, nor with the perception of cross-modal spatial relations, it is, also, consistent with the ‘objectivity’ of perceptual experience. One difficulty with the DSST explanation was that if—as the DSST explanation presupposes—the objects which we most directly perceive by sight and touch do not share any spatial properties, then those objects are not the objects in a world ‘out there’ to which we think that perception gives us access. But the structural explanation makes no such presupposition. It is consistent with the structural explanation that (at least, some of) the same objects and properties are perceived by sight and touch, though we perceive those objects and properties in different ways, in that our visual and tactile experiences have different spatial, structural features.

This is a particularly interesting consequence of the structural explanation. As we said in §5, whilst it is mistaken to think that ‘yes’ to MQ is inconsistent with a view on which perceptual experience fails to be of mind-independent objects, nevertheless, ‘resistance to answering affirmatively’, in the case of MQ is often thought to be ‘animated by’ a conception of perceptual experience and the distinction between the senses on which there is a clear connection between modality-specificity and a lack of objectivity.²⁷ O’Callaghan, for instance, elides the claims that ‘awareness of space consists in awareness involving features unique to a given sense modality’ and (from Russell) that the space ‘of science’ (i.e., objective space) is neither ‘the space of touch or the space of sight.’ O’Callaghan appears to believe then, that objective spatial awareness cannot be explained in terms of modality-specific features.

Similar concerns are raised elsewhere. In his first paper on Molyneux’s Question,²⁸ John Campbell defends an ‘externalist’ conception of shape perception, which we can understand as the view that what makes a perceptual experience one of shape ‘is the fact that it is responding to shape properties of objects in the environment’.²⁹ And, he suggests, ‘insofar as we are externalist about shape perception, we will have to think of it as amodal’ since it will, on such a view, be a ‘single phenomenon’.³⁰ If we take this to mean that the perception of an objective shape property cannot crucially involve modality-specific features then we must disagree with Campbell. On the structural explanation, modality-specific spatial, structural features of experience are involved in shape perception but do not stand in the way of its objectivity.

7. Perspective, modality specificity and objectivity

²⁷ Casey O’Callaghan, ‘Seeing what you hear: cross-modal illusions and perception’ *Philosophical Issues* 18 (1) (2008) pp.316-338, at p.322.

²⁸ John Campbell, ‘Molyneux’s question’ *Philosophical Issues* 7 (1996) pp.301-318.

²⁹ John Campbell, ‘Shape properties, experience of shape and shape concepts’ *Philosophical Issues* 7 (1996) pp. 351-363, at p.351.

³⁰ Campbell, ‘Molyneux’s question’, p.303.

I start this final section by considering a third explanation of ASYMMETRY: Ruth Millikan's. Millikan's explanation is not, or so I argue, a viable alternative to the structural explanation. However, it provides a helpful starting point for further discussion of the relationship between the modality specific, spatial, structural features of perceptual experience that figure in the structural explanation of ASYMMETRY, and the objectivity of perceptual experience.

7.1

Millikan argued that Evans' response to TMQ is based on a pair of common mistakes. The 'assumption behind Evans' confidence' about the answer to TMQ is, on her view, that 'continuousness and pulsatingness in whatever medium must be represented by continuousness and pulsatingness, hence will always be recognised again'.³¹ Thus, on her view, Evans succumbs to the mistakes she calls 'content internalizing' and 'content externalizing'. One makes the former mistake, in the case of perception, if one thinks that properties represented when one perceives belong also to the vehicle that carries the content in which those properties are represented. Content externalizing is the reciprocal move: thinking of properties of the vehicle as 'showing up', also, in the content the vehicle carries. The Millikanian explanation—and diagnosis—of ASYMMETRY is that whilst we have come to recognize the falsity of such moves for experience of colours and shapes, it is less clear that we have, as she puts it, 'assimilated the truth' in the case of temporal experience.³²

The first problem for Millikan's explanation is that it depends on its being phenomenologically plausible (if, as she thinks, ultimately mistaken) to think of experiences of pulsating things as themselves pulsating, and experiences of continuous things as themselves continuous. But this is not intuitive. Continuous experiences of pulsating things, and pulsating experiences of continuous things, are easy to imagine and occur fairly frequently.

The second and more interesting problem relates to the status of Millikan's explanation *as diagnosis*. It is important for Millikan not only that we think that the answer to TMQ is 'yes' due to making the internalizing and externalizing moves she identifies, but also that these moves are mistaken for all kinds of properties. It seems right to say that they are mistaken for spatial properties. However, whilst they probably are mistaken for the temporal qualities mentioned in TMQ (pulsatingness and continuousness) there is another temporal quality for which content internalizing and externalizing moves are, arguably, valid. The temporal quality in question is temporal location: the place in time at which something seems to occur or obtain. It is tempting—and I will suppose, true—to say that there does not seem to be any distinction, in experience, between the apparent temporal location of the objects of experience (when they are present or occur) and the temporal location of the experience itself.³³ So Millikan's explanation of ASYMMETRY fails as diagnosis, because to the extent that we may be reluctant to abandon content internalizing and

³¹ Ruth Millikan, R. 'Perceptual content and Fregean myth' *Mind* 100 (399) (1991) pp.439-59, at p.443. There is some exegetical support for Millikan's diagnosis; see Evans, 'Molyneux's question', p.373 n.18.

³² *ibid.*

³³ For defence of this claim see Ian Phillips, 'The temporal structure of experience' in D. Lloyd and V. Arstila (Eds.), *Subjective Time: the Philosophy, Psychology, and Neuroscience of Temporality*. (Cambridge MA: MIT Press, 2014), pp.139-158 and Oliver Rashbrook, 'An appearance of succession requires a succession of appearances' *Philosophy and Phenomenological Research* 87 (3) (2013) pp.584-610.

externalizing in the case of temporal properties—i.e., where temporal location is concerned—we may well be right to do so.

Now, as far as a defence of the structural explanation is concerned this last point may seem otiose. Millikan's explanation is no serious competitor to the structural explanation just because, as we have already seen, it is not intuitive that experiences of pulsation pulsate, and experiences of continuousness are continuous. But it is worth homing in on the failure of Millikan's explanation as diagnosis, in any case. Why? As we saw in the previous section, the structural explanation allows us to accommodate the idea of perceptual experience's having modality-specific features, without threatening the objectivity of such experience. Exploring why we are tempted (and right to be tempted) by content internalizing and externalizing moves in the case of the perception of temporal location, if in no other case, helps to reiterate the point that modality specificity does not, in itself, imply a lack of objectivity, and also to argue that modality specific features may have a positive role to play in at least one kind of perceptual objectivity. In fact, we should not rule out, yet, that the spatial structural features that figure in the structural explanation of ASYMMETRY have just this role.

7.2

Our reluctance to abandon content internalizing and externalizing moves just for the case of temporal location is explained by the following phenomenological observation:

(D) There is not an introspectively accessible distinction between the temporal location of an experience, and the temporal location of the apparent object of that experience. An analogous claim about spatial location does not seem to be true.

Note that what D says about the spatial character of experience is wholly negative: there is not a certain lack of an introspectively accessible distinction, namely, between the spatial location of experience and of its (apparent) objects. There is reason to emphasise this wholly negative claim. Even the *question* of the relationship between the temporal properties of experience and of its objects arises in the case of temporal properties, specifically, because, as Ian Phillips has written, 'time is special':³⁴ experience *has* temporal properties that one can attend to, even if indirectly, by attending to the objects of experience. Thus one can so much as ask about their relationship to the temporal properties of other things, such as the objects of experience. It is not clear we can make any sense of the idea of experience having introspectively accessible, spatial properties of its own, such that we can so much as ask about their relationship to the apparent spatial properties of the objects of experience. Hence, there is a wholly negative claim to be made here: we do not find a certain distinction in the case of our experience of temporal location, and we cannot say the same about our experience of spatial location.

However, what D says about the spatial character of experience can be spelled out more positively, too. Which is to say, there is a positive, introspectively accessible distinction to be made between the spatial properties of the apparent objects of perception and something else. The relevant distinction is between the spatial location of the apparent objects of perception and the spatial location *from which* one seems to

³⁴ Phillips, 'The temporal structure of experience'. p.139.

perceive those objects. Turning to *this* distinction is not changing the subject away from D. The temporal location from which one apparently perceives things is most naturally thought of as the temporal location of the experience one has. What else could it be? So, we can understand the following, D2, as equivalent to D:

(D2) There is an introspectively accessible distinction between the spatial place from which one perceives things, and the apparent spatial location of those perceived things. There is no such distinction, on the other hand, between the temporal location from which one perceives things, and the apparent temporal location of those perceived things.

And D2 can, in turn, be expressed much more neatly as follows:

(D3) Perceptual experience has a *spatial perspectival character*, but does not have a *temporal perspectival character*.³⁵

D3, a spelling out of D, is then a way of capturing why we are tempted (and right to be tempted) by content internalizing and externalizing moves in the case of the perception of temporal location, if in no other case. And the reason why we are not tempted to make the moves for the case of spatial location is, arguably, an aspect of the phenomenal character of perceptual experience that is responsible for one kind of perceptual objectivity, namely, the *phenomenal* objectivity of perceptual experience. An experience is phenomenally objective if it *seems* to be an experience of objects that are not dependent for their existence on the perceiver's mind. As A.D. Smith points out, one way in which experience can achieve this kind of objectivity is by presenting to us the spatial relationship between objects of awareness and ourselves. As Smith puts it:

Perception concerns the "external world." The suggestion is that this is, in essential part, because perceptual experience presents such "external" objects as *literally* external—to our bodies.³⁶

Suppose this is right.³⁷ Note, now, that like the *spatial structure* of experience, the *spatial perspectival character* of experience is modality-specific: it differs across the senses. Arguably, it differs in that there are different locations from which one seems to perceive in different modalities. I seem to see *from* the location of my eyes, and hear *from* the location of my ears, and so on. It also differs in other ways. The lemon seems to be at a location distinct from the place from which I see it in that there seems to be quite a distance between the two: a large spatial separation. The lemon-odour seems to be at a location distinct from the place from which I smell it in that it seems to be in the vicinity of my nose, but is otherwise (usually) indeterminately located.³⁸ The lemon seems to be at a location distinct from the finger with which I feel it in that it seems to be just beyond the boundaries of that finger, and in contact with it. Of

³⁵ This is not to say that temporal perception is not perspectival in some other way. See Christoph Hoerl, 'The perception of time and the notion of a point of view' *European Journal of Philosophy* 5 (2) (1998) pp.156-171.

³⁶ A.D. Smith, *The Problem of Perception* (Cambridge MA: Harvard University Press, 2002), p.134.

³⁷ C.f. Susanna Siegel, Susanna, 'Direct realism and perceptual consciousness' *Philosophy and Phenomenological Research* 73 (2) (2006), pp.378-410.

³⁸ See Richardson, 'Sniffing and Smelling'.

course, there are no corresponding differences in the temporal perspectival character of perceptual experience since it has no temporal perspectival character.

If Smith is right that one way for experiences to be phenomenally objective is for them to be spatially perspectival, and yet the spatial perspectival character of experience differs across the senses, then some modality specific spatial features of experience do not preclude, *but are responsible for* its objectivity (of one kind, anyway). And these will be whatever modality specific features are involved in perceptual experience, in each modality, having the spatial perspectival character that it does. The significance of this for our purposes is three-fold. First, it is a further illustration of the point, made above, that there is no clear connection between modality-specificity and a lack of objectivity. Second, it shows, further, that some modality specific features may have a positive role to play in perceptual experience's achieving at least one kind of objectivity. Third, we should not rule out that the modality specific features involved in experience, in each modality, having the spatial perspectival character that it does *just are* the spatial structural features that figure in the structural explanation of ASYMMETRY.

We should not rule this out because it is plausible that differences in perspectival character, across modalities, are to be explained in terms of something other than just which objects and properties are perceived. I can have a tactile and a visual experience of the same lemon at the same location in space that have different perspectival characters. Structural features, which are a matter not of what is perceived but *how*, seem like good candidates to explain this difference. Furthermore, descriptions of modality-specific perspectival character overlap in obvious ways with descriptions of modality-specific structure. For example, as we saw in §6.1, the spatial structural features of visual experience are such that we are aware not just of objects and their properties, but also *a region of space* in which they are located. The perspectival character of visual experience involves seeming spatial separation between one's eyes and the objects one sees, which is to say, awareness of *the space* between the two. It ought to be explored whether this awareness of space, too, can be explained in terms of the spatial structural features of visual experience. Are we aware of the space between our eyes and the things we see as (part of) the space within which things can be seen? This and related questions deserve further attention which can and will have to wait for another occasion.

We have seen that whatever the answer to Molyneux's Question might be, there has been resistance to answering 'no' due to an association between views of perception in which it is in some respect modality specific, and views on which our 'access through perception to the world out there' is threatened. I have argued that the modality specific, spatial, structural features of experience that explain hesitance about answering 'yes' to MQ are not, in this way, threatening. In fact, there are reasons, deserving of further exploration, to think that these modality-specific features might have a positive role to play in the objectivity (of one kind, anyway) of perceptual experience.

Department of Philosophy
University of York
York
YO10 5DD
louise.richardson@york.ac.uk