In a State of Pain

Paul Noordhof

Michael Tye and I are both Representationalists. Nevertheless, we have managed to disagree about the semantic character of 'in' in 'There is a pain in my fingertip' (see Noordhof (2001); Tye (2002); Noordhof (2002)). The first section of my commentary will focus on this disagreement. I will then turn to the location of pain. Here, perhaps somewhat surprisingly, there seems to be much more agreement between Tye and me. I restrict myself to three points. First, I argue that Tye has not succeeded in providing a decisive consideration against a related theory which takes pains as representationally unmediated objects of pain experiences. Second, I defend Tye against an objection from Murat Aydede. Third, following on from this, I question whether Tye's characterisation of the content of pain experience is correct. The fact that there is so much to discuss is a testament to richness, interest and exemplary clarity of Tye's work.

1. In

The nature of the first disagreement concerns the proper account of the invalidity of inferences such as

(1) The pain is in my fingertip.
(2) The fingertip is in my mouth.
Therefore,
(3) The pain is in my mouth.

Tye argued that this inference is invalid because pain contexts are intensional. If we recognise this, he claims, we will see that the 'in' of 'in my fingertip' is to be understood simply spatially. He cited this, at the time, as an important consideration in favour of the Representationalist view (e.g. Tye (1995a), pp. 226-228; Tye (1995b), pp. 111-116). He compared the inference of (1) to (3) with

(4) I want to be in City Hall.
(5) City Hall is in the ghetto.
Therefore,
(6) I want to be in the ghetto (Tye (1995a), pp. 226-228 or 331-332; Tye (1995b), p. 11).

In the latter, we have inference failure due to the intensionality of want contexts.

My initial objection was that the analogy breaks down. Whereas, in the second case, appeal to the intensionality of want contexts preserves the spatial reading of 'in', in the case of pain, it does not. I tried to bring this out by comparing

(7a) There is a pain in my mouth such that I feel pain there (false).
(7b) There is a place in the ghetto such that I want to be there (true).

The fact that my pained finger is in my mouth does not make the pain there. The fact that City Hall is in the ghetto does make the place I want to be in the ghetto. If the 'in' of 'pain in the forefinger' was simply spatial, then (7a) and, for that matter, the following should be true.

(8a) A pain is in my mouth.

In fact, it is false. Whereas, by comparison (7b) and

(8b) City Hall is in the ghetto

are true. So, my thought was, there's no *pure* spatial sense of the 'in' in 'pain in the mouth' to preserve.

I made a proposal of my own. When I say I have a pain in my mouth or a pain in my finger, I am describing a state of my mouth or the finger, that of being painful or hurting. Because my mouth and finger have spatial locations, the pain has a spatial location too. Nevertheless it has a spatial location in virtue of being a state of something which does. The 'in' in such formulations is not simply spatial. It has a state-attributing character with spatial implications in the case of spatial things. I compared the case of pain with the following.

(9) There is a hole in my shoe.
(10) The shoe is in the box.
Therefore,
(11) There is a hole in the box.

The claim that there is a hole in my shoe describes a state of the shoe. The box is not in that state just because a shoe is and the shoe is in the box. Therefore, one cannot conclude from (9) and (10), (11).

I am quite prepared to allow that the failure of certain inferences relating to pain may be due to the intensionality of pain experience, for instance:

(12) I feel that my left foot is painful
(13) My left foot is the foot with harder soles.
Therefore,
(14) I feel that the foot with harder soles is painful.

It is quite conceivable that there may be inference failures because of my proposal and the fact that pain experiences are intensional. One example would be when (1) and (3) are explicitly written as the content of our pain experience. My point is that, even if we allow that pain is intensional, it does not follow that the 'in' of 'pain in the foot' should be taken to be simply spatial and, in fact, it is not.

Tye's attempted rescue of the spatial thesis is to distinguish three spatial senses of 'in'. I list them.

in_1: spatially within

and, in the case of hollow objects,

> in_2: spatially within cavity of hollow object
> in_3: embedded within cavity surround of hollow object.

Thus, he explains why we cannot conclude that there is a pain in the mouth by saying that the context-determined use of 'in' is 'embedded within the cavity surround of a hollow object - in this case the mouth – and by having a finger in one's mouth the pain is not embedded in the surround.

In response, I provided a series of further invalid inferences which sought to question Tye's diagnosis of the situation (Noordhof (2002)). In so doing, I had two aims. First, I wanted to supply cases with which his approach might have difficulty. Second, I wanted to underline the relative smoothness of the application of my own approach.

I think I was unsuccessful under the first heading with the diamond case I actually described so I'll set that one aside. Although there are different criteria regarding what constitutes a flaw for different kinds of object, Tye needn't be sensitive to this in the diamond case I gave because his approach can just appeal to the first and third senses of 'in' as he notes (this volume, p. 31 (Manuscript)). However, I think he does have difficulty with the following.

Suppose a wealthy nobleman is so displeased with the discovery of a flaw in a diamond that he decides to use it as building material for a wall. The following inference would be invalid.

(15) There is a flaw in the diamond.
(16) The diamond is in the wall.
Therefore
(17) There is a flaw in the wall.

There may be nothing wrong with the wall. The flawed character of the diamond does not make it poor building material and it may contribute exactly as it should to the proper structure of the wall. I take it that (15) would involve sense one of 'in' and that the same sense is at work in both (16) and (17). I'm not quite sure how Tye would develop his spatial proposal further to deal with this type of case. My own proposal deals with it perfectly easily. At a rough first pass, in attributing a flaw to an object, we are attributing a state which explains why the object does not meet with some ideal standard. The state in question can have spatial location in virtue of the spatial location of the object. But the use of 'in' in attributing it is not purely spatial. Of course, if I'm right about this, then Tye's treatment of the original diamond case is incorrect.

Let me now turn to the others I cited. Consider

(18) There is a fault in my computer.
(19) The computer is in my office.
Therefore
(20) There is a fault in my office.

Here I was supposing that 'fault' referred to an error *in* software functioning, for instance, in some of the files needed to boot and reboot one's computer. Now I have no doubt that, in fact, an error in functioning can be given a spatial location given that the computer is a spatially extended

object and its programmes load from a spatially locatable memory. Nevertheless, the 'in' of an error 'in' functioning refers to a particular breakdown in the temporal sequence of the computer's operations. There is little doubt that, in English at least, 'in' can be used in a purely temporal sense e.g. 'He arrived just in time', 'In the moments after he first heard of her death….' 'In the middle of the performance, the leading actor lost his wig'. Talk of errors in functioning has some similarities, and may well be an extension of, this usage. If this is what we mean by a fault in the computer, then 'in' does not have a purely spatial meaning. Instead, the spatial location *derives* from the location of the object with the error in functioning.

It is conceivable that Tye can insist that there is a non-derivative spatial sense of 'in' in which a fault can be *in* an object just because it is a feature of its workings. But rather than proliferate another spatial sense of 'in', we might instead note that the failure of the inference stems from the fact that just because there is an error in functioning in the computer, it doesn't follow that there is an error in functioning of my office. Our attribution of this kind of (malfunctioning) state to the computer does not imply that it should be attributed to the office.

I had a related idea in mind with regard to the following inference.

(21) There is a tremor in my hand.
(22) My hand is in my pocket.
Therefore,
(23) There is a tremor in my pocket.

A tremor is a feature of the activity of a hand. Again, I have no doubt that because a hand is a spatially extended object, it will be possible to provide a location for the tremor even if (as Tye envisages) this might end up being the whole hand. Nevertheless, when we say that there is a tremor in the hand, we don't think of a particular spatial location in the hand whether vague or precise but rather attribute a feature to its active and passive state: to its workings. This is brought out by the fact that the various options for spatial location appear forced. We don't think of a tremor as either vaguely located – for example, as a mountain may be - or as taking up the whole hand. Rather its location seems perfectly precise – the hand – while at the same time not taking it all up but only characterising properties of its active or inactive state. Other illustrations of the same usage are 'There is a limp in his step' or 'There is a quickness in his hand'. For that reason, I don't think that Tye happily construes the 'in' of (21) as just the first sense: spatially within. It is true that if he insists upon it, then he has an account of the invalidity which appeals to a simply spatial sense of in. But the tremor is not an isolated case of description of activity.

Here is another inference which fails. It illustrates the same point but lends itself even less to Tye's treatment.

(24) There is a jauntiness in their playing of a piece of music.
(25) Their playing of a piece of music is in the house.
Therefore,
(26) There is a jauntiness in the house.

I should make clear that I'm envisaging that (24) describes *how* they are making the music sound and not the fact that they are moving their limbs in a jaunty manner. So understood, the 'in' of (24) is characterising a state of musical activity. It is not happily interpreted as saying that the jauntiness is spatially within the played music even if this is understood to mean taking up the

entire location of the music (whatever that might mean). It is partly because 'in' has this sense in (24) and (26) that the inference does not follow. Again it is possible for Tye to appeal to a spatial sense of 'in' in which something can be spatially 'in' something else by being a characterisation of its workings or activity but again it is unclear why we must proliferate spatial senses of 'in' rather than recognise the point I have been stressing about the characterisation of states of spatially located objects.

Perhaps Tye will insist that the failure of (24) to (26) reflects the peculiar character of music. There is no need to appeal to a spatial 'in' deriving from the characterisation of an object's workings or activity. He might insist on a similar response in the case of the computer. His point would then be that these uses of 'in' just should not be understood in the same way as the use of 'in' 'a pain in the foot'.

The following inference failure suggests that this line of response will be unfruitful. It concerns the fact that the bottom step of a staircase is made of springy wood.

(27) There is a spring in the step.
(28) The step is in the house.
Therefore,
(29) There is spring in the house.

I take it that Tye would say that (27) involves sense 1 of 'in'. (28) involves the same sense. The house is not a cavity within which a step is present. Part of the structure of the house is the step just like part of the wall was the diamond (if you don't like this, think of a spring in the wall instead). Therefore, (29) should also be a case of sense 1. Yet the inference does not follow. It might be right to call an element of a structure springy without calling the structure springy. The explanation of this is (again) that it is not appropriate to attribute a state to an object – as 'in' can do – just because a part of it is in that state. This case does not appeal to some consideration about what would be an ideal state of an object – as the revised diamond case did - which Tye might hold importantly differentiates the other cases from the cases in which he is interested.

My last example was

(29) There is a poisonous gas in the spacecraft.
(30) The spacecraft is in the earth's atmosphere.
Therefore
(31) There is a poisonous gas in the earth's atmosphere.

Although I'm not entirely clear, I think that Tye's treatment of (29) to (31) is this. The poisonous gas in the spacecraft is within the cavity surrounded by the atmosphere. Hence sense 2 of 'in' is in play. Whereas in (31), the third sense of 'embedded in the cavity surround' is in play. There are three problems with this suggestion. First, Tye is assuming that part of the earth's atmosphere is not in the spacecraft. But at that stage in the flight, this need not be right. Air from Earth may not yet have been replaced by the stores of oxygen and so forth on the spacecraft. In which case, it is not true that the poisionous gas is not 'embedded' in (part of) the earth's atmosphere. Second, and in many ways more important, gases don't embed in other gases. Rather they mingle with other gases. There is a sense of 'in' where x is in y because it is mingled with elements of y. Consider a shoal of fish, shoal A, and another shoal of fish made up of shoal A and shoal B, call it shoal C. It is appropriate to say shoal A is in shoal C. Nevertheless, it seems inappropriate to

say shoal A is embedded in shoal C. Embedding conveys the idea that something is in something else without being dispersed. Shoals and gases are not like that. Third, it is not clear why having the poisonous gas in the spacecraft fails to count as being embedded in the atmosphere unless embedding is tacitly being understood as mingling in this case. For instance, consider

(32) Tanya has a ring in her nose.
(33) A lock of her lover's hair is in the ring.
Therefore,
(34) Tanya has a lock of her lover's hair in her nose.

It seems to me that, in the circumstances, the latter inference is valid. I'm not convinced that there are contextual factors that legitimately settle that embedding can mean mingling in the sense required to explain the inference failure of the spacecraft case.

By contrast, my own proposal can explain the inference failure. In saying that the poisonous gas is in the spacecraft we are characterising a state of the interior of the spacecraft. Just because the spacecraft is in the atmosphere, it does not follow that it is legitimate to characterise a state of the atmosphere in this way. Once more, characterising the state of a part does not imply the same characterisation of the state of the whole.

So let me summarise my first line of objection. I have explained the failure of certain inferences relating to the location of pain in terms which still gives pain a spatial location and which appeals to a perfectly standard use of 'in' not restricted to mental contexts – the state-attributing sense. Tye's insistence on a purely spatial reading of 'in' has trouble with other inferences involving the state-attributing sense of 'in' leading to a proliferation of special *purely* spatial senses of 'in'. I suggest that at some point he is going to have to recognise the state-attributing sense. When he does, he will find that he has a neater explanation of both these cases and his original inference involving pain. As I have remarked, this is compatible with allowing that the intensionality of pain experience will have a role to play in explaining inference failure. The point is just that Tye cannot cite as a consideration in favour of Representationalism that it enables us to see that the proper reading of 'in' in 'pain in a foot' is purely spatial. It is not.

2. The Location of Pain

According to Tye, 'Pain' has a twofold use. It describes a particular mental state – what I shall call the experience of pain – and it describes a particular quality we experience in the body. Tye claims that the obvious naturalistic candidate for this quality is bodily or tissue damage. The following passage sums up his view.

> If pains are representations, what do they represent? The obvious answer is pain…..
> Which quality (or type) is represented? Pain experiences normally track tissue damage.
> So, tissue damage is the obvious naturalistic candidate for the relevant quality (This Volume, manuscript, pp. 3, 4).

He holds that our experiences of pain represent pain in something like the same way as the height of the mercury column in a thermometer represents atmospheric pressure (This Volume, pp. 20-21). From his previous work, we know that the theory of representation he has in mind is, roughly, causal covariance in optimal circumstances (e.g. Tye (1995b), pp. 100-105).

Given that this is his position, it is a little surprising to read him remarking about another theory in which pains are real objects of mental states

> When I feel a pain in my chest, for example, the pain really is in my chest even if the feeling of pain is not. That, however, cannot be right (This Volume, Manuscript, p. 7).

If pain in the second sense is bodily or tissue damage, then pain may be located in the chest. Moreover, he is quite explicit here that he is considering what should be said about pain and not the feeling of pain. He continues

> The pain, whatever else it is on such a proposal, is a mental object for the feeling. And mental objects cannot exist in chests or legs any more than such objects can exist in walls or tables. Of course, I can feel a pain in a hand (that has recently been amputated) and I can place the stump of my arm against a wall or table. But the pain I feel isn't in the wall or table (This Volume, p. 7).

I have a couple of comments about this passage.

First, although pains can't be located in walls or tables it seems very natural to locate them in the body, indeed, that's where our experience represents them to be. If mental objects cannot be located in the body, then we should not think of pains as *mental* objects. So characterising them is not essential to the theory at hand and foisting this upon them is not a sympathetic development of the theory under consideration. Second, if we do allow that pains may be located in bodies, that does not mean that we can't rule out their being located in walls or tables. Once we recognise that the 'in' in 'pain in a phantom limb' has a state-attributing character, no amount of jiggery pokery will impel us to conclude that pain is located in something which cannot hurt. In the absence of a limb, the pain will not be located in the wall. The pain is not represented to have a pure spatial location which, because we have pressed the stump against the wall, lies within in the wall. Instead, our experience of pain represents the pain to be a state of the limb and if the limb doesn't, the default position is that we have an illusion.

Of course, the default position is not realised if we have a case of referred pain. How might opponents of Representationalism think of this? It is compatible with their position that pain experiences are partly representational, namely that part relating to the representation of the location of the pain. In which case, the content of pain experiences would be purely predicational. There would be a gap for an instance of the property of pain. If the subject stands in the right relation to this instance, then it will be tied to a predicational element representing the location of the pain. Thus we might analyse 'John has a pain in his left shoulder as

(34) R(John, pain, <….., in the left shoulder>).

Here 'pain' stands for an instance of the property of pain, 'R' the appropriate relation between John, the instance of pain and a certain predicational content <….., in the left shoulder>. This leaves open the possibility that there can be misrepresentations of location. That is what opponents of Representationalism might choose to say in cases of referred pain generally and, specifically, for those phantom limb cases in which the verdict of referred pain is plausible. As far as I can see, Tye has not provided any grounds for rejecting such a theory.

Let me now turn to Tye's characterisation of the content of pain experience as concerning tissue or bodily damage and its relationship to the intuitive thought that, standardly, pain hurts.

According to Tye, a bit of bodily or tissue damage hurts if it gives rise to a certain affective-emotional response in us. Murat Aydede questions whether such an approach can be adequate. As Aydede rightly says

> One would think that it is *because* the damage feels so painful, hurts so much, that it causes dislike in me, not the other way round (Aydede (2001), p. 33).

Aydede's concern is that Tye can't capture the *causal* connotation of the 'because'. Tye, in effect, concedes to Aydede that this is correct but questions whether he needs to respect any such intuition (This Volume, p. 27).

It seems to me that a proponent of Tye's theory can do rather better than either party allows. First, according to Tye, the affective-emotional response is responsible for representing a particular case of bodily damage as hurting. So we can still capture the intuition that it is something represented as hurting to which we are responding affectively and emotionally. This is not enough by itself to capture the causal intuition but it does serve to explain some of its force. Second, as yet no theory of being painful has been provided. One option is to take it as the disposition to give rise to the affective-emotional response. Different theories of dispositions yield different verdicts as to whether dispositions cause their distinctive manifestations. I think it is by no means clear that, if he were to understand painfulness in this way, he would have to conclude it was inefficacious (see Noordhof (1997) for relevant considerations put in terms of functional properties).

Nevertheless, introducing the disposition of painfulness into the characterisation of the phenomenal content of pain experience has its cost. As Barry Maund notes, Representationalists need an answer to the objection that a visual experience of bodily damage is phenomenally different to a pain experience of bodily damage. If phenomenal differences are just representational differences, then these two states should have the same phenomenal content. There are various moves that Representationalists may make. In his response to Maund, Tye elects to deny that our visual experiences do have bodily damage as part of their non-conceptual representational content.

The problem is that the introduction of painfulness in the content of our pain experience seems to threaten the argumentative force of Tye's response to Maund. Maund suggests that it is appropriate to attribute quite rich phenomenal contents to visual experience including the fact that objects look rusty, wooden or metallic. He sees these as of a piece with saying that a particular part of our body may look damaged. Tye denies that objects look to have these properties in the non-conceptual phenomenal sense. His grounds for this are that, intuitively, there may be things which look phenomenally just like these items and yet lack these properties (This Volume, pp. 22-23). Of course, this does not by itself suggest that looking rusty, wooden or metallic are not part of the non-conceptual phenomenal content of our visual experiences. An essential step to this conclusion is that the existence of something which looks just like a rusty object, but is not rusty, reveals a more general phenomenal property that both of these objects have. Otherwise, we would have to stick to a phenomenal content involving rustiness and just conclude that one object was correctly phenomenally represented to be rusty and the other was not.

The difficulty for Tye is that it seems just as conceivable that there may be features of body parts which give rise to an experience of painfulness in the absence of any genuine bodily or tissue damage. So if it is legitimate to rule bodily or tissue damage out from the proper characterisation of the non-conceptual phenomenal content of our visual experience, it seems just as plausible to rule it out from the non-conceptual phenomenal content of our pain experience on the same grounds.

Perhaps Tye will reply that it is not conceivable that features of body parts, which don't involve, damage will be correlated with experiences of pain in optimal circumstances. To this thought, there are two things to say. First, it is quite conceivable that natural selection should have so arranged matters that some false positives in optimal circumstances take place. There will be some kinds of bodily activity which, although they are not bodily or tissue damage, are sufficiently similar to bodily or tissue damage that it is better that the creature whose body it is experiences pain. Second, Tye is prepared to divorce the characterisation of 'optimal circumstances' from biology to capture intuitions about the consciousness of swamp people. In which case, let us consider a possible world populated by swamp people who have experiences of pain which are not correlated with bodily or tissue damage at all. They may not live long but their brief lives are sufficient to establish that bodily or tissue damage should not figure in the non-conceptual phenomenal content of our experiences of pain if it should not figure in the non-conceptual phenomenal content of our visual experiences of bodily or tissue damage.

So the problem for Tye is that once you allow painfulness to figure in the characterisation of the phenomenology of pain experience, it threatens the centrality of bodily or tissue damage.

References

Murat Aydede (2001), 'Naturalism, introspection, and direct realism about pain', *Consciousness and Emotion*, 2, no. 1, pp. 29-73.

Barry Maund (2002), 'Tye on Phenomenal Character and Color', web symposium on Tye: Consciousness, Color and Content at http://host.uniroma3.it/progetti/kant/field/tyesymp.htm

Paul Noordhof (1997), 'Making the Change, the Functionalist's Way', *British Journal for the Philosophy of Science*, 48, pp. 233-250.

Paul Noordhof (2001), 'In Pain', *Analysis*, 61, no. 2, pp. 95-97.

Paul Noordhof (2002), 'More in pain…', *Analysis*, 62, no. 2, pp. 153-154.

Michael Tye (1995a), 'Representationalist Theory of Pains and their Phenomenal Character', James E. Tomberlin (ed.), *Philosophical Perspectives, 9, AI, Connectionism and Philosophical Psychology*, 1995, pp. 223-239, reprinted in Ned Block, Owen Flanagan and Güven Güzeldere (eds.), *The Nature of Consciousness* (Cambridge, Massachusetts, The MIT Press), pp. 329-340.

Michael Tye (1995b), *Ten Problems of Consciousness* (Cambridge, Massachusetts, The MIT Press).

Michael Tye (2002), 'On the Location of a Pain', *Analysis*, 72, pp. 150-153.