

# EPICUREAN ASPECTS OF MENTAL STATE ATTRIBUTIONS

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In a recent paper, Gray, Knickman and Wegner (2011) present three experiments which they take to show that people judge patients in a persistent vegetative state (PVS) to have less mental capacity than the dead. They explain this result by claiming that people have implicit dualist or afterlife beliefs. This essay critically evaluates their experimental findings and their proposed explanation. We argue first that the experiments do not support the conclusion that people intuitively think PVS patients have less mentality than the dead. And second, we provide an alternative explanation of our ascriptions of mentality to the dead and PVS patients, one which turns on Epicurean considerations about the nature of death.

## 1. Introduction

Questions about how and when we ascribe mental states to other people are at the forefront of debates in the philosophy of mind and social psychology. One particularly puzzling case arises when we consider patients in a persistent vegetative state. A patient in a vegetative state is one who 'appears at times to be wakeful, with cycles of eye closure and eye opening resembling those of sleep and waking. However... there is no evidence that the patient can perceive the environment or his/her own body, communicate with others, or form intentions.' (Royal College of Physicians 2003, p.1). How do we think of such patients? Do we think of them as lacking minds?

In a recent paper, Gray, Knickman and Wegner (2011) report a series of experiments which they take to show that people perceive patients in a persistent vegetative state (PVS) as having less mental capacity than the dead: we think of PVS patients as ‘more dead than dead’ (p.275), as ‘something less than dead’ (p.278). This is a striking claim: do we really think of the dead as being *more* mentally capable than those in PVS who are still alive? This article discusses and criticises their paper.

We focus on two claims from Gray et al. (2011): that people perceive patients in PVS to have less mental capacity than the dead; and that this is explained by the presence of implicit afterlife beliefs or implicit dualistic thinking. Call these the *Datum* and the *Explanation* respectively. In §2 we recap the experiments which Gray et al. take to support these claims. In §3 we discuss some constraints on the methodology that Gray et al. employ. In §4 we criticise the *Datum*: the experimental data does not support the claim that people perceive patients in PVS to have less mental capacity than the dead. In §5 we turn to the *Explanation*: we will suggest that even if people perceive patients in PVS to have less mental capacity than the dead, there is a better explanation for these judgements which doesn’t turn on ascribing to people implicit afterlife beliefs or implicit dualistic thinking.

## 2. Gray et al. (2011)

Gray et al. (2011) designed three experiments to test people’s judgements about the mental capacities of people in a persistent vegetative state when compared both to living people and to the dead. In Experiment 1, participants are given one of three different vignettes describing a fictional character named David who has been in a car accident and either lives, dies, or enters a persistent vegetative state (PVS). Participants are then asked to rate David’s mental capacity by indicating on a 7-point scale whether he ‘can influence the outcomes of situations’, ‘has emotions and feelings’, ‘knows right from wrong’, ‘is aware of his environment’, ‘has a personality’, and can ‘remember the events of his life’. In this experiment, participants reading the PVS vignette gave the lowest rating of mental capacity to David.

In Experiment 2, a corpse vignette was added in order to control for the possibility that ‘the dead are conferred more mind because of a reduced bodily focus’ (p.277). In this experiment, participants reading the PVS

vignette still attributed a lower degree of mental capacity to David than those reading the death vignette. However, a notable result of Experiment 2 is that ‘non-religious participants did not ascribe less mind in the PVS condition than in the *corpse* condition.’ (p.278)

Experiment 3 differed from the previous two in that participants were given vignettes asking them to imagine that they had been in an automobile accident and were either dead or in a PVS. In addition to being asked to rate their own mental capacities, participants were also asked to rate on a 7-point scale ‘how bad’ the outcome would be for them. The PVS outcome was rated to be much worse than death and, as in the previous two experiments, also rated to have the least amount of mental capacity.

Based on the results of these three studies, Gray et al. conclude that ‘people consistently viewed the persistent vegetative state as something less than dead: they ascribed less mind to people in a PVS (Experiments 1-3) and saw it as worse than death (Experiment 3).’ This result is sometimes expressed in terms of how people perceive PVS patients but it seems to us to be more accurate to describe the studies as cases in which participants judged PVS to involve less mentality or to be worse than death. Regardless, however we describe these results, the conclusions Gray et al. draw from these experiments are startling.

### 3. Relying on Fiction

In all three experiments, Gray et al. aim to discern what people intuitively think about a subject’s mental capacities in various conditions by seeing how they respond to some *fictional* story. It is therefore worth asking how it is possible for someone’s judgment about a fictional text to inform us about her beliefs or intuitions about the actual world.

Generally, a fictional story explicitly represents a number of things that a competent reader will regard as true only *according to the story*. In the vignettes written by Gray et al., readers are told that David lives in Ohio, went to college in Michigan and that his surname is Tuchman. These are not facts but they are nonetheless true according to the story participants are given. We shall adopt David Lewis’s (1978) helpful terminology and call these ‘truths in fiction’. If we were to ask readers of the vignettes what state David lived in, we predict the majority would answer ‘Ohio’. This is

because readers respond to what they are explicitly told in the story – it is true in fiction that David lived in Ohio.

Yet we could also ask readers questions that go beyond what a fictional text explicitly says. For instance, we could ask them whether David lived in the United States of America. We predict the majority of readers would respond that he does but that information is not explicitly stated in the vignette written by Gray et al. It does nevertheless seem to be true in fiction that David lives in the United States. Why is that? According to Lewis, it is because truth in fiction is the ‘joint product of explicit content and a background of generally prevalent beliefs.’ (1978, p.44) On Lewis’s account, our background beliefs about the location of Ohio combined with the explicit information that David lives in Ohio entail that he lives in the United States. Thus, in any case in which a fictional story does not explicitly tell readers the answer to a particular question, a reader will typically draw upon her background beliefs in order to answer the question. This is how we are in a position to learn about what people believe by seeing how they respond to fictional stories - their background beliefs partially determine what is true in fiction.

Before concluding this section, we wish to note an important qualification to this methodology. Often there simply is no determinate answer to a question about a fictional text. Consider the very beginning of the text used by Gray et al.:

David Tuchman grew up in a small city in Ohio. He went to college in Michigan and returned home to Ohio afterwards to work at his family’s local business. Shortly after he moved back home, he went out to dinner with some friends from high school at a local restaurant. On his way home from dinner, David’s car was struck head on by a truck that swerved across the median.

We know from the story that David worked in his family’s business. Did he work full-time or part-time? We know that a truck hit his car. Were there other passengers in the car? The story does not provide any information that answers these questions, even when one draws heavily on one’s background beliefs. Plausibly, there just are no determinate answers to these sorts of questions - the text of the fiction, even when supplemented by reasonable auxiliary assumptions, allows for more than one possible correct answer in these sorts of cases (Lewis 1978). This does not mean that we cannot use fiction to learn about a person’s background

beliefs, only that we need to be careful with the wording of the fiction and subsequent questions when using this methodology.

#### 4. The Datum

Gray et al. (2011) take their experiments to support the claim that people perceive PVS subjects to have less mental capacity than then dead. We have called this the *Datum*. In this section we argue that the experiments do not support the *Datum*.

Let's focus on Experiments 1 and 2 in which participants are asked to rate the mental capacity of David. Since David is a fictional character in a text they have just read, we should expect their responses to be largely determined by any relevant information contained within the text. Thus, whether or not participants agree or disagree that David 'has emotions and feelings', 'has a personality', or 'can remember the events of his life' will depend significantly on whether or not the story they read informs them that he does, whether it is true in fiction that he has these mental capacities.

Consider the questions concerning David's mental capacities in the PVS condition. Both experiments use the same text to describe David's PVS condition. Here is how that text ends:

Although David did not die, he entered a Persistent Vegetative State. David's entire brain was destroyed except for the one part that keeps him breathing. So while his body is technically "alive," he will never wake up again.

This text contains contextual information directly relevant to the question of whether or not David has any mental capacities.

First, the story tells the reader that David's *entire* brain has been destroyed, except for one small part that keeps him breathing. This information is obviously relevant to anyone who thinks human brains sustain the mental capacities of living human beings. It would then follow that someone whose brain has been almost completely destroyed (except for some small part that sustains breathing) would lack a significant degree of mentality. We suggest that this is plausibly how participants interpret the PVS vignette.

But now compare the following two questions:

(1) Can *David* remember the events of his life?

(2) Can someone whose entire brain has been destroyed, except for a small part that keeps him breathing remember the events of his life?

Participants are explicitly asked by Gray et al. to answer question (1) but this might be difficult if the story does not specify whether or not *David* has a good or bad memory. As we have seen in the previous section, when a story fails to specify a particular characteristic of a fictional character, it is usually unclear how to appropriately answer a question about that characteristic. Yet we need not worry about this when it comes to David's PVS because the story Gray et al. provide *identifies* David as a human whose entire brain has been destroyed, save one small part. Therefore, by substituting co-referring expressions, participants are easily able to read question (1) as question (2). Can someone whose brain has been destroyed remember events of his life? Does he have emotions? Does he have a personality? Memories? It is very difficult to see how.

The PVS story explicitly conveys information about a serious physiological impairment that implies David lacks mental capacities and this is further encouraged implicitly in two ways. First, in the questions given to participants Gray et al. use quotation marks to flag the term "alive". (The questions given to participants – including this use of quotation – can be found in the Appendix material.) Why use scare quotes here? According to standard theories in linguistics, quotation marks encompassing a word indicate non-standard usage and signal to the reader that the word does not contribute its ordinary semantic interpretation to the sentence – in this case the quotation marks indicate that David's body is not alive in the standard sense (Gutzmann and Stei 2011; Predelli 2003).

Yet, even if quotation marks were omitted, non-standard usage is further indicated by the use of the word "technically", a term that pragmatically hedges or mitigates the illocutionary force of an expression (Holmes 1984). So saying that someone is "technically alive" conveys something like: "he's not alive in the ordinary way, and, we have some reservations about using this description." These sorts of implicit indications do not entail that David lacks mental capacities, but they do encourage readers to make pragmatic inferences that could explain the authors' non-standard

usage. In the context of a fictional story, a reader's attention will naturally be drawn to other aspects of the story that might serve as a plausible explanation. Perhaps the reason David is only "technically" alive is because nearly all of his brain has been destroyed.

We therefore propose that the text Gray et al. use to describe PVS contains information that makes it extremely improbable that David has any mental capacities. In particular, because the story explicitly tells readers that the parts of his brain that would normally support certain mental capacities have been destroyed, it implies that David lacks emotions, awareness, memory, knowledge, personality, and the ability to influence the outcomes of situations. The judgement that it is true in the fiction that David lacks mental capacities draws on participants' background beliefs about the role of the brain in sustaining mental capacities rather than participants' background beliefs about PVS. And since the experiment does not support claims about the participants' judgements about PVS patients, it does not support the claim that that people judge PVS patients to have less capacity than the dead.

This raises a question about the methodology of these studies. Gray et al. claim they are testing "lay intuitions" about a subject's mental capacities. But, in that case why does the PVS vignette give participants so much information about that condition? Why not simply end the story with "he entered a Persistent Vegetative State" and let participants appeal to their actual "lay intuitions"? It may be that if the story did not specify what it is like for a person to be in a vegetative state, participants would give higher ratings of mental capacity. Indeed, this would be what we would predict if participants intuitively thought people in a vegetative state maintained some minimal degree of mentality, a very natural intuition that is explicitly excluded by the story Gray et al. use.

One might think the more detailed description is needed in order to explain to naive readers what a persistent vegetative state is. The problem, however, is that the description given by Gray et al. is not at all uncontroversial. Several studies seem to show that vegetative patients are responsive to speech and there is also some evidence that they have the ability to imagine (see Shea and Bayne, 2010 for a review and discussion). So it is misleading to characterize a standard PVS patient as someone who only retains the ability to breathe. We could modify the end of the story by deleting the last two sentences and it might then be used to reveal

something interesting about peoples' lay intuitions concerning PVS. But it is also possible that we would obtain very different results.

## 5. The Explanation

But what if the results of a suitably modified experiment did support the *Datum*? What if we found evidence that people did judge PVS patients to have fewer mental capacities than the dead? It is important to recognise the strangeness of this result. A very natural thought is that death signifies the end of your mental capacities. And if the dead have no mental capacities, then it is not possible for there to be people who have fewer mental capacities. The preferred *Explanation* of Gray et al. is a codification of this thought: we do not think of the dead as having no mental capacities because we implicitly believe that a subject's mental capacities continue after her death. Gray et al. suggest two sources for this belief: i) that we implicitly believe in an immaterial mind or soul that lives on after the death of the body and ii) that people view others as *either* minds *or* bodies (p.276). Call these *afterlife* and *dualist* beliefs respectively.

Experiment 2 aims to support the *Explanation*. The central thought is that dualistic thinking is reduced when subjects are made aware of the dead as non-minded bodies – at least, for those who do not hold explicit afterlife or dualist beliefs. By reframing the dead person in the vignette as a corpse – that is, a body – those without explicit views about the survival of mind after death are forced to reconceive the dead person as a body and, if the *Explanation* is correct, should no longer ascribe fewer mental capacities to the dead than to PVS patients. Furthermore, this change should not hold for those who do hold explicit afterlife or dualist beliefs. Taking self-declared religiosity as a correlate for afterlife and dualist beliefs, the gap in ascribed mental capacities should remain for those with religious views. This is what was found in Experiment 2.

Gray et al. cite other studies which show that people hold implicit afterlife or dualist beliefs. In what follows we will not challenge this wider claim. Rather, we aim to provide an alternative explanation of the *Datum* which doesn't involve the ascription of afterlife or dualist beliefs. We think that our explanation is a more plausible explanation of the *Datum* but further studies would be required to show which is to be preferred.

We call our alternative explanation the *Epicurean Explanation* after the following much-discussed fragment from Epicurus:

So death, the most terrifying of ills, is nothing to us, since so long as we exist, death is not with us; but when death comes, then we do not exist. It does not then concern either the living or the dead, since for the former it is not, and the latter are no more. ('Letter to Menoeceus', pp.124-5)

The Epicurean holds that when people are dead, they no longer exist. If people are implicit Epicureans, then they hold that the dead no longer exist. We explain below how this accounts for the *Datum*.

Start with Experiment 1. Why do people ascribe less mental capacity to PVS patients than to the dead? Note first the format of the study. Participants were asked to indicate the extent to which David could exercise various mental capacities. And the questions were answered on a 7-point scale from “-3, Strongly Disagree” to “0, Neither Agree nor Disagree”, to “3, Strongly Agree”. How would we expect implicit Epicureans to answer these questions?

One might think that implicit Epicureans should answer “-3, Strongly Disagree” to all the questions – after all, if David no longer exists when he is dead, then he cannot exercise any mental capacities. But there is a problem in negating the claim that David can exercise a mental capacity which may prevent implicit Epicureans from answering “-3, Strongly Disagree”. Consider the case of “Knows Right from Wrong”. Participants are asked the extent to which they agree with the following statement:

(3) David knows right from wrong.

How should we negate this statement? We take the natural negation to be:

(4) David doesn't know right from wrong.

Disagreement with (3) implies agreement with (4). And – this is the problem – (4) seems to commit one to the existence of David, a commitment which is incompatible with implicit Epicureanism.

This is a claim about what (4) *seems* to commit us to: in our more reflective moments we may deny that the truth of (4) requires the existence of David. But this is a reflective judgement to be made when thinking about the complicated semantics of such statements. Prima facie, (4) involves a commitment to David's existence. And if disagreement with (3) implies agreement with (4), then disagreement with (3) involves a commitment to David's existence.

Consider an analogy. Do you agree or disagree with the following statement: "I have stopped beating my partner"? Questions of this form have long been recognised to be problematic (Diogenes, *Lives* 2.135). Neither agreement nor disagreement seems an appropriate response because both seem to involve an admission that one once beat one's partner. This problem arises because the question presupposes that you beat your partner. If one thinks that when the presupposition of a sentence is false, the sentence itself is neither true nor false (Strawson 1950, 1964), then neither agreement nor disagreement will be an appropriate response to the original question. Similarly, if (3) presupposes the existence of David, then neither agreement or disagreement will be appropriate for subjects who deny the existence of David.

What, then, would we expect implicit Epicureans to do in this situation? The right thing to do would be to judge "0, Neither Agree nor Disagree". This is the best way to signal that (3) is false without committing oneself to (4). We thus have an Epicurean explanation of the data concerning the dead.

What about PVS patients? PVS patients exist, so we would expect implicit Epicureans to have no problems making judgements which commit them to the existence of such people. So, in the case where David is a PVS patient, there is no reason for implicit Epicureans to avoid asserting (4). Since that is the case, they are free to disagree or strongly disagree with (3). We also have an Epicurean explanation of the data concerning PVS patients.

What about Experiment 2? In this experiment, the vignette was reframed to make salient David's body in the death condition. How should we expect implicit Epicureans to respond? In the explanation given by Gray et al., the saliency of David's corpse leads people to focus on his body rather than his mind. On our Epicurean explanation, the saliency of David's

corpse leads people to think David continues to exist, albeit as a corpse, rather than thinking of him as having gone out of existence. The wording of the example strongly encourages this way of thinking: “David dies on impact... David now lies in a coffin underground.” (p.277). Since the wording of the example takes a stand on the continued existence of David – he exists, in a coffin underground – we would expect implicit Epicureans to have no problem asserting (4). Since that is the case, they are free to disagree or strongly disagree with (3). This is what we see in Experiment 2.

The Epicurean explanation suggests that those who do not think that we go out of existence at death will have no problem in asserting statements of the form of (4), and thus will have no problem agreeing or disagreeing with (3) in cases where David no longer exists. However, those who believe in an afterlife do not think that we go out of existence with death and thus, to the extent that religiosity is a shorthand for belief in an afterlife, we would expect those who are religious to have no hesitation in agreeing or disagreeing with (3) when David is dead. This is supported by Experiment 2: participants who are high in religiosity are happy to agree with statements of the form of (3) whilst those who are low in religiosity neither agree nor disagree. And since highly religious participants are unlikely to be implicit Epicureans, their distinctive pattern of response in Experiment 2 is best explained by a belief in an afterlife.

Consider finally Experiment 3. In this experiment participants were asked to imagine that they were in a car accident resulting in either PVS or death and indicate ‘how bad’ the outcome would be for them. Participants reported PVS to be a worse outcome than death. They were then asked about their mental capacities in each case: as in the previous experiments, participants rated themselves to have fewer mental capacities in the PVS case than in the death case. Since the ascription of mental capacities correlates with the perceived badness of the outcome, Gray et. al. claim that ‘evaluations of PVS are linked to mind perception’ (p.248).

The Epicurean explanation provides an alternative diagnosis. The relative badness of PVS and death is not to be explained by the fact that the former involves one having fewer mental capacities than the latter, but by the fact that one goes out of existence at death. On this explanation, implicit Epicureans take existing in the PVS condition to be a worse state of affairs than not existing in the death condition: in their estimation, existing with severely diminished mental capacity is worse than not existing at all. This

comprehensible and common-sense ordering explains the judgements about the relative badness of PVS and death without reference to beliefs about mental capacity differing in the two conditions.

The Epicurean explanation provides an alternative explanation of the kind of data canvassed in Gray et al. (2011) and does so without ascribing to people implicit afterlife or dualist views. It follows that the *Datum* cannot be used to support the ascription to people of implicit afterlife or dualist views.

Furthermore, the Epicurean explanation has an advantage over the *Explanation* offered by Gray et al. in that it predicts the divergence in ascription of mental capacity between the life and death conditions found in Experiment 1. In Experiment 1, participants ascribe more mental capacity to the living than to the dead. This is easily accounted for by the Epicurean explanation: David exists only in the life condition. But it is unclear why implicit dualists would ascribe less mental capacity to the dead compared with the living. There is thus some reason to prefer the Epicurean explanation since it predicts a difference in mental capacity ascription between both the life and death conditions *and* the death and PVS conditions, unlike the *Explanation* offered by Gray et al. which predicts a difference in only the latter case.

There is a further way in which these competing explanations can be tested. The two make differing predictions about the ascription of bodily attributes to David in the death condition. According to Gray et al., the reason that subjects judge that the dead have more mental capacities than PVS patients is that subjects implicitly believe that the dead continue to exist as minds after death. If this is correct, then subjects who are asked whether David has various bodily attributes in the death condition should be inclined to disagree or strongly disagree. In contrast, the Epicurean explanation holds that subjects implicitly believe that people go out of existence at death. This explanation draws no distinction between mental and bodily attributes. It thus predicts that judgements about whether David has various bodily attributes should match subject's judgements about whether David has various mental capacities in the death condition.

However, certain questions about David's bodily attributes will be ineffective at testing these differing predictions because they can be understood as asking whether David's *body* has those attributes. Consider a

question that asks whether subjects agree or disagree with the following statement:

(5) David has two legs.

If subjects understand this as asking about David's *body* then they will agree or strongly agree with the statement regardless of their implicit beliefs about the persistence of minds after death or about the existence of people after death.

We can avoid this problem by choosing an attribute which requires a subject to be embodied but which doesn't apply to bodies, for example the attribute of being left- or right-handed. Consider now the question which asks whether subjects agree or disagree with the following statement:

(6) David is left- or right-handed.

Since bodies are not the kind of thing which can be left- or right-handed, there is no temptation for subjects to hear this as a question about David's body. But since only subjects *with* bodies can be left- or right-handed, we have a case where the two explanations make differing predictions. The explanation of Gray et al. holds that subjects implicitly believe that the dead continue to exist as minds and not bodies. Thus since the truth of (6) requires that David have a body, they should be inclined to disagree or strongly disagree. In contrast, the Epicurean explanation holds that subjects implicitly believe that people go out of existence at death. Thus if (6) presupposes the existence of David, the Epicurean explanation predicts that subjects will neither agree nor disagree with the question. The two explanations can be empirically tested.

## 6. Conclusion

Our starting point was the question of how we think of people in persistent vegetative states. As the clinical definition from the Royal College of Physicians makes clear, the vegetative state sits uneasily between two extremes: it involves some of the characteristics we associate with being wakeful, but there is no clear evidence of perception, communication or the formation of intentions. Gray et al. make the surprising claim that we ordinarily think of such patients as having less mental capacity than the dead and that this is explained by the presence of

implicit afterlife beliefs or implicit dualistic thinking. We have provided reason to doubt both of these claims: the experimental data does not support the claim that people judge patients in PVS to have less mental capacity than the dead. And even if it did, there is a better explanation available.

Why does this matter? The legal and ethical requirements governing the treatment of patients in a persistent vegetative state have been prominent in public discourse since at least 1993 when the House of Lords ruled that medical treatment could be withheld from Anthony Bland, a PVS patient. Gray, Knickman and Wegner suggest that our commonsense contributions to these debates may be hindered by the fact that ‘people’s perceptions of PVS are out of step with objective biological functioning’, since after all ‘a person in PVS... is more functional than a dead person’ (p.279). Our *Epicurean* explanation has no such implication. There are interesting questions about our attributions of mentality to PVS patients but we have been given no reason to think that we think of them as, mentally, less than dead.

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