Knowing Pain

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Abstract

We might have different projects in mind when we ask whether we know pain. Can I know what someone else is going through when they say they are feeling pain? Do you and I always know that we are in pain when we are in pain? Can we know something about pain in general, about its essence, what makes it a pain? In nursing, McCaffery’s Principle states that pain is whatever a patient says it is whenever the patient says it is. But this principle, while being morally cautious, is no guideline for knowledge. This article explores the epistemic strength of knowledge-claims about pain from different perspectives, such as the definition of the International Association for the Study of Pain. I assess how accurate we may be given such existing pain phenomena as pain asymbolia, emotional pain, or Welschmertz. One of the conclusions derived is that the phenomena grouped under the label ‘pain’ are not homogeneous, which challenges a mono-disciplinary pain science and undermines the strength of most of our knowledge claims concerning pain. I close with an outlook on the limits of our knowledge about pain and suggest that currently marginalized methods in pain science may help to improve our knowledge about pain in general in the light of the heterogeneity of phenomena labelled ‘pain’.

Key Words: Epistemology of pain, homogeneity of pain, pain asymbolia, pain ascription, self-ascription of pain, IASP definition of pain.

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1. Introduction

Do you know what I feel when I tell you I am in pain? I hope so, especially if you are my doctor or nurse. But hope is a poor guide to knowledge: I hope that I will not die, but we all know that death is inevitable. So, do I know that you and I agree on what pain is?

Much depends on whether we know what pain is or is not, but, depending on our roles, we have different goals in mind. Pain scientists want to know the nature of pain and its connection to our body’s activity, anatomy and chemistry. Caregivers want to know what you are going through so they can treat you accordingly: is it an intense and burning pain? Can you localise it? Does it spread? Are you confusing a pressure experience with pain? Might you even be a hypochondriac? All this matters for providing the right treatment. Lastly, your friends and family want to relate to your suffering. Sometimes, they may excuse your misbehaviour because you are in intense
pain: think of a wife swearing at her husband while she is in labour, or a father cursing in front of his kids after hitting his thumb with a hammer. In some sense, even adequate empathy for pain is connected to knowledge about pain since it requires a similarity between your experience and my idea of that experience. If my idea of your pain is one of a little tingle while you are suffering intensely, my empathy is likely to seem shallow or even sarcastic to you.

So, do we know pain? Let me offer three interpretations of the question: (1) Can we know what someone is experiencing when they use the expression ‘pain’ or its synonyms? (2) Do I know when I myself am in pain? (3) What can we know about pain in general and what may be the limits of our knowledge?  

Nothing seems to be clearer to ourselves than the feeling of pain. There is, some philosophers claim, such a self-intimating moment in experiencing pain that we immediately know that we are in pain: there is no feeling pain without knowing that you are in pain.  

Pain is epistemically luminous: it ‘shines’ so brightly that we are automatically informed when we have it. Conversely, our beliefs about pain can be seen as transparent: whenever I believe that I am in pain, I am in pain. That at least is a standard assumption in healthcare: ‘pain is whatever the experiencing person says it is, existing whenever he says it does,’ writes Margo McCaffery. We immediately see through the belief to the referent that the belief pertains to. Being in pain and believing to be in pain suggests knowledge that we are in pain.

A belief about one’s pain is, thus, self-warranting: if one has this belief, it is true and justified. So the answer to (2) would be positive. If we ask somebody whether she is in pain and, if she answers without wanting to deceive, we know that she is in pain. Yet, we do not know what kind of pain she is in or what this pain is like. This may be revealed by further description. Or my belief that her pain is like what may be warranted by her present and my past pain experiences being identical in quality. If people answer truthfully or if qualities are shared, the answer to (1) is also positive. If pain truly is such a self-intimating phenomenon, then—concerning (3)—there seem to be very few boundaries to what we might know about it.

Unfortunately, the story is more complicated. In a slightly different context, Fred Dretske provides strong reasons for doubting the connection of the self-intimating aspect of pain and knowledge about pain: we must distinguish between awareness of things and awareness of facts. Things are linguistically expressed in nominal phrases, like ‘ball’ or ‘the woman my father married.’ Facts, on the other hand, are linguistically expressed in sentences, like ‘My father married a woman.’ The knowledge demanded by the three questions posed above is knowledge that or propositional knowledge: when you have knowledge of your propositional knowledge, then you have (at least in the classical picture of knowledge) a justified true belief. Beliefs are stances or attitudes a person has towards a proposition: you think that a proposition p is true. In the case of knowledge, p is actually true. As an example, consider me knowing that I am short-sighted. For the sentence to be knowledge, it actually has to be true—I really have to be short-sighted to know that I am short-sighted. That is why knowledge can be called a fictive mental state.

Knowledge of things is not propositional; it is not knowing that. Consider the sentences ‘I know Bob,’ ‘I know Paris,’ or ‘I know karate.’ These sentences seem to express a kind of knowing how: that we know how Bob acts, we know how to get around in Paris, and we know how to chop boards in half with bare hands. Compare this with a different kind of knowledge, knowing what-it-is-like, which is knowledge of the qualitative feeling of mental states: knowing what it is like to eat cheesecake or knowing what it is like to dream of flying.  

Regarding the knowledge of pain, it seems obvious that the knowing subject has to have had the experience. An analgesic, somebody who is unable to feel pain, cannot know what it is like to have pain, even though she may have complete propositional knowledge. She may understand the phrase and have an idea about it due to others telling her, but in a way her understanding of pain resembles the understanding of colour by a blind person.

Strictly speaking, one cannot know what another’s pain is like because nobody can have another person’s pain: the subject being in pain is an inextricable part of the pain experience. This does not exclude the possibility that there are resemblances, shared structures or properties, between different people’s pain experiences. We can state that our pains share properties, but this transcends knowing what-it-is-like: stating identities between properties two objects are having is propositional, not phenomenal knowledge. We are back at knowing that.

Therefore, our three questions aim at knowing that. Thus, even if awareness entails knowledge, awareness of pain must be awareness of a fact to entail this kind of knowledge. When we ask the last question—what can we know about pain?—we ask also for general facts about pain, e.g. the fact that pain is a mental state or that pain is unpleasant. However, when we stand in such an intimate relation to the state of pain, we relate to an object, namely the mental state of hurting. We do not stand in the same relation to a general fact: in the moment you feel pain, you do not experience pain as a mental state, that is, you do not experience that pain belongs to a larger class of objects such as thoughts, emotions and desires. The arguments from self-intimacy do not bring us any closer to answering the three questions above: our awareness of pain is the awareness of a thing; and even if awareness necessarily leads to knowledge, it does not lead to the propositional knowledge needed for understanding somebody else’s pain or knowing something scientifically about pain.
We must therefore focus on propositional knowledge. (1) partly rests on whether everyone assents to the same analysis of 'pain.' Any accepted analysis of 'pain,' e.g. the definition by the International Association for the Study of Pain (IASP), can be the starting point of this inquiry. But that two people must assent to a similar analysis has been questioned on pragmatic grounds in nursing—for example, by Margo McCaffery’s statement that pain is whatever the patient says it is. If this is the way pain scientists and healing professionals approach their target phenomenon, we also ought to consider use-conditions of the term ‘pain.’"" Wiitgenstein mentions use conditions of ‘pain’ in the Philosophical Investigations numerous times, specifically concerning what makes sense to say and what does not. I am not in a position to add a meaningful exegesis of my own; therefore I follow a different methodology: I contrast documented usages of the phrase with one of the most successful analyses of ‘pain’, the IASP definition.

2. What Is This Thing Called Pain?
The definition of the International Association for the Study of Pain (IASP) has determined our scientific understanding of pain since 1986. No textbook on pain does without it. It reads:

Pain: an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage.11

There are four good reasons to accept this as a fitting analysis of our concept of pain. First, it is intuitive: most of us assent to this analysis without further theoretical reflection or scientific training—it simply mirrors our usage as laypersons. This makes it a real definition that reflects our way of speaking in contrast to a nominal definition, where we define arbitrarily, e.g. ‘justice’ as ‘every prime number larger than 12.’12 Second, the definition is scientifically useful. By stating the parts of pain, the definition suggests which sciences contribute to our understanding of pain, e.g. sensory neuroscience, affective psychology, etc. If a phenomenon is complex, it has been a successful strategy in the past to ‘divide and conquer.’13 Third, the definition clearly covers our most paradigmatic pain experiences: broken bones, headaches, stomach aches, muscle cramps, labour pains, toothaches, and so on. Lastly, as a real definition, it is fallible. The IASP recognizes this.

In a footnote to the definition we find:

Many people report pain in the absence of tissue damage or any likely pathophysiological cause. ... If they regard their experience as pain and if they report it in the same ways as pain caused by tissue damage, it should be accepted as pain.16

The generality of the IASP definition is thus under threat from non-standard usage of the term. If we hold on to the thesis that ‘pain’ picks out a homogeneous group of phenomena, we have to change the definition in light of such usage: if a sufficiently large portion of our community of speakers use the expression ‘pain’ without assenting to specific parts of the defnienium, such as actual or potential tissue damage, we could conclude that this is not a necessary part of our idea of pain. This encourages us to test the applicability of the IASP definition in fringe cases. Influential as the IASP definition is, it does not pass this test.

A class of fringe cases leads to the rejection of parts of the IASP definition as necessary. To refute a connection to hedonic valence (pleasantness or unpleasantness) in general, we may refer to pain asymbolia.17 Patients with this pathology do feel pain: they can report about their pain threshold, their pain’s location and its intensity.18 What is lacking in pain asymbolia is pain’s motivational impetus, its emotional force. A telling example comes from a surgeon working in India, whose patient suffered under extreme vaginal cramps, so painful that she turned to brain surgery for relief. After the surgery was performed with a simple wire (!), she stopped complaining about pain. Years later, the surgeon visited her again and asked about her pain-free life. She answered:

‘Oh, yes, it’s still there [the pain]. I just don’t worry about it anymore.’ She smiled sweetly and chuckled to herself.

‘In fact, it’s still agonizing. But I don’t mind.’19

This account is coherent with other reports by pain asymbolics, who show no sign of rational or linguistic impairment as well. Apparently, something in their experience is sufficiently pain-like to be worthy of the label ‘pain.’ This dissociation of pain affect and evaluation from pain sensation is not limited to neural pathologies: pain felt while in a hypnotic trance (e.g. during dentistry), can be experienced as such while lacking any motivation for action;20 sitting pains during meditation can be calmly attended to without emotional evaluation or distress. An experience has to be neither unpleasant nor emotional to be considered pain.

Let me then focus on association with tissue damage, which bears a conceptual problem. Association is an arbitrary cognitive act: anything can be associated with anything else. There is nothing wrong with associating Freud with mothers, Donald Duck with Nixon, or triangles with tissue damage. Still, we rightly hesitate to call images of triangles ‘pain,’ even when they are associated with tissue damage. The association with tissue damage is
Being an alarm system with evolutionary advantage. A strong social constructivist view also ignores evidence that parts of the pain matrix can be traced back to simple life forms such as ringworms. Therefore, description by others should not count as a necessary component for pain any more than description by the sufferer herself.

The IASP definition has thus shrunk to a sensory experience—which pain is in paradigmatic cases. But consider such literary usages as Jean Paul’s Weltschmerz. It describes a painful emotion due to the world’s balefulness and one’s incapability to change it. This mental state, which incorporates a complex set of beliefs about oneself and the state of the world, does have accompanying sensations, but these vary and need not be of any specific sensory modality such as sound, sight or nociception. The term Weltschmerz has caught on since the 19th century, which suggests that it is meaningful to many people. If Weltschmerz is ‘pain’, as the etymology suggests, then pain is not necessarily limited to sensory experience. And if the tie to sensory modalities breaks down, we are left with pain as an experience—which is too unspecific to be helpful.

Is the IASP definition of pain at least sufficient? Imagine the following scenario: Gertrude, an analgesic, insensitive to pain from birth, cannot feel and has never felt any pain in her life. One morning, she wakes up in a hotel, and scrubs her hand on the rough plaster of the wall. Seeing the fresh blood on her knuckle right after waking up angers her. The anger and the sight of blood are unpleasant to her, and both are associated with tissue damage on her hand. Even though Gertrude fulfills all conditions for the IASP definition, she still feels no pain.

If the IASP’s use-conditions for ‘pain’ are neither necessary nor sufficient, we are forced to give up the assumption of homogeneity: we are dealing with a varied field of phenomena grouped together only by loose resemblance. Pain is not one but a family of phenomena. How does this affect our knowledge of pain in ourselves and others?

3. **Knowing Pain?**

We have now seen how much difference there is in the usages of pain expressions and mental states associated with them, from sensational pain asymbolia to cognitive-affective Weltschmerz. The first conclusion has been that pain is not a homogeneous type. How does this affect our knowledge about pain? Clearly, we might confuse knowledge about one subtype of pain with knowledge about another. This raises the question: how justified are we in our knowledge claims about pain? How safe is our propositional knowledge about pain?

Safety has become a technical term in modern epistemology. To determine the safety of a knowledge claim, we consider closely resembling alternate scenarios and see how little change knowledge turns into false
belief. Under safety, if someone knows that p, then she believes that p when p is true in (nearly) all alternate scenarios in which she forms her belief in the same manner as she forms her belief in the actual scenario. Consider the Chicken Exper Case: it is notoriously difficult to determine the sex of a freshly hatched chicken, therefore experts in sexing chicks are highly valued in factory farms. One of these professionals, Gladys, thinks she reliably tells the sex by smell, while her colleague Dorothy thinks she does it by weight. Let us assume that there is only one way to reliably tell the sex of a chick, and that is by smell. An internalist in matters of justification does not ascribe knowledge about the sex of a specific chick to Dorothy, as she is internally unjustified—she believes the wrong justification, namely that she sexes by weight, while externalists do claim knowledge for Dorothy: even if she is not aware of it, she still has the sense of smell that allows for proper sexing. How much do we need to change to see if Gladys’s and Dorothy’s knowledge about the sex of a specific chick is safe? Not much: a runny nose is a minor change in the scenario, yet it might make all the difference.

Considering such alternate scenarios is a powerful philosophically tool: besides asking whether we can know something about pain—and obviously, we sometimes know something about pain—we add the question whether our possible knowledge is safe. We are able to distinguish knowledge from believing truly simply because we are lucky, by asking whether our claimed justification is sensitive to the changing situation. If it is, then we know; if it is not, then we do not know.

4. Can We Know What Someone Is Experiencing when They Say ‘Pain’?

What may be the inner procedure we use to form a belief about the experience that another person is having when she is talking about pain? We might consider an analysis or theory of pain. The IASP definition covers at least paradigmatic cases—statistics is on its side—but it cannot claim safe knowledge, especially not when we are facing a pain asymbolic, a person in grief, or someone feeling Weltschmerz. They all use the expression ‘pain,’ but this usage does not convey enough to know safely what the experience is like, whether it is more sensational, cognitive, or affective. Even if I bracket a theory-based account and simply pose my own pain as a pseudo-referent of her utterance, I cannot claim safe knowledge: there might only be minimal resemblance between her and my pain. The usage of ‘pain’ alone neither suggests nor rejects this possibility: our knowledge of the pain of others based on the usage of the linguistic expression is unsafe. Yet, the probability that our belief is accurate may be heightened by further independent sources such as non-verbal and contextual constraints: observing body language and attending to the social and psychological context of a subject in pain do much more work than hearing the word ‘pain.’ Pain asymbolics, for example, show less facial grimacing when in pain even as they report pain verbally.

5. Do I Know when I Myself Am in Pain?

The question about propositional self-knowledge concerning pain (knowing that I am in pain) is complicated by a lack of research about the connection of an experience and the conceptualisation of this experience. There may be no method at all. Instead, there may be immediate processes, like mental pointing, attention or inner perception. If so, are our abilities to conceptualise our experience as reliable as we might think?

Ned Block has introduced a distinction between phenomenal consciousness (‘phenomenal’ being the property by which something has experiential character) and access consciousness (‘access’ being the property by which a mental state can influence other mental states such as beliefs, emotions or behavioural dispositions). According to Block, this distinction is supported by empirical findings as well as by conceptual analysis. Consider, for example, change blindness: a subject is presented with a complex stimulus, e.g. a scene at the market. After a short switch to grey, the same picture is flashed again but with a detail changed, e.g. the colour of the trousers of one of the vendors. It takes most people quite some time to realise what specifically has changed (therefore: change blindness). Though you sense that a change in your experience has occurred, this experiential change is inaccessible to belief formation at the time of its occurrence. If there is a difference between attending and experiencing, it seems at least possible that you will have an experience of pain to which you are not attending, and therefore may not conceptualise it. If someone has a headache while watching a thriller that person may at first be preoccupied with this pain, but as the suspense rises in the movie, she is increasingly drawn into the story—until she forgets about her headache. Does she still have a headache if she is not attending to it? There is at least the conceivable possibility that pain is still present. Some minor pains may be below the threshold and are not conceptualised at all. If so, there might be a pain that one does not know that one is having it. Therefore, that pain is not luminous.

This means that when one is in pain, one is not necessarily aware that one is in pain. But how about wrongly believing that one is in pain? How about transparency? Our intuitions deny this possibility: if I believe I am in pain, I am in pain. Nursing manuals promote this view: the subjects are always right about their pain—remember Margo McCaffery. In the practice of nursing, giving the subject such an authority may well be justified for pragmatic and moral reasons: we do not want a person to remain in pain even if we might have to nurse a few hypochondriacs from time to time. But this pragmatic stance does not apply to self-ascription. One reason to doubt transparency of pain beliefs—being in pain whenever I believe that I am in
pain—is misconceptualisation. Consider the spiciness of hot food, produced by capsaicin, which occurs naturally in chilli peppers. Most consider this experience a taste—it tastes hot or spicy—but this chemical compound docks to the nociceptors of the tongue, the dedicated pain receptors: on the transducer level the experience of chilli ought to count as pain. Amongst tastes, spicy hotness is unique: imagine the sugariness of candy in the corner of your eye. This is hard for most people. Now imagine the spicy hotness of a chilli in your eye. This comes easy to most. You would not hesitate to call this imagined experience pain. By purity, the ‘taste’ of spicy hotness of food should also be considered as pain on the introspective level. If it is possible to mislabel the taste of spiciness as pain, why should it not be possible that the concept ‘pain’ is misapplied in other cases as well? Allow me another example: at the dentist’s, my friend Jonas’ jaw was sedated, and the dentist asked him whether a certain procedure was painful. Jonas winced in reply. ‘That is not pain,’ said the dentist, and suddenly pushed his instrument under the teeth-ridge: ‘That is pain.’ What is remarkable is not the sadism of a licensed dentist, but Jonas’ comment: ‘The dentist was right; I did not feel pain before, only pressure.’ The misattribution of the concept of pain is therefore plausible. Since such cases exist, our own self-assertions of pain—believing that I am in pain now—might be neither transparent nor (even if true) as safe as intuitively expected. Pain’s privacy (only I myself can be the proper judge of whether I am in pain) makes it hard to evaluate the degree of safety of our knowledge about it. Intuitively, these cases seem marginal, yet how marginal they are is still an open question.

6. What Can We Know about Pain?

Our insight into the non-homogeneous diversity of the phenomena commonly subsumed under ‘pain’ and our limited understanding of the pain of others as well as our own pain affects our knowledge of the nature of pain in general. ‘Nature’ may be understood in two ways. As a metaphysical notion, ‘nature’ refers to the essential properties that make an entity what it is, in this case: pain. But pain experience also relates to our biological nature, in the sense of our evolutionary history and neural make-up.

The metaphysical notion has already been subverted by the failure of the IASP definition: necessary conditions for something to be subsumed under ‘pain’ (other than it being a mental state) cannot be found. If there are no identity criteria for pain, it may follow that pain does not exist—no entity without identity. We meet this challenge by giving up the homogeneity assumption, that is, by regarding pain as not one but many different kinds of experience, grasped by a plethora of concepts grouped together by family resemblance where no single feature is universally shared under one term at the surface: ‘pain.’

There are still facts that we can know about this group as a whole even if they do not suffice for a definition, e.g. that every pain is a mental state. Knowing that more than one kind of phenomena fall under ‘pain,’ we lean toward sub-categorisation. That is, we may know the nature of pain (a), pain (b), pain (c), etc. At the moment, we are far from grasping all of these sub-phenomena. Progress towards such knowledge must involve expanding our awareness of the different contexts of pain phenomena and of the subtle differences between them in different cultures and periods. Historical, ethnological and anthropological studies will further our ability to distinguish sub-phenomena of pain. On the other hand, literature, oral history and visual representations may further broaden our horizon of what is possible in pain. This inquiry may never be exhausted, especially since some possible categories of pains may have not yet been felt or conceptualised by humans. Using only one’s own pain as a study object, as in auto-phenomenological enquiry, sacrifices statistical significance and may even enforce stereotypes, since a single person is not likely to experience all subtypes of pain.

Our inquiry into the biological nature of pain faces similarly grave problems: if we cannot know in which sub-type of pain a person is, we cannot yet determine what the specific neural correlate of that specific type of pain is. Scanning 230 patients may reveal certain regularities in neural activation, yet we might overlook subtle differences in this averaging process: 42 of them might have pain-type (a), while 37 are in pain (b), with the resting in pain (c), except 3 being in a rare pain (d). Examining each group separately could reveal different correlates, but our proven weak categorisation skills might hide a vast diversity, e.g. under the label ‘pain (a),’ which now will all be correlated with only one shared type of neural activation pattern. This is not a problem of neuroscience per se, but of our impaired classificatory access to our own mind—we have not yet provided the concepts that neuroscience can reduce. The best strategy may be to use multiple and independent methods and triangulate the findings.

Revealing minimally sufficient neural correlates is one of the most central goals in the quest for the neural substrates of pain experiences—experiences without description, conceptualisation or belief. Without minimal sufficiency, our results do not reflect what we are looking for, namely the neural correlates of pain experience, not (pain experience + x). If we were to mistake the correlate of (pain + conceptualisation) as the correlate for pain, we might ignore the pain of non-lingual beings like babies, animals or the comatose. Focusing on (pain + x) instead of just pain may side-track us in our search for the phylogeny of pain. There must have been a break-off point in our ancestry: somewhere between single-cell organisms and higher primates like homo sapiens there was a mental quantum leap after which animals could feel pain. Searching for this dividing line is crucial for animal ethics as well as for animal experiments in pain research. Emphasis on (pain
mental states. Further research questions should pertain to contexts: When and why does a person use a pain expression? When are they only metaphorical? When is some pain welcomed and desired? When is pain despised? Studies of extra-phenomenal contexts, those that stand outside the experience of the subject in pain—linguistic, social, ethnological and cultural ones—can complement other extra-mental approaches such as neurology or pharmacology, as well as the study of intra-phenomenal contexts which may reveal which phenomena co-occur ‘in’ the subject. The study of pain should not be confined to the mental state of pain and its inner structure; it should take into account ways in which this state is embedded in our situation and our mind when feeling pain. Triangulation of conceptual, contextual and neuroscientific tools may lead to the breakthroughs we hope for.

Notes

1 These questions relate to three central debates in philosophy: (1) our knowledge of other minds, (2) self-knowledge and the epistemic status of self-ascriptions, and (3) our knowledge of the metaphysical nature of specific mental states. These three questions also have a highly practical impact on nursing, pain treatment and bedside dialogues. That talking to a patient may actually inform a diagnosis is an indicator that at least (1) can be answered affirmatively; there is at least something that we can know about that specific individual pain when the person who experiences it talks about it. It also suggests that there is at least some answer for (3). Quite probably, answers on the philosophical side will influence recommendations for field work in health care. Conversely, if success is an indicator for truth, successful therapies might warrant certain philosophical positions as more plausible than others. In this article, however, the main focus is not on practices or treatment but on the relationship between pain and knowledge.


3 See Timothy Williamson, Knowledge and Its Limits (Oxford: Oxford University Press, 2002). It is quite another question whether pain may also be absent-luminous: whether we always know when we are not in pain. We often are aware of pain’s onset, yet seldom can we say when a pain has ceased. When you take a pill against headache, you will realise after a while that the pain is gone, but you will not be able to determine the exact moment when it has stopped. Hence, there must have been a period when you were not aware whether you were in pain or not.

4 Margo McCaffery, Nursing Practice: Theories Related to Cognition, Bodily Pain, and Man-Environment Interactions (Los Angeles: UCLA Student
Knowing Pain

Gabriel, ‘Definition,’ in Historisches Wörterbuch der Philosophie, ed. J. Ritter and K. Gründer (Bazel: Schwabe, 1980); Frederick Suppe, ‘Definition,’ in A Companion to the Philosophy of Science, ed. W. Newton-Smith (Oxford: Blackwell, 2002). In cases of real definitions, it is permissible to use analysis and definition interchangeably, as I do in this article.
15 A good example has been the study of life, seen as an irreducible \textit{dual vital}, until a specific level of understanding reproduction, metabolism and homeostasis was achieved (cf. Churchland, 2002). With the IASP definition, pain might receive a similar treatment.
16 See n. 13 above.
17 Grahek distinguishes the phenomenology of normal pain, pain asymbolia and analgesia (loss of pain affect) with the distinction between 	extit{feeling pain} and 	extit{being in pain}, a distinction which points toward the involvement of the self. Normal pain experiences have both, while pain asymbolics only feel pain, but are not in pain; analgesics lack both features. N. Grahek, 	extit{Feeling Pain and Being in Pain} (Cambridge, MA: MIT Press, 2007 [2001]).
21 In the case of \textit{aloedynia}, pain is elicited by non-noxious stimuli and associated not with tissue damage but with an effect on the nociceptors themselves. One might argue that this is still damage. Then again, certain types of neuropathic pain—pain due to lesions in the central nervous system—produce pain which is not felt at the location where the actual tissue damage is. Phantom-limb pain is another example: a patient feeling a pain in a hand she no longer has is mis-associating the felt location with the actual tissue damage. We could compromise by saying that the association must not be subjective. It may be sufficient for an outside observer to associate correctly the felt pain with a tissue damage of the subject in pain. This, however, would entail that the subject herself cannot know whether she is in pain or not, as pain is now dependent on an objective association not available to the subject.

Store, 1968). Quoted in Caroline Bunker Rosdahl and Mary T. Kowalski, 
Textbook of Basic Nursing (Philadelphia: Lippincott Williams & Wilkins, 2007), 704.


3 Doubts about this classical picture of knowledge being justified true belief have been raised most prominently by Timothy Williamson (Knowledge and Its Limits, 2002). Williamson states that knowledge is a distinct mental state (21-48).

4 Williamson, Knowledge and Its Limits, 21-48.


6 This may be a temporary state. If our ability to manipulate the human brain progresses further, it is not impossible that we may induce colour experiences in the blind, or pain experiences in the analgesic. Furthermore, it is not yet certain that an identity statement of conscious states with brain states is false, even though strong arguments for this have been put forward. In this case, even an analgesic may know what it is like to have a pain state under the guise of knowledge of neural activity. At the moment, both cases are utopian.

For an overview see P. Ludlow, Y. Nagaosa and D. Stojlar, eds., There’s Something about Mary: Essays on Phenomenal Consciousness and Frank Jackson’s Knowledge Argument (Cambridge, MA: MIT Press, 2005).

There is a danger in making use of a single determinant of whether something is in pain or not, however practical and ethical this approach might be. If we say that pain science is determined by what people call pain, and there are no restrictions on what people can call pain, as McCaffery seems to imply, then pain science is in danger of losing its homogeneity. Furthermore, pain would emerge not as a natural phenomenon, but as a constructed one: everything that is called a pain is pain. This marginalises fruitful evolutionary and neuroscientific approaches.


9 Albert Menne, ‘Definition,’ in Handbuch philosophischer Grundbegriffe, ed. H. Baumgarten and C. Wild (München: Kösel, 1973); H. M. Nobis and G.

S. Benjamin Fink
22 This illusion is known since 1896; for a newer discussion see Bouhassira, et al., ‘Investigation of the Paradoxical Painful Sensation (‘Illusion of Pain’) Produced by a Thermal Grill,’ Pain 114 (2005): 160-167.


27 See George Caftin and John Ewers, O-kee-pa: A Religious Ceremony, and Other Customs of the Mandans (Lincoln: University of Nebraska Press, 1976).


29 ‘Nur sein Auge sah alle die tausend Qualen der Menschen bei ihrem Unter-gingen. Diesen Weltschmerz kann er, so zu sagen, nur aushalten durch den Anblick der Seligkeit, die nachher vergüten.’ [‘Only his eyes saw all the torment of humanity in its decline. This Weltschmerz he can only bear, so to say, by contemplating the bliss that compensates afterwards.’] Jean Paul, Selina oder über die Unsterblichkeit (Stuttgart: J. G. Cotta’sche, 1827), 132, my translation.


38 I believe that pain metaphors, i.e. metaphors used to describe the specificity of a pain, are a valuable tool in gaining further insight into pain difference because they rely on structural similarities between different sections of reality. The use of specific metaphors to describe a specific pain suggests structural parameters that lay the basis for classification.

39 One may hope for a mutual influence: a careful neuroscientific study might reveal subtleties that we may then explore from the first-person perspective.

40 Even in careful studies we may misunderstand the neural correlates of pain per se due to the difference between phenomenal and access consciousness. If these are different processes, they must have different implementations in the brain. It is, however, only our belief that we are in pain that counts as an indicator that we are experiencing pain now. Measuring in this instances will give us, even in the best of circumstances, only a measurement of a state being phenomenal and accessible; Ned Block has called this ‘Epistemic Correlationism’ or ‘Phenomenal Consciousness ↔ Reportable Principle’ (‘Consciousness, Accessibility, and the Mesh between Psychology and Neuroscience,’ Behavioral and Brain Sciences 30 (2007), 483-485). As phenomenal consciousness is different from access consciousness, we need to subtract the activation of access consciousness from the whole measured
activation. This raises a problem: as long as we do not know the neural correlate of access, we cannot know the minimally sufficient correlates of pain experience. Unfortunately, access consciousness needs something to access, and that is phenomenal consciousness. Therefore, block states, we face a hurdle in getting to the neural correlates of pure phenomenal consciousness due to our methodology.


Bibliography


Descartes, René. Principia philosophiae, Amsterdam: Elsevier, 1641.


Popper, Karl. 'A Note on Verisimilitude.' *The British Journal for the Philosophy of Science* 27 (1976): 147-159.


Rubins, J. L., and E. D. Friedman. 'Pain Asymbolia.' *Archives of Neurology and Psychiatry* 60 (1948): 554-573.


