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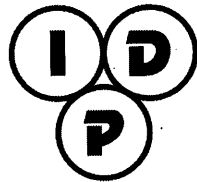
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Making Sense of: Hub  
*'Pain'*



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## A Natural State without a Nature? Dealing with the Ambiguity of 'Pain' in Science and Ethics

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### **Abstract**

Can we find necessary and sufficient conditions for a mental state to be a *pain* state? That is, does pain have a nature? Or is the term 'pain' ambiguous? I argue here that our expression 'pain' lacks necessary use conditions if one considers a range of contexts. As use conditions constrain the reference class, I argue that 'pain' does not refer to a natural category, but binds together a bunch of loosely resembling phenomena. This leads to problems for scientific and clinical discourse. To solve these, a method of explication is suggested, based on a discursive combination between analysis of first-person reports and theories of natural science. Lastly, I consider the ethical implications of this ambiguity that lead to a reformulation of the goal of pain science: not alleviation of all pains ought to be our goal, but only manipulation of conscious and negative emotionally-charged pains.

**Key Words:** Pain, pain asymbolia, neurophenomenology, explication, IASP definition of pain, suffering.

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### **1. Pain: Nature and Nurture**

Pain is obviously a natural state. Nothing extraordinary is necessary for it to occur; it is a universal experience. If pain is natural, it is not limited to a culture, race or probably even specie. Despite our tendency to neglect the suffering of animals, we believe that they feel pain as well. If pain has an evolutionary history, it suggests a function for survival. Pain *is* part of nature.

On the other hand, pain has a strong social and cultural component influencing at least three aspects: the expression of pain, the potential to see meaning in certain pains and the specific objects causing psychic pain. The expression of pain is clearly moulded by society. Think of a Spartan society where men were scolded for showing pain and compare this to our society where men are increasingly encouraged to express it. On the borderline of expression and meaning are pains induced in spiritual contexts as in faqirism or flagellation. Compare these to an average person receiving an injection—its sting has less meaning and is differently expressed. Our potential to see meaning in certain pains has influenced our reactions to them, one example being labour pains. Donald Caton<sup>1</sup> retells the history of obstetric anaesthesia, showing a tendency of modern women to refuse it, while such procedures were desirable in Victorian times—Queen Victoria herself being a prominent advocate. Labour pains can be seen as accompanying a joyous

moment, or being failures of human evolution, or being punishment for Original Sin—different meanings may very well influence our ability to endure.

Social factors also influence what may become an elicitor of pain which is specifically prominent in 'psychic pain.' As a mental state, psychic pain is directed towards an object or a state of affairs—what philosophers call its intention. Which entities become the intentional objects of psychic pain is partly dependent on our society: whether we see a caricature of a prophet as hurtful is dependent on our religious upbringing; whether we feel guilty when we cheat might be dependent on our guilt-based versus shame-based culture; is the death of one's child not less painful to some if it were in the name of nation, king, god or freedom? More examples come to mind. In conclusion, society has a huge influence on the specificity of pain states.

There is tension between these two threads; on the one hand, pain is something so natural that even a new-born mouse can feel it, yet on the other hand, pain is highly influenced by cultural constraints. How much culture is then necessary for pain? How much nature is sufficient? If we inquire to what extent expression, potential meaning and the intentional objects are constituent components of pain, i.e. whether they are necessary for pain to exist; we might be able to answer these questions.

If expression were a necessary component of pain, no paralysed person could feel pain, as they in principle cannot express anything. This is exactly Hilary Putnam's counterexample to a behaviouristic interpretation of 'pain': If I were to cut those pathways that make your muscles twitch but leave your pain fibres intact, and then compare your behaviour to someone's whose pain fibres are cut as well, then there will be no difference in expression. However, there is a mental difference: you can feel pain, while the other can't.<sup>2</sup>

Expression is no necessary component of pain, and neither are meaning nor specific intentional objects. Meaning is not important, as meaningless pains (like accidents with chainsaws) are still painful. Seeing meaning in pain may make it more endurable, yet does not diminish it. The same holds for specific intentional objects: what society influences is only the class of specific objects with a potential to elicit psychic pains; but that *this* state of affairs makes me feel pain and not *that one* is not a necessary feature of pain in general. The only necessary condition is that there is *some* state of affairs causing my pain. The first is a claim for specific objects, the second is a claim for the necessity of intentionality in general. Society and its influence are therefore not necessary for the existence of pain.

The paralysis example is also an illustration of why questions about the nature of pain (its necessary properties) are morally important. Most agree intuitively and without reference to any meta-ethical theory that pain is something we ought to prevent and not elicit in our fellow beings. Thinking about the nature of pain—what is necessary to have pain—will then determine which entities deserve our moral consideration: if expression were a necessary component, then the paralysed

are of no ethical relevance. Justifying whom we give and whom we deny treatment depends on our theories of what pain is. Our intuitions about its nature determine which entities we consider worthy of studying to better understand pain, its treatment and prevention. For example, if language possession were a necessary component of pain, then animal experiments would be devoid of explanatory value in pain science.

A caveat: Putnam leads us to the conclusion that expression is not part of the nature of pain, but this does not rob an inquiry into expression of its importance, as expression might still be a contributing factor, either towards pain's intensity or towards additional psychic pain. Could it not be the case that I suffer more when I am not allowed to express my pain? The social contributions to pain are important to research in order to minimise specific variations of pain in humans. My focus in this chapter, however, is on minimally sufficient conditions for pain in every sentient being. I ask whether something like this exists. My question is not: what is the nature of pain? Instead, I question our initial intuition and ask: does pain have a nature at all?

My method will be this: I analyse the usage of the expression 'pain.' The underlying assumption is that usage limits the set of possible reference objects: if a baby says 'Dada,' she surely does not mean the artistic movement of the 1920s. If we can derive necessary use conditions for the expression 'pain,' we might grasp something about our intuitive metaphysics of the object of reference, namely pain itself.<sup>3</sup> As a starting point, I compare the official definition by the International Association for the Study of Pain (IASP) with patients' usage of 'pain' to see whether this definition grasps such use conditions.

## 2. Definition vs. Usage: Why Pain is not what Medicine Teaches

The IASP developed its influential definition in 1986 and it has not changed since. It states:

Pain: An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.<sup>4</sup>

This definition is a sound starting point for an inquiry into the nature of pain as its goal is to state necessary conditions. It also comes close to our intuitive and everyday understanding of 'pain.' Additionally, it adequately describes a paradigmatic pain experience. Imagine a hammer smacking your finger. The ensuing sensory experience is temporally close to the impact and immediately unpleasant. Your subsequent cursing is a sure sign of your emotional response, and both—the sensory and the emotional experience—relate to the tissue damage of your digit. Lastly, the IASP definition is fruitful as it fragments the phenomenon into sub-parts which are associated with broader fields of research, such as

affective neuroscience and signal detection theory. There are good reasons for the IASP definition. But does it grasp a nature of pain?

Before we can answer this question we need to clarify whether we actually deal with a definition in the technical sense. Defining is not a game for the fainthearted as we strive for maximal generality: definitions express universal equivalences and thereby delimit the usage of an expression. The relation of definiendum (what is to be defined) and definiens (what defines) can however be arbitrary. In this case, we talk of stipulative or nominal definitions, which are neither true nor false. It would not be against any formal rule to define 'justice' as 'every prime number,' but it would violate the semantic rules of English. What we (and presumably the IASP as well) are after is to grasp the way we already use the expression 'pain.' That is, we reject arbitrariness and instead aim for an analysis of how the expression is applied. Universal equivalence is still the goal: the analysandum 'pain' and the analysans need to be replaceable in their usage without a change in truth value or (in the case of usage analysis) acceptance. Consider as an analogy the expression 'bachelor' and 'unmarried man.' If John is a bachelor, he is also an unmarried man—and vice versa. Only if this condition is fulfilled can we say that we have succeeded in our analysis. Therefore, the stakes stay high: one counterexample is enough to refute an analysis.

The IASP accepts this method of testing. In a note to their definition, we find: 'If [the patients] 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.'<sup>5</sup> That is, if we find a case where a person regards their experience as pain but obviously lacks one of the conditions mentioned by the definition, then we are allowed to reject the definition as a whole or in part. This is exactly how I will proceed to establish that the IASP's analysis fails: neither does it name necessary nor sufficient conditions. There are cases where we use 'pain' that lack one of the ascribed properties as well as cases where every component is present, yet 'pain' is not appropriate.

An example might be shame, e.g. laughing out loud about a blind person falling over his seeing-eye dog and then feeling guilty. Both laughing and shame are sensations; both are associated with the tissue damage of the blind man falling. This example satisfies the definition but it clearly misses the intention of the IASP. Therefore, two further conditions need to be mentioned, first that the components all relate to the same person. This excludes states where the tissue damage is felt by somebody else. Second, the components are bound into one Gestalt because pain is experienced as homogenous in paradigmatic cases. This excludes that the sensory components (like those of laughter) are simply felt at the same moment as the emotional components which belong to a different state, in our case, shame. If sensation and emotion are not bound into one Gestalt, we do not speak of pain.

However, even with these additions we can find states that fulfil the analysis without being called pain. Imagine the following: your hand falls asleep in an awkward position. You get up and your hand brushes the rough stone wall beside

you resulting in scratches. As you realise this you become angry about being careless. In this state your anger is an unpleasant sensory and emotional experience associated with tissue damage. Still, we hesitate to call this pain.

Thus the IASP definition is too broad if anger falls under it. Adding conditions might help. However, this would entail that the features already mentioned are already necessary. A look into psycho-pathologies and first-person accounts of pain patients reveals that this is not the case. Therefore, the IASP definition fails; searching for further constraints is futile. Let me present examples to support this claim.

Is unpleasantness necessary for pain? In paradigmatic cases, pain is unpleasant, the drill of the dentist, the cut of the carving knife, the stubbed toe, and so on. However, we are also familiar with forms of masochism. One has to be careful as the masochistic mind is not properly understood and there is a variety of possible explanations: the masochist might have an unpleasant pain, but has a higher order desire to feel it; she might like pain but not severe pain; or she might actually feel pleasure where others feel pain.<sup>6</sup> One of the possibilities here is clearly that the masochist feels pain as pleasant. The possibility of pleasant pain negates the necessity of unpleasant pain.

There are other examples. Consider pain asymbolia.<sup>7</sup> People in this condition can tell when a noxious stimulus becomes painful, this being the prime criterion for distinguishing them from analgesics who cannot feel a noxious stimulus as painful. Pain asymbolics do not see pain as a threat, and therefore do not react to it as such. Some smile at their scientific 'torturers' as the following passage illustrates:

In spite of apparently normal perception of superficial and deep pain, the patient showed a total lack of withdrawal responses. He tolerated prolonged pinprick or soft-tissue pinching in all four limbs without adequate grimacing or defensive movements of his limbs. [...] On occasion, the patient willingly offered his hands for pain testing and laughed during stimulation. He had no concern about the defect and appeared highly cooperative during pain evaluation.<sup>8</sup>

An illustrative evaluation from these patients' perspective is provided by Brand and Yancey: Years after having performed a lobotomy on an Indian woman to rid her of excruciating vaginal pains, her surgeon visits her again. She seems joyful and easy going, so he asks her how it is like to live without pain.

[S]he said, 'Oh, yes, it's still there. 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.'<sup>9</sup>

This report seems paradoxical to most of us: an agonising pain one does not mind? What pain asymbolia illustrates is that pains can be totally without valence. Nikola Grahek has contrasted 'feeling pain' with 'being in pain' to grasp this experiential difference: we feel and are in pain, while pain asymbolics only feel the pain but are not in pain.<sup>10</sup> Consider also that the patient herself uses the expression 'pain' as do all pain asymbolics. We ought not discard such usage of 'pain' as inappropriate simply because it seems alien to us. Pain asymbolics show no conceptualisation deficiencies.

Once one grasps the possibility of pleasant or unevaluated pain, no reference to psycho-pathology is needed: the pain after a good workout can be pleasant; many people love spicy hot food whose specific feeling is elicited by Capsaicin docking to the pain receptors of the mouth. Consider also the experience of dentistry under hypnosis where one feels pain but does not react to it.

The loss of the reactive component naturally leads us to the emotional component of pain. Emotions are classically seen as the motivating force of our mental life. Masochists and sportsmen experience this component: both of them feel pleasure and act accordingly, seeking more of the same stimuli. Pain asymbolics and subjects under hypnosis lack this motivating component; they do not act on pain despite the fact that they feel it. In pain asymbolics, it is evident that it is only a cognitive act—an abstract insight that this stimulus is going to be damaging—that makes them move. It is not the pain sensation itself. Still, their mental state is a pain state—even without emotional charge. Therefore, emotions as well as evaluation are not necessary components for a state to be subsumed under the label 'pain.'

Does pain need a sensory component? 'Sensory' needs to be disambiguated to answer this question. We might think of signal detection theory, where we would call something a sensation if dedicated transducers turn outside information into a kind of information computable by the system, e. g. the receptors on your retina turn the energy of photons into neuronal activity. In the case of pain, the dedicated transducers are the nociceptors which react to heat, cold, deformation or pressure. Yet, not every pain is elicited by nociceptor activation and not every nociceptor activation is painful. Warmth and coolness are also sensed by nociception, and the cause of thalamic pain is inside the brain, which is void of nociceptors. 'Sensory' might then mean 'represented as if it were an outside stimulus.' Thalamic pain would then be sensory as the pain appears to be caused externally although it isn't. Bodily representation holds for most cases of pain: it seems as if consciously experienced pains are bodily located.

Are all pains sensed as being of one's own body? Intuitively, one might agree, but intuition is a fallible guide for science and metaphysics. Consider that we talk of psychic pain, mental pain, social pain and empathic pain. None of these is necessarily felt as being of one's body. Psychic pains such as grief or boredom need not be felt in the body at all to be experienced as painful; the same holds for

social pains such as shame. Science supports this by proposing 'empathic pains.' Subjects in a study by Tania Singer watched their spouses being hurt by electric shock. This elicited activation in their neural pain matrix similar to the activation caused by their own pain. Interestingly, while the emotional part of the pain matrix was activated, the neural correlates of bodily pain sensation were inactive.<sup>11</sup> I feel tempted to say that this points toward the possibility of unlocalised pain and thereby pain that is not sensory in the above sense.

One might reply that 'pain' in such expressions as social, empathic or psychic pain is used only metaphorically. This is a possibility—but does this refute the above argument? I believe not: we use the expression 'pain' in cases of grief, boredom, shame or compassion in a socially embedded and regulated way. If this does not suffice to count as a non-metaphorical usage of 'pain,' why should then pain asymbolics, masochists or sportsmen not use 'pain' metaphorically by the same standards? So far, we have been dealing with an inquiry into natural language which allows us to speak of unlocalised pains, thereby exposing sensory experience as an unnecessary use condition.

We are left with the conditions of 'pain' as an experience and its association with, or description in terms of, tissue damage. Here I want to focus on the connection with tissue damage. The IASP weakens its definition in a footnote:

Activity induced in the nociceptor and nociceptive pathways by a noxious stimulus is not pain, which is always a psychological state, even though we may well appreciate that pain most often has a proximate physical cause.<sup>12</sup>

Introducing association to dissociate pain from nociception is problematic as it is an arbitrary relation: I can associate bunnies with justice, tissue damage with red-green-tartan and pain with a bowl of ice cream—and what is wrong with that? Further reasons to reject the association with tissue damage have already been given above by mentioning psychic, social and empathic pain. Therefore, both the associated object (tissue damage) and the relation of association are dubious in a general analysis of 'pain.'

Is description a necessary condition? Only a described mental state would then have the potential to be pain. This is clearly not the case: pain does not need the possession of a concept PAIN to exist. If this were the case, then new-borns, most animals and certain demented would not be able to feel pain as they lack concepts. Even having this mental flag reading PAIN is not sufficient for description; one needs to be able to additionally formulate a sentence like thought, e.g. this is a mental state that feels terrible and makes me want to cry and scream for mummy. Coupling pain with description also implies that it only has a function for us, mentally capable humans after the age of two. The costs of such a position are too high: remember that most of our pain medicine is developed and tested on animals.

If you have followed my argument, we are down to one last component: experience. That experience is a necessary component of pain is either wrong or trivial, but this depends on one's intuitions about consciousness per se. What makes a mental state a conscious experience is that it feels like something. We can have mental states that do not feel like anything: in a post-Freudian world, unconscious desires and beliefs are accepted. Unconscious desires can become conscious, during therapy for example. Some philosophers claim that this can be true not only for beliefs and desires, but for pain states as well. David Chalmers distinguishes between psychological and phenomenal pain, i.e. both are pain yet only one is experienced.<sup>13</sup> In this case, the experiential quality is not a necessary component. This argument does not rest on evidence but instead on a specific idea about a metaphysical possibility concerning the relation of consciousness to other mental states. Then, claiming that experiencing is a necessary feature of pain is wrong. If Chalmers' distinction is not accepted, the property of being experienced is then simply trivial as it does not distinguish pain from any other mental state like seeing red, hearing B-flat, or contemplating oneself as a thinker of thoughts.

In conclusion, the IASP definition—despite being intuitive, fruitful and paradigmatic—fails: none of the mentioned properties reflects necessary conditions for a state to be reliably subsumed under the expression 'pain.' None of the counter examples is beyond what is possible in the actual world we inhabit.

I have claimed that the IASP definition has the advantages of grasping our intuitions about paradigmatic pain experiences. Yet, when we ask about the nature of pain—what makes a state pain in every possible instance—our intuitions and some widespread cases are poor guides. This might be due to our poor ability to study the mind by introspection. Simply attending to our own mind might lead us to exaggerated judgements about what is necessary. If we were to have only such paradigmatic pain experiences to which all IASP criteria introspectively apply, we might misjudge those criteria as necessary. To prevent such introspective fallacies, we might be tempted to define pain in non-introspective terms, either by its function or its neurophysiological bases. If introspection cannot teach us about the nature of pain, perhaps cognitive science and biology can!

There are philosophical problems with analysing 'pain' by function (i. e. a specific relation between an input and an output) or brain activation. David Lewis exemplifies this by two examples.<sup>14</sup> First, we can imagine a mad man who is in pain (i. e. is in the same brain state as we are when we feel pain), but only when doing light exercises on an empty stomach; the cause of his pain is different. Additionally, his pain does not lead to our typical reaction; rather than screaming and writhing, it causes his mind to drift towards mathematics; the effect of this pain is different. Still, this state feels just like pain does to us.<sup>15</sup> Second, we can imagine a Martian whose pain is elicited by damage to its body and results in the same pain feeling and avoidance behaviour we have, but the Martian has no neurones—only a hydraulic pumping system fulfilling the function of a central

computational system analogous to our brain. Martian pain has the same cause and effect as pain has in us, but a totally different realisation. If the mad man example is conceivable, then we cannot state a universal equivalence between pain and a function. If the Martian example is conceivable, we cannot state a universal equivalence between a brain state and pain. Lewis holds that in an individual X the concept PAIN refers to the instantiation of the causal role of pain in the appropriate population of which X is a part. This entails that the identity of pain with a brain state is only contingent, not necessary, and that there might be pain even if its paradigmatic function does not hold in the mad man scenario. Both mad pain and Martian pain are conceivable, so they are both metaphysically possible, and therefore neither function nor neural implementation can inform us about necessary features of pain.

Our starting point has been the usage of the expression 'pain.' We can conclude that there are so far no necessary and sufficient conditions—be it in medicine, intuition, neuroscience or cognitive science—that determine when a state is felicitously subsumed under the expression 'pain.' If usage limits reference, then there are no necessary or sufficient conditions for the reference class of 'pain.'

This leaves us with two possible conclusions. First, pain might not exist. This seems counterintuitive: even though there is no common denominator in the cases where 'pain' is acceptably used, there clearly are cases where 'pain' is used unacceptably. There are clear-cut cases where most of us would agree that pain exists—a pin prick, a cut, a punch, a fall, a broken heart and so on. The second possible conclusion is that 'pain' as we use it in our community of speakers refers to a conglomerate of loosely resembling phenomena. Wittgenstein coined the term 'family resemblance terms' for these kinds of expressions:<sup>16</sup> Somehow, all members of a family resemble each other even if they share no common feature like a Habsburgian chin or a weird nose. In our case, pain is then no single nemesis, but a horde of horrid critters.

How then is pain science possible if it lacks integrity in its field of inquiry? Obviously, we are better at manipulating pain in humans than ever before. Pain science has progressed. How can this be if all its phenomena are only loosely connected? We have to explain how pain science can achieve and further its obvious progress. The next section deals with science's ability to manoeuvre around the problem raised by the family resemblance properties of 'pain.'

### 3. Explication before Explanation in Pain Science

The predictive and explanatory power of natural science relies on unambiguous concepts. Pain science is dependent on natural science: the way aspirin or morphine interact with the body is clearly a function of our physical makeup. How does pain science then arrive at concepts that cut at the joints, fragmenting what we subsume under 'pain' into types, each with its own nature? Only with such

concepts can pain scientists formulate an explanandum (something to be explained) for their individual experiments and theories.

Rudolf Carnap has argued that the ambiguity of natural language cannot be transferred into the language of science. Instead, the diverging usages of an expression need to be rebuilt in the language of science. This 'explication' leads to many scientific terms relating to the same natural language term, yet all scientific terms have a rigid application.<sup>17</sup> Consider 'water,' as in 'drink more water,' 'a philosopher of first water,' 'still waters run deep.' Only in a few cases is this 'water' really H<sub>2</sub>O. There are strict rules for the correct application of H<sub>2</sub>O; therefore 'H<sub>2</sub>O' is one possible explicans of the explicate 'water.' For Carnap, the ideal language for building the various explicantia is the language of physics.

If we apply this to the case of 'pain,' our goal is to arrive at a group of sub-phenomena with a metaphysical nature. That is, we develop conceptual tools to describe with greater clarity the distinguishing features of pain phenomena. Does the same method apply as in the case of 'water'? Can we simply look at physiology, chemistry and physics to explicate 'pain'? There is a strong temptation to follow this lead, as we know a lot about the neural pain matrix in humans. However, the neural pain matrix is a correlate of pain and not all properties of pain apply to neural activity without further background assumptions—remember mad pain and Martian pain. Additionally, we cannot be sure whether we are able to grasp all phenomena at this level of description. Furthermore, the community of speakers we are most interested in—pain patients—have no understanding or insight into the activation levels of their own pain matrix. To use only the language of neurology as the language of explication might not lead to the clinical applicability we desire.

Therefore, a bilateral method seems more promising: to sort out the natural borders between pain phenomena, we ought to use introspective alongside neurophysiological or computational vocabularies. We already have insight into what characterises the pain of e. g. pain asymbolics: their pain lacks an emotional charge while sensory aspects prevail. This characterisation of emotionless pain as a sub-phenomenon is derived from an analysis of various introspective reports in combination with observational measures of the behaviour of these patients.

Using introspection and analysis of reports cannot, however, be the ultimate method. Explication solely in phenomenological terms is too limited and too course-grained. It is coarse-grained as it might be that two neurologically distinct pain phenomena share the same experiential quality—we would miss a possibly important distinction. It is limited, first, as it only allows us to inquire such pain phenomena which have an experiential quality, thereby ignoring unconscious pain; and second, it only grants access to describable pain, thereby leaving out possibly different pain phenomena in non-humans or infants. Even though phenomenology shows us a way, it needs to be combined with neurological, physiological,

biological, cognitive and behavioural methods to lead to natural terms for these mental states.

Spatial limitations allow me only a rough sketch of this bilateral process. Assume we have found a pain phenomenon that has a specific experiential structure which we formally write as P(a,b,c)—read: pain with properties a, b and c (for example pain that is emotionally charged, unpleasant and has a tingling sensation). Assume further that all patients with P(a,b,c) show a common lesion. We establish a category P(a,b,c) B(d)—read: pain with properties a, b, and c and brain anomaly of type d. But what if there are no common but only different anomalies B(d), B(e)... B(n)? We then divide the subjects into groups according to their brain damage and seek further phenomenological differences. Should B(d) and B(e) share a common experience, introspection alone would lead us to abandon a natural kind. We would not have seen a difference in P(a,b,c) B(d) and P(a,b,c) B(e). But if B(d) and B(e) do not share a common experience, we have broadened our introspective vocabulary of pain: we will establish an introspective category of pain P(a,b,c,x) B(d) and P(a,b,c,y) B(e). If we encounter a patient that describes a pain P(a,b,c), we inquire whether it also exhibits x or y. In this way, we arrive at a vocabulary that is suitable for patients to describe their pains adequately and is at the same time empirically fruitful as it grasps the neural implementation of pain subtypes.<sup>18</sup>

This bilateral account entails that pain science is dependent on first person reports, at least heuristically. The incorporation of first person methods becomes more than a mere heuristic once we formulate the following goal for pain science: to achieve the highest possible degree of regulation of the experiential components of pain, as the pains we most care about are the ones we feel and suffer under. Prinz and Knobe argue on empirical grounds that conscious states in general have a high intuitive moral impact.<sup>19</sup> If there are unconscious pain states, they are not as morally relevant as conscious ones. Therefore, we ought to focus our efforts in pain science on those pains with an impact on consciousness. To listen and learn from the suffering subjects becomes more than a mere heuristic—it is the prime source for defining the goals of pain science.

#### 4. Doubting the Ethical Relevance of Pain

I have claimed that there is a subclass of pain which is more morally relevant than others, namely consciously experienced pain. Are there other metaphysical differences that make a moral difference? Is it actually permissible to claim that some pains are more relevant than others?

The question of moral relevance has a horrid history. In the past, this issue was often linked to chauvinism, sexism, racism or—in today's case—specieism. What lies behind these positions is a fallacy: we derive an ought-statement from an is-statement; but just because two things are different we cannot infer that they ought to be treated differently.<sup>20</sup> In the case of sexism: just because women are different

from men does not justify that they ought to have different rights. When I state that conscious pain has higher moral priority than unconscious pain, am I committing this fallacy? No, as this claim depends on the moral intuition that pain and consciousness are of moral importance. This is in a way an *ad hominem* argument in the sense that its acceptance rests on whether you, the reader, share these premises. If you do not, then the argument loses its grip. If you do, you are already on my side: you agree that it is permissible to establish a moral hierarchy of pains due to additional properties like being conscious. We can ask whether there we agree also on other properties.

Consider again the case of the pain asymbolic, who claims that she does not care about the sensory pain experience—'it's agonizing, but I don't mind.' The patient herself does not mind the pain but does mind severe tissue damage. I have cited other cases of pain where we lack a negative stance toward pain: masochism, sport, spicy food, and hypnosis. As long as there is no damage or negative utility involved in such pains, why should we claim that they ought to be prevented? No such case can be made other than one that rests on prejudice. Where no one is harmed, no judge shall adjudge—and harm is distinct from pain. For example, torture is morally condemnable not because it causes pain but because it causes harm; contrast this with cooking spicy hot food for a friend, which causes him pain but no harm and is thereby morally permissible.

So what are the properties that make a pain relevant for moral discourse? We have already mentioned the property of being experienced and being negatively emotionally charged. Let us call these two the suffering component and distinguish it from the sensory component and the possible positive emotional evaluation of pain. This distinction enables us to group psychic, social and empathic pains and distinguish them from paradigmatic pain, pain asymbolia and pain due to spicy food. The first is necessarily emotionally charged, the other only contingently. Of the three examples in the second group, spicy food pain is clearly not morally relevant while paradigmatic pain—e. g. a hammer falling on your foot—clearly is. Of the three examples in the first group, all are morally relevant: psychic pain and social pain are paradigmatic indicators where psychological or spiritual help is advisable, while empathic pain is one of the prime reasons to act morally (in order to prevent the pain of someone we empathise with). All these ethically relevant pain states share the involvement of emotions. Without emotions pain loses its impact—we 'don't mind,' as the pain asymbolics say.

Similar observations can be made once we consider meditative practices. Deep meditation can lead to an increase of certain emotions or to a better control of emotions. Meditators in a deep state of meditation feel less need to act on their pain.<sup>21</sup> Also consider depersonalisation: here, subjects feel no connection to their emotions, as they do not 'own' them—resulting in a higher tolerance for pain or for negatively charged emotional stimuli.

All in all we might ask ourselves: as long as a person in sensory pain does not mind it, why should we? Given that there are no additional considerations, like higher costs for care due to injury, it is safe to say that there is no reason to prevent these unemotional or even pleasant pains. Pain is not morally relevant in and of itself. Instead, suffering is the morally relevant component.

### **5. The Ambiguity of Pain: Science and Ethics Need Conceptual Clarification**

I argued that our usage of the expression 'pain' has no common denominator, which implies that such definitions as the IASP's fail to grasp our everyday usage. An analysis of the usage of 'pain' in pathological and non-pathological cases led us to conclude that it cannot refer to a single natural kind with necessary and sufficient conditions, but to a loose grouping of phenomena held together by their similarity to paradigmatic pain experiences.

This leaves us with the problem of devising a language for researching pain, not only for natural science, but for the humanities and social sciences as well. This volume is a good example, where the peacock called 'pain' shows its multi-coloured plumage: 'pain' is many-faceted, and exposes many connections to a variety of phenomena. Natural science, medicine, health care and the bedside dialogue are aspects of questioning and understanding 'pain,' both through the eyes of objective science and the lived experience of the sufferer. In this volume, the chapter by Milton Cohen and John Quintner focuses on the relation between the medical model and lived experience, while Mary Buchinger-Bodwell elaborates on our stance towards such narratives. An impressive example on how the individual psychological make-up determines the influence of pain on one's life is presented by Heather McKenzie. Art and literature open our eyes to pain's metaphorical usage; they can also expose its structure and point to many possible ways of experiencing pain. Hildur Kalman and Naomi Scheman's as well as Ian Flaherty's chapter are examples of inquiries into the social dimensions of pain, demonstrating pain's influence on our social life as well as pain's plasticity to social forces. All these are important for understanding the wide variety of phenomena which we bundle under 'pain'; all help raise our awareness of pain's multitude; all broaden our idea of one of nature's most horrid and helpful gifts.

In the last section, I argued that not every beast in pain's kingdom is equally bothersome: once we are able to control the emotional side of the experience, we leave the realm of moral relevance. Pain in and of itself raises no ethical issues, but suffering does, in all cases. This also points to a field of studies contributing to the sufferers' relief through emotion regulation. The knowledge that 'pain' has a high degree of ambiguity raises our intellectual and empathic sensitivity; it may lead us to understand, manage, overcome or accept pain, not in all cases, but in those manifestations we care for.



## Notes

<sup>1</sup> D. Caton, *What a Blessing She Had Chloroform*, Yale University Press, New Haven, 1999.

<sup>2</sup> H. Putnam, 'The Nature of Mental States,' in *Mind, Language and Reality*, *Philosophical Papers, Vol. 2*, Cambridge University Press, Cambridge, 1975, p. 429-440.

<sup>3</sup> The idea that philosophical inquiry leads us not to knowledge about our concepts, but to knowledge about metaphysical modality is taken from T. Williamson, *The Philosophy of Philosophy*, Oxford University Press, Oxford, 2007, pp. 134-178, who provides a thorough argument for such an interpretation of philosophical endeavors.

<sup>4</sup> International Association for the Study of Pain, 'Pain Terms: A Current List with Definitions and Notes on Usage,' in *Pain*, Supplement 3, 1986, p. 346.

<sup>5</sup> Ibid.

<sup>6</sup> For a thorough elaboration on the possible variations of masochism and pleasure, see S. Rachels, 'Is Unpleasantness Intrinsic to Unpleasant Experiences?' in *Philosophical Studies*, Vol. 99, No. 2, 2000, pp. 187-210.

<sup>7</sup> Two classical studies are J. L. Rubins and E. D. Friedman, 'Pain Asymbolia,' in *Archives of Neurology and Psychiatry*, Vol. 60, 1948, pp. 554-573; and M. Berthier, S. Starkstein and R. Leiguarda, 'Asymbolia for Pain: A Sensory-Limbic Disconnection Syndrome,' in *Annals of Neurology*, Vol. 24, 1988, pp. 41-49.

<sup>8</sup> Ibid., p. 42.

<sup>9</sup> P. Brand and P. Yancey, *The Gift of Pain*, Zondervan Publishing House, Michigan, 1997, pp. 210-211.

<sup>10</sup> N. Grahek, *Feeling Pain and Being in Pain*, MIT Press, Cambridge, MA, 2007.

<sup>11</sup> T. Singer, et al., 'Empathy for Pain Involves the Affective but not Sensory Components of Pain,' in *Science*, Vol. 303, 2004, pp. 1157-1162. Also: T. Singer and C. Frith, 'The Painful Side of Empathy,' in *Nature Neuroscience*, Vol. 8, No 7, 2005, pp. 845-846.

<sup>12</sup> International Association for the Study of Pain, loc. cit.

<sup>13</sup> D. Chalmers, *The Conscious Mind: In Search for a Fundamental Theory of Conscious Experience*, Oxford University Press, Oxford, 1996, p. 17.

<sup>14</sup> D. K. Lewis, 'Mad Pain and Martian Pain,' in N. Block (ed), *Readings in the Philosophy of Psychology*, Vol. 1, Harvard University Press, Cambridge, MA, 1980, pp. 216-222.

<sup>15</sup> The main goal is to distance the feeling of pain from its causal role. If you have problems imagining this case, think of pain asymbolics that feel pain but without the natural effect. Combine this with an odd cause for pain, such as my grandmother's knee pains before rain was coming. The mad man case is an extrapolation of such a combination.

<sup>16</sup> L. Wittgenstein, *Philosophical Investigations*, Blackwell, Oxford, 1953/2001, §67.

<sup>17</sup> R. Carnap, *Der logische Aufbau der Welt*, Felix Meiner, Hamburg, 1998, pp. 12-15.

<sup>18</sup> There is the metaphysical possibility that there are no commonalities between two structurally similar experiences. This would lead us to abandoning the background assumption that experiential structure supervenes on physical structure. This interdisciplinary chapter is not the place to follow this philosophically interesting position as it would question the whole traditional medical approach of pain treatment.

<sup>19</sup> J. J. Prinz and J. Knobe, 'Intuitions about Consciousness: Experimental Studies,' in *Phenomenology and Cognitive Science*, Vol. 7, No. 1, pp. 67-83.

<sup>20</sup> The locus classicus for this fallacy is D. Hume, *A Treatise of Human Nature*, Clarendon Press, Oxford, 2007, pp. 1739-1740. The term 'naturalistic fallacy' was coined by G. E. Moore, *Principia Ethica*, Prometheus Books, Buffalo, NY, 1903, § 10.

<sup>21</sup> A. Lutz, et al., 'Cognitive-Emotional Interactions: Attention Regulation and Monitoring in Meditation,' in *Trends in Cognitive Science*, Vol. 12, No. 4, 2008, pp. 163-169.

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**Abstract**

Although understandings of pain phenomena have benefited from theoretical developments such as the biopsychosocial model of illness, the clinical path of the person in pain presenting to a health professional still leads to frustration for both. The biopsychosocial model generated an 'official' definition, two major conceptual frameworks, and three putative explanatory models. However, in the absence of a theory that embraces pain as an emergent and unpredictable phenomenon, these progeny have been unable to displace biomedical reductionism or to transcend dualism. The observer-dependent stance of the clinician results in marginalisation of the 'patient,' compromises therapy and confronts both parties with a potential clinical nemesis. The lived experience of pain reflects an *aporia*, a puzzle that denies us access to its secrets. However application of principles underlying the self-referentiality of living systems opens a path to integrating the traditional somatic dimension of biomedical analysis with dimensions of beliefs, emotions, behaviour and environment. Clinically, pain may be grasped anew through the engagement of autonomous self-referential living systems, creating the intersubjective or 'third space' with each influenced by similar sets of humanist factors and confronted with the same *aporia*. This reframing generates new possibilities in assessment, treatment and policy.

**Key Words:** Biopsychosocial, reductionism, dualism, *aporia*, self-referentiality, autonomous systems, intersubjectivity, third space.

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**1. Introduction**

This chapter seeks to understand why what should be a basic function of the health professions—the management of pain—is not only unsatisfactory but also frustrating for both the person in pain and the health professional. How is it, we ask, that there is such a poor fit between the conventional medical approach to the person in pain and that of the lived experience of pain?

To address this conundrum, the basic tenets of (Western) biomedicine need to be appreciated, their inadequacies with respect to pain identified and the attempts to remedy this situation examined. A central issue remains—whether the 'slipperiness' of defining and researching pain using the linguistic tools available limits any attempt to reframe the clinical encounter.