

The Philosophy of Pain

Introduction

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Over recent decades, pain has received increasing attention as – with ever greater sophistication and rigour – theorists have tried to answer the deep and difficult questions it poses. What is pain’s nature? What is its point? In what sense is it bad? The papers collected in this volume are a contribution to that effort.

Understanding pain requires addressing two of its most obvious but least understood aspects: its unpleasantness and motivational force (how, that is, it drives us to behave in certain ways, for example withdrawing your hand from hot water). Pain’s unpleasantness and motivational force seem closely intertwined. But what is the nature of each, and what exactly is their relationship? These questions are the focus of Part I.

A second route to understanding pain is through its connection with emotion, on which Part II focuses. For one thing, there appears to be overlap in the neural activity subserving pain and emotions. For another, just as pain is typically unpleasant, so are certain emotions. Indeed, pain’s unpleasantness may involve certain emotions. What, then, is the relationship between pain and emotional suffering? In what ways are they the same? In what ways different?

Finally, the atypical can sometimes illuminate the typical, hence Part III addresses deviant pain. Chronic pains, for instance, appear not to be associated with any physical damage, except perhaps to the nervous system. Pains undergone by pain asymbolics appear not to be found unpleasant. And the masochist’s pains seem to be wanted, even pleasant. Thinking about such cases offers insights into pain’s nature. Below we briefly sketch the volume’s three overarching themes, and the contributions that follow.

Part I: Pain, Unpleasantness, and Motivation

Typical pains are unpleasant and motivational. The water become hot, you begin to feel pain, its unpleasantness increases, and you lift your hand out.

Questions about pain’s unpleasantness and motivational force are beginning to receive the attention they deserve. In virtue of what are pains unpleasant? In virtue of what do they motivate us? What mechanisms underlie their unpleasantness and motivational force? What influences these features? These questions are the focus of the papers in Part I.

The first two chapters are moves in a philosophical debate about what makes pains unpleasant. Taking pain to be motivational because unpleasant, many explain pain’s unpleasantness in terms of things that will also explain its motivational force. The traditional view, for instance, appeals to experience-directed desires: your pain’s being unpleasant is simply a matter of your disliking it in the sense of wanting it to stop for its own sake. But others have recently proposed alternatives. Some say pains are motivational (and unpleasant) in virtue of not desires but the possession of special intentional contents: imperative contents (according to imperativists) by dint of which your pains tell you what to do, or evaluative contents (according to evaluativists) by dint of which your pains evaluate bodily conditions as bad for you. Others reject such intentional accounts and claim, for example, that your pain’s unpleasantness and motivational force turn not on its content as such, but on the kind of processing its content undergoes.

In the first chapter, ‘Imperativism and Pain Intensity’, Colin Klein and Manolo Martinez defend imperativism. A pain, they think, motivates in virtue of a part of its phenomenal character that consists in possession of imperative (rather than indicative) content. Your pains, in short, motivate because they are commands from your body: for you to see to it that a certain bodily state not exist (on Martinez’s version) or for you to protect a certain part of yours (on Klein’s).

This view, some worry, cannot capture pain’s intensity, since the intensity of a command is not a matter of content. Bruiser might shout and swear when telling you to stand up, whereas Petal might speak softly and say “please”, but that difference is not an intentional difference.

Klein and Martinez’s response is two-fold. First, they distinguish command intensity from such phenomena as the politeness with which a command is expressed and the relative urgency of one command vis-à-vis others. Second, they use a possible-worlds model of imperative content to explain command intensity as an intentional phenomenon. The basic model says an imperative’s content is the set of worlds at which it is satisfied. To incorporate intensity, Klein and Martinez argue, the content must include a function that ranks worlds. One imperative content, A, might be more intense than another, B, because A and B each ranks worlds

at which A is satisfied at B's expense over worlds at which B is satisfied at A's. With this idea in place, Klein and Martinez go on to propose more complex functions for more difficult cases; they also consider the bearing of their semantics on whether one pain might be not merely more intense but twice as intense as another; and they gesture at what it might be in virtue of that an experience possesses such a content—at, that is, a psychosemantics.

In Chapter 2, 'Pain and Theories of Sensory Affect', Murat Aydede and Matthew Fulkerson reject both imperativism and evaluativism in favour of the idea that a pain's unpleasantness and motivational consistency consist in the kind of processing its content undergoes.

Among their objections to imperativism and evaluativism, a key complaint is that neither view explains pain's intrinsic badness. Consider an allodyniac who is being caused agony by innocuous caressing of her forearm. Evaluativists say her experience represents to her (falsely) that her forearm is in a bad state. But Aydede and Fulkerson argue that this fails to explain why she has reason to stop that experience, hence to stop the caressing. Why should representations of badness themselves be bad? Imperativism, they argue, struggles with similar problems. For why should receiving a command from the body itself be bad? And even setting aside these normative questions, can imperativism explain pain's motivational consistency? Commands, Aydede and Fulkerson suggest, are not inherently motivational. When the police command a crowd to disperse, the crowd might be unmoved. Pain, they argue, is better compared to water cannon.

Instead, Aydede and Fulkerson propose a psychofunctionalist account: a pain is unpleasant in virtue of the "m-processing" undergone by the sensory information it carries (about bodily states and events). M-processing is something that happens subpersonally, they explain, hence its precise contours should be delineated by science; but Aydede and Fulkerson anticipate that m-processing will be an inherently motivational mode of processing, specified in terms of the processed information's effects on the organism's preferences, motor systems, and learning. Hence their overall picture is that an unpleasant pain has a belief-like component, which carries sensory information about a bodily condition, and a desire-like component (consisting in that information being m-processed) which is not identical to but can be modelled on a personal-level desire for that represented bodily condition to cease. And it is in these terms that they explain unpleasant pain's intrinsic badness. Its badness, they argue,

consists in the frustration of the desire-like component "as registered by" the belief-like component.

The final chapter of this section presents 'A Neuroscience Perspective on Pleasure and Pain'. In this, Dan-Mikael Ellingsen, Morton Kringelbach, and Siri Leknes address unpleasure and pleasure – or affect – in general. As neuroscientists, their approach is rather different from the preceding chapters'; but there are threads of continuity, not least their interest in the relationship between affect and motivation.

The relationship between affect and motivation is, they suggest, complex. Distinguishing between 'liking' (manifest in feelings of pleasure and such facial expressions as lick-lipping) and 'wanting' (manifest in approach behaviour, for instance) the authors report cases where 'wanting' seems to be increased independently of 'liking'. In one, injections of dopamine into rats' brains made the rats work harder for a sugary treat yet not lick their lips more once they got it; in another, human subjects pressed a lever obsessively to cause brain stimulations it wasn't clear they were enjoying.

There are also, the authors argue, cases showing the looseness of the relationship between experiences' sensory and affective components. Some are ordinary, as when chocolate is found pleasurable at first but disgusting after over-eating. Others are extraordinary, for instance pain asymbolics failing to find even pain unpleasant. There are also cases in which experiences seem both pleasant and unpleasant, the authors argue, as when winners of sub-optimal prizes say they feel both good and bad, putting pressure on the idea of a single continuum between pleasure and displeasure.

Turning to the diverse and flexible determinants of affect, the authors argue that these are complex, instructive, and (despite the 'liking'/'wanting' distinction) tied to motivation. Homeostatic needs can seem to be key determinants, as when sodium-depleted rats display strong 'liking' reactions to intensely salty water. But context is also important. On one theory, your pain's unpleasantness will be reduced if you unconsciously deem what's causing it less important than, say, an impending threat. Expectations, associations, and the 'meanings' attached to events can all, relatedly, play a role – as demonstrated, the authors argue, by a range of cases, some involving placebos (see also Corns' chapter), another involving subjects finding gentle touch more pleasurable when the toucher is attractive. Such flexibility between stimuli and affect, the authors conclude, suggests that affect's role is less to provide us with

information than to motivate us, on the basis of unconscious calculations, towards the best actions.

Part 2: Pain and Emotion

The relation between pain and emotion is a fruitful area for new perspectives on affective experience. It has been long thought that physical pain has an emotional element: consider for instance the famous IASP definition of pain, first suggested in 1964, that it is “[a]n unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.” Moreover, as Jesse Prinz points out in his contribution, philosophers as wide-ranging as Aristotle, Spinoza, and Hume all hold that emotions are forms of pain or pleasure. This chimes with common-sense thinking: it is widely held (albeit sometimes metaphorically) that some forms of emotional suffering are themselves painful – we talk of the pain of a broken heart and of disappointment, of being pained by grief and loss. Despite these close connections, philosophical research has seldom addressed both forms of negative affective experience together, preferring instead to focus on one form and address the other only in passing. This is both surprising and unfortunate: surprising, given that the links between the two seem well-known and rather obvious; unfortunate, given that research and progress in our thinking about one kind of experience might profitably inform our thinking about the other. A focus on pain or emotion to the exclusion of the other thus threatens to be detrimental to philosophical progress in either area.

The papers in this second section all deal, to a greater or lesser extent, with points of comparison and contrast between pain and emotion. Michael Brady’s paper – ‘The rationality of emotional and physical suffering’ – focuses on the extent to which pain and negative emotion are reason-responsive. Brady wishes to defend a traditional view according to which forms of emotional suffering – like grief, disappointment, and shame – are reason-responsive, and thus assessable as rational or irrational, whilst forms of physical suffering – like pain and hunger – are not. He thus argues that although there are many ways in which physical and emotional suffering are alike, they differ considerably at the normative level.

Brady makes his case by arguing that there are number of reasons to think that forms of emotional suffering are reason-responsive; he cites introspective, metaethical, and developmental evidence. The first

kind of evidence suggests that we need to appeal to evaluative content in order to distinguish emotions from each other, but that such content is not necessary for introspection to distinguish different kinds of physical suffering. The second focuses on the idea that the values to which emotions respond are best understood on ‘rational sentimentalist’ lines, that is, in terms of features that make the emotion rationally appropriate. The objects of physical suffering do not admit of a plausible rational sentimentalist treatment, however. Finally, he argues that there are good developmental reasons for forms of emotional suffering to involve an evaluative stance; in particular, this is needed to accommodate the wide range of objects that trigger emotions and flexibility in behavioural response. Neither of these reasons, he argues, are applicable when we consider forms of physical suffering. He maintains, in light of this, that there are good reasons to think that emotional suffering is, and physical suffering is not, reason-responsive, because emotional suffering is, and physical suffering is not, imbued with evaluative content. Brady concludes, finally, that this puts pressure on evaluativist accounts of pain and other forms of physical suffering, since these hold that pain and physical suffering do have evaluative content.

In ‘The placebo effect’, Jennifer Corns looks at another point of comparison between physical and emotional suffering, namely the susceptibility of each to the placebo effect. Corns begins her paper by pointing out an interesting point of dissimilarity between physical and emotional suffering: the former seems susceptible to placebo effects whilst the latter is not. Corns thinks this dissimilarity is troubling for attempts to characterize the placebo effect, and proceeds to argue that there is no clear characterization available and none likely to succeed, whether for pain or emotion.

Corns makes her argument by considering six ways that non-placebo effects have been distinguished from the placebo effect in the existing literature. These are (i) active versus inactive, (ii) real versus fake, (iii) pharmacological versus psychosocial, (iv) specific versus non-specific, (v) treatment effects versus context effects, and (vi) legitimate healing versus illegitimate healing. In each case, Corns argues that there are considerable problems with drawing the purported distinction in this way. This would seem a troubling conclusion if it was important to have a successful characterization of the placebo effect. But Corns goes on to argue against the utility of identifying any class of effects as placebo effects. In particular, such an identification does not help in the areas

where it is claimed to help, namely in (i) randomized control trials, (ii) inquiries into the supposed mechanisms of the effect itself, and (iii) treatment. Finally, Corns explains away the intuitions we have about there being a distinct class of placebo effects, and argues that doing so can help to improve our treatment of all kinds of suffering. Far from being useful to our medical practices, therefore, the idea that there is such a distinct class can hamper effective treatment.

Jesse Prinz's paper, 'What is the affective component of pain?', focuses on one of the central ways that pain and emotion are thought to be connected, namely (as mentioned earlier) the idea that pain has both a sensory component and an affective component. Common sense and scientific theory support this 'componential' view of pain, with the sensory component purportedly carrying information about the body – e.g. that it has been damaged – and the affective component corresponding to the feeling of badness or unpleasantness that makes pain something to avoid. It is Prinz's aim to investigate the nature of the affective component. He begins by looking accounts which identify the affective component with an emotion, first considering and dismissing the idea that there is a distinctive emotion characteristic of pain, and then arguing against the claim that one or more familiar emotions (such as anger and fear) constitute the emotional element. Prinz proposes, instead, that negative affect can be identified with negative valence. This is not an emotion, although it is a component of some emotions.

Prinz then reviews different theories of valence, and proposes his own account, according to which valence is an 'inner marker' that (in the case of pain) tells us to act so that the sensory component ceases or stops. After defending this account by showing that it can accommodate a wide variety of empirical findings, Prinz then discusses a potential objection to his account of valence as an internal marker: since such markers are not on his view to be identified with feelings, then the affective component of pain that is constituted by negative valence is not itself an unpleasant feeling: it does not feel bad, in other words. Although this sounds paradoxical, Prinz concludes by explaining reasons for doubting that pains necessarily involve an unpleasant feeling in addition to their sensory component. This means that we should reject a 'folk platitude' about pain, namely that it is necessarily unpleasant; but, Prinz thinks, doing so can lead us to a clearer philosophical view as to why pain is after all bad.

Part 3: Deviant Pain

Paradigmatic pains hurt, are felt as being located in one's body, are associated with damage or injury, are motivational, conscious, and more besides. But many of the pains that we experience are not paradigmatic. A good theory of pain should be able to account not only for paradigmatic pains, but also atypical, deviant pains. Though deviant pains make an appearance in the first two parts of the volume, each of the papers in Part III provides a targeted, empirically rich discussion of a type of deviant pain and its importance for philosophical theories of pain.

In 'The unpleasantness of pain for humans and other animals', Adam Shriver takes up the most discussed case of deviant pain within philosophy: pains that subjects report not being bothered by. The standard interpretation of these deviant pain cases is that the affective component of pain is absent, while the dissociable sensory component remains.

After giving an overview of the evidence for this type of deviant pain, Shriver explains their philosophical relevance. In the philosophy of mind, for instance, change in the affective component without a change in the sensory component may be thought to raise problems for representational theories of pain which require phenomenal qualities to supervene on intentional content. In ethics, for instance, our understanding of the relationship between the two components arguably has implications for what we think is ultimately valuable or disvaluable. Dissociations raise further questions in applied ethics about non-humans and developing humans who may only experience pain's sensory component.

Shriver claims that though philosophical questions like these cannot be settled by scientific inquiry, neither can they be settled without it. He first turns to research aimed at identifying affective pain processing in non-humans, but points out how such research is surprisingly limited due to difficulties separating behavioural reflexes from affect. Accordingly, he argues for a three-pronged approach combining what we can learn about the relevant neural mechanisms in humans with both behavioural evidence and drug reactivity from humans and non-humans. Shriver considers this evidence and ultimately concludes that it is currently inconclusive.

Since answering the philosophical questions raised by sensory/affective dissociation is limited by these gaps in our scientific understanding, Shriver spends the remainder of the article suggesting

ways in which philosophers and scientists have and might further work together to fill them. In particular, he focuses on existing research into correlations between unpleasantness and both learning and motivation. Throughout this discussion, he raises further philosophical questions and experiments that he thinks could advance our understanding.

In the next chapter, ‘When is a pain not a pain? The challenge of disorders of consciousness,’ Valerie Hardcastle focuses on the pains of patients suffering from disorders of consciousness. The pains experienced by these non-conscious, or minimally conscious, patients may be understood as another type of atypical, deviant pain, consideration of which Hardcastle thinks helps to reveal what is and is not morally significant about pain and appropriately targeted for treatment.

With some reservations about the term, Hardcastle provides an overview of disorders of consciousness. Such conditions range from the clearly conscious people suffering from locked-in syndrome to the clearly non-conscious coma patients. Hardcastle focuses mostly on the middle of this spectrum and describes the tests—both behavioral and neural—used to determine how conscious such patients might be. Hardcastle is sceptical about what this evidence reveals and, more importantly, thinks the results are irrelevant for whether these patients are in pain.

It is, Hardcastle argues, pain processing that matters—both morally and for treatment; in particular, it does not matter whether the person is experiencing conscious pain or whether the person is conscious. Whether pain is being processed can be ascertained independently of whether the patient is conscious. Hardcastle argues that consciousness is not necessary for moral worth; in particular, it is not necessary for the two classic contenders for moral standing: being rational and having interests. Moreover, against a more traditional model invoking dedicated pain pathways, Hardcastle argues that pain processing is best understood as being carried out by massively parallel processing across a complex, neural network. She then compares the activity in this network between healthy subjects and patients suffering from various disorders of consciousness. Her aim is not to adjudicate this evidence, but instead to convince us that it is the processing of information across this network that matters, and not whether any of this processing is conscious. The final section of Hardcastle’s chapter focuses on the negative effects of pain processing as evidenced in both premature infants who have undergone multiple painful procedures and chronic pain patients. She concludes that not treating pain is detrimental to the brain and central nervous system—

and that this is as true and as morally relevant for the deviant pains undergone by those suffering from disorders of consciousness as it is for paradigmatic pains.

In the final chapter, ‘The first-person in pain’, Frederique de Vignemont focuses on the relationship between pain and bodily ownership. She argues that for a pain to be felt as yours it is not necessary that the felt pain be localized in a body felt as yours. Pains felt in such an “alien” body—a body that you feel, but not as yours—are clearly another type of deviant pain.

De Vignemont presents some of the reasons that it has seemed that pain and bodily ownership are instead conceptually inseparable, i.e. reasons that have been offered for the claims both that I necessarily feel my body as my own whenever I have bodily sensations (including pain) and that I necessarily feel a body part as my own when I localize pain within it. Consideration of these reasons give rise to two key hypotheses: that being able to feel pain and feeling that something is a part of my body are jointly sufficient for localizing pain in that something (“the sufficiency claim”) and that it is necessary that something be felt as part of my body in order for me to feel pain within it (“the necessity claim”). De Vignemont tests these hypotheses against three types of cases: the Rubber Hand Illusion, ownership delusions, and disownership syndromes. She argues that while the sufficiency claim is consistent with these cases, the necessity claim is not and should therefore be rejected.

While pain and bodily ownership thus dissociate, de Vignemont argues that threat and bodily ownership do not: to experience a bodily threat, I must experience the threatened body as my own. She ultimately explains this difference by invoking the different spatial organization of the two types of experiences: a threat is always more or less external to the body, but pains are not. Threats, unlike pain, are therefore essentially tied to sensing the boundaries of one’s body. De Vignemont concludes by noting that even if there are rare, deviant cases in which we feel pains in alien bodies that we do not feel as our own, we nonetheless always feel the pain as our own.

This volume arose from what came to be known as the Pain Project. Operating under the aegis of the Pain and the Nature of Minds programme at the University of Notre Dame, the Pain Project focused on relations among pain, perception, and emotion, and on pain in non-human animals. Its core team – Principal Investigators, David Bain and

Michael Brady, and their postdoctoral fellow, Jennifer Corns – are philosophers at the University of Glasgow. The broader team, based in Glasgow, Paris, and Oslo, comprised philosophers of mind and cognitive science, ethicists, neuroscientists, and veterinary scientists. Over 18 months, from January 2012 until June 2013, the Project ran four workshops and a conference, at which most of the contributions to this volume originated. The present volume exhibits the progress being made in understanding pain. But it is also clear that further progress needed. There are many questions yet to be answered. We hope the papers collected here stimulate further work into the nature of pain.