Chapter 3
Contexts versus Kernels

In this chapter I shall argue that the kernel view of pain is false. That is, insofar as they are normatively significant, pains are not merely sensation kernels which hurt. Instead, they are complex mental states with sensory, affective, conative, desiderative, and cognitive components. As such, the character, identity, and significance of a pain is deeply influenced by the context in which it occurs. In the next chapter I shall argue that abandoning the kernel view and properly understanding what pains are, opens the way to the correct understanding of why they are bad. That and several results along the way will be a payoff of the narrowly focused strategy I set out in the last chapter.

I'll begin this chapter by arguing that the context in which a pain occurs influences its intrinsic value. If intrinsic value depends just on intrinsic properties, this will show that the intrinsic properties of a pain extend beyond the particular way it hurts to, inter alia, one's mood, level of attention, desires, and the meaning a pain bears. In §3.2, I'll then explore these further intrinsic properties of the pain and their interactions. I shall conclude in §3.3 by arguing that rejecting the kernel view entails rejecting existing accounts of pain's intrinsic value in favor of a new account that had previously been obscured by the kernel view.

§3.1
Against kernels

I shall now begin by arguing that we must reject the kernel view. That is, I shall argue that, insofar as they are normatively significant, pains are not merely sensations. My argument is straightforward. I shall present pairs of cases which contain phenomenologically identical painful sensations. However, in virtue of the contexts in which they occur, the two pains have different intrinsic values. Thus, if intrinsic value depends solely on intrinsic properties, then the two pains which involve the same painful sensations must differ in intrinsic properties. That is, the pains' intrinsic values must depend on more than just the sensation. Therefore, the kernel view is false. I'll then broach the alternative to the kernel view in §3.1.5.

3.1.1 The kernel view

On the kernel view of the nature of pain, a pain is just a painful sensation kernel. Insofar as it is normatively significant, its nature and intrinsic badness lie solely in the way it hurts. When I stub my toe, the pain is wholly before my mind in the way it stings and throbs. Insofar as it affects our lives, there is nothing else to pain.

The kernel view holds that pains are the atoms of experience which hurt. As an experiential atom, a pain is necessarily distinct from the other elements of one's experiential milieu. The arthritic pain in my hand as I type this sentence is

distinct from my experience of the cat draped drooling across my forearms, though I am simultaneously conscious of both. This is the sense in which pains are they are sensation kernels. Thus my reaction to a painful sensation is not part of the pain; it is a reaction to the kernel.

On this view, the character of the painful sensation kernel exhausts the properties in virtue of which a pain is intrinsically bad. Stubbed toes throb; cuts sting and burn; migraines pound and crush. Hence if pains are bad because they are unpleasant, these properties constitute a pain's unpleasantness. If pains are bad because we dislike them, the kernel composed of these properties is what we dislike.

In making this argument, I shall assume that if x is intrinsically bad, x's badness must depend solely upon its intrinsic properties. I'll return to this assumption and how different accounts of intrinsic value sit with my argument in §3.1.4.

3.1.2 Intrinsically good pains

The kernel view is false. I shall now argue that pain's intrinsic value cannot depend solely on the kernel's intrinsic properties. When embedded in the right context, some pains are intrinsically good. If the same pain can have different intrinsic values in different contexts, there is no hope for the kernel view.

To be a genuine intrinsically good pain, a pain must not satisfy any of the following.

(i) The pain is good solely in virtue of some instrumental purpose it serves.[1]

(ii) The pain is good solely in virtue of its being an ineliminable part of a positively valued activity.

(iii) The sufferer has the false belief that her pain is intrinsically good. She is deluded by some sort of sickness or psychosis.

All cases of allegedly good pain can be described so that they satisfy some of (i)-(iii). For example, an ascetic may whip herself to atone for her and humanity's sins through the pain: (i). A weightlifter may endure 'the burn' only because of her commitment to building muscle: (ii). And, in many sad cases, past abuse and psychological trauma are manifested in self-destructive desires and practices: (iii). But the fact that we *could* recast hypothetical cases doesn't show how we *must* describe them. The brute assertion that a case is impossible does not answer an argument from possibility.

The following involves an intrinsically good pain that need not be ruled out by (i)-(iii).

Weightlifter: Kylie is a weightlifter. She enjoys going to the gym and looks forward to her workouts. One reason she looks forward to her workouts is that she enjoys the burning sensation caused by the buildup of lactic acid and the microtearing of muscle the exercise involves. She readily admits that this sensation, <u>the burn</u>, hurts. However, Kylie looks forward to experiencing the burn. For her, the burn is not just an unavoidable byproduct of the exercise; nor does her liking it consist in the fact that its onset signals that she is

[1] Pain is of course instrumentally good in its contribution to self-preservation. The horrific fates of those congenitally insensitive to pain leaves no doubt. See, Nagasako, Oaklander et al. (2003).

> nearing the end of a successful set. She enjoys the burn not just despite the fact that it hurts, but *because of the way it feels*. For Kylie, the pain is intrinsically good.

Imagine that Kylie and her workout partner Kyle are both given a drug which suppresses the burn without affecting their performance. Taking it does not allow them to lift more, and they remain perfectly aware of their level of exertion. Kyle regards the burn as an unpleasant side-effect. He may occasionally say that he likes the burn but he really only means it in the extrinsic senses of (i) and (ii); or, if deluded by machismo, in a way explained by (iii). Kyle is enthusiastic about the drug. It affords him all the enjoyment without the pain. Kylie claims she enjoyed her workout less, and that she would not use the drug again.

Weightlifter need not be an isolated case. Let me sketch a few others; each can be sharpened as necessary.

> *Coffee Drinker*: Natalie looks forward to her cup of morning coffee. She enjoys its aroma, its deep flavor, the gentle buzz it imparts, the warmth of the mug in her hands, and the way the first sip burns her lips. Like the rest of us, she attests that burning her lips hurts. Nonetheless, she enjoys that particular pain. When one morning she is given a cup of slightly cooler coffee which does not burn her lips, but which has all the same characteristics, she claims that she enjoys it less than one which burns her lips. Given the choice, she prefers to have her lips slightly scalded by the coffee.[2]
>
> *Ascetic*: Francis belongs to a religious order of ascetics. She acknowledges that being whipped hurts. However, she always volunteers to be scourged during ceremonies and whips herself during solitary prayer. The pain caused by whipping holds an important place in her religious asceticism. Her beliefs

[2] Alternatively, we can imagine that she is given a heat-resistant lip balm. This removes the chance that the flavor, aroma, and warmth, have been altered.

about the mortification of the flesh underlie its goodness for her but it is the pain per se which is good. She does not value it as a means for atoning for the sins of mankind. It is good because the pain in the context of religious ceremony is a religious experience.[3]

Masochist: Melissa the masochist enjoys certain pains in certain contexts. She does not deny that they hurt or claim that they are pleasurable. She has not been abused in childhood nor does she have any 'dark reasons'. She balks at any such suggestion, claiming instead that some pains can be good if they are suffered in the right contexts.

Spicy Food: Meena likes spicy food. When she goes to Korean restaurants she orders the spiciest dishes and requests them 'aju mepke' (extra hot). The heat of the food makes her mouth hurt, she readily admits, and she sips water and tea frequently. Nonetheless, it is precisely that burning sensation which she enjoys.

These cases likely strike you as variously more and less plausible. I hope some strike you as possible.[4]

These pains are intrinsically good in virtue of the contexts in which they occur. Consider two new cases.

*Weightlifter**: Walking to the gym, Kylie slips and suffers a minor tear of the biceps in her left arm as she grabs a railing to arrest her fall. The sensation is phenomenologically indistinguishable from the burn that a set of curls produces. Nonetheless, her cursing and complaining about the pain are evidence that it is intrinsically bad.

*Ascetic**: Francis is kidnapped by the state police who whip her to extract information. The sensation is phenomenologically indistinguishable from that which she experiences during her religious ceremonies. Nonetheless, her pleas for mercy are evidence that the pain is intrinsically bad.

[3] See, for example, Avila (1976-1985); and Siena (1980).

[4] Margaret Temkin pointed out that several of these cases involve a kind a ritualistic activity; that they may involve a kind of addiction. Since the association between the enjoyment of the activity and the pain is very tight, we might worry that Kylie and company fail to discriminate between the two in their evaluations. We can imagine parallel cases with one-off or first-time evaluations to circumvent this concern about the soundness of their judgments. But we should not shrink from the tight association. I argue in chapter four that it is quite revealing about the source of pain's intrinsic badness.

If Weightlifter and Ascetic are possible, these extensions should be as well. If both Weightlifter and Weightlifter* involve the same sensation, and the sensation is intrinsically good in Weightlifter and intrinsically bad in Weightlifter*, then the same pain has different intrinsic values in different contexts. That difference can only be explained by the change in context. But the properties of a context are not intrinsic properties of a pain on the kernel view. Therefore, the kernel view is committed to the intrinsic value of pain depending on non-intrinsic properties. The kernel view is false.

1.3 Phenomenologically indistinguishable sensations

I shall assume that the phenomenology suggests that the pain's intrinsic value really can be what is changing in these cases. Hopefully you will agree that this is possible —if only provisionally until you've seen the complete account of pain which it leads to. I do, however, want to briefly argue for another assumption: that these contrasting cases involve phenomenologically indistinguishable sensations.

It is empirically true that the character of a painful sensation can vary independently of the emotions and attitudes which accompany it.[5] Moreover, I am not alone among philosophers in believing that a painful sensation can

[5] See §3.2.2.1.

remain the same between contexts in which the pain seems to have different intrinsic values. For example, Korsgaard writes:

> Pain really is less horrible if you can curb your inclination to fight it. This is why it helps, in dealing with pain, to take a tranquilizer or to lie down. Ask yourself how, if the painfulness of pain rested just in the character of the sensations, it could help to lie down? The *sensations do not change*.[6]

Similarly, Hare imagines jumping repeatedly into cold water to generate an analogy to feeling pain without disliking it.

> Suppose…that I do this diving act many times in the hope of getting not to mind this degree of cold; and that in the end I succeed. *It is not necessary to suppose that there is any change in the degree of cold that I feel (even subjectively)*; there might be, but that would spoil the example. It may be merely that through habituation I stop minding my skin feeling like that. We do not even need to suppose any course of habituation. Whether I found the cold unpleasant or invigorating might depend on my general state of mind —on whether I was feeling depressed or elated.[7]

This suggestion that the sensation itself (the cold kernel) can remain invariant between cases where its value differs is an analogue of my assumption about pain.

But perhaps the assumption that the phenomenology does not change is implausible where the pains allegedly differ in valence. Hopefully a more streamlined case will bolster the intuition supporting my assumption. Consider:

> *Weightlifter***: Kylie is carrying her friend's couch up five flights of stairs. She really dislikes the attendant burning sensation of the exertion. At the third flight it dawns on her that this is just another form of weightlifting. With that realization she comes to like the sensation.

[6] Korsgaard (1996), 147. My italics.
[7] R.M. Hare (1970), 80. My italics.

Indeed, we can imagine that, after banging into a wall, Kylie stops thinking of the job as a form of weightlifting and the burn becomes bad again (we can iterate so that the burn flips back and forth between bad and good). If this is possible, we should accept the possibility that the sensations in my cases are phenomenologically indistinguishable. That is enough to undermine the kernel view.

3.1.4 How other accounts of intrinsic value fit with this

To complete this argument, let me return to the assumption that intrinsic value depends solely on intrinsic properties. As we saw in chapter two, this view is widespread among both proponents of containment views and proponents of stance views. But not everyone accepts it. Shelly Kagan, for example, argues that relational properties such as an object's causal history can contribute to its intrinsic value. Thus, on his view, the pen used to sign the Emancipation Proclamation can have an intrinsic value which another qualitatively identical pen lacks.[8] I thus need to say how my argument sits vis-à-vis this conception of intrinsic value.

The conceptual apparatus I set out in chapter two answers this problem. Nonetheless, it will be helpful to briefly recapitulate the rough answer here. My examples purport to show that the intrinsic value of a pain rests on something

[8] Kagan (1998).

more than the sensation kernel. On a containment view, this is the claim that the character of the kernel by itself is a sufficient condition of the pain's intrinsic value. On a stance view, this is the claim that the relevant evaluative attitude has more than just the kernel as its object. For example, what we dislike isn't just the kernel, it's the kernel in the particular context. So far so good.

I then claim that this entails that the pain must have some intrinsic property in addition to the kernel which responds to the context. But this need not follow on Kagan's view. If intrinsic value can depend on relational properties, then it could be that the pain is just the kernel but that the kernel's intrinsic value depends partially on its relation to certain features of the context. Thus nothing about the intrinsic properties of pain would follow from the claim that pain's intrinsic value is partially context dependent.

The topic of this chapter is Q2: What are pains insofar as they are normatively significant? I therefore use the term 'pain' to denote whatever bears the intrinsic value we find in our putative conception of the experience of pain. I have argued that the bearer of pain's intrinsic value includes both the kernel and its relationship to the context. Hence, I have argued that the kernel's relationship to the context is in fact an intrinsic property of pain. Thus the claim that pain's intrinsic value depends on relational properties of the kernel is consistent with the claim that these relational properties are intrinsic properties of the pain.

Therefore, given how I propose to use the term 'pain', Kagan's account of intrinsic value has no bearing on my conclusion that pain, as it is normatively significant, is not merely a painful sensation.

3.1.5 The alternative to the kernel view

If my argument up to this point is correct, pain, as it is normatively significant, is much more complex than simply a sensation. Its intrinsic value and therefore intrinsic properties are sensitive to the context in which it occurs. I believe that this leads us to the view that pain is a complex phenomenon with sensory, affective, conative, desiderative, and cognitive, components. That is, certain of the affective states, emotions, desires, and beliefs, which accompany the painful sensation kernel are themselves intrinsic properties of the pain.

I shall spend the next section fleshing out and defending this conception of what pains are. Once we have the proper conception of pain in view, we will then be in position to examine the existing theories of pain's intrinsic badness. In §3.3 I shall argue that, having approached pain and its value directly and not as a mere example in a larger theoretical discussion, we can see that all of the existing views are mistaken. That will be a payoff of the methodological strategy set out in chapter one.

§3.2
The composite view

If the kernel view is false, pain cannot be merely a sensation kernel. To avoid the problems besetting the kernel view, a pain must have some intrinsic property which can be affected by context while the quality of the painful sensation kernel remains unchanged. The composite view holds that a pain is a composite of a painful sensation kernel and a reaction. In Weightlifter, Kylie likes the burn; in Weightlifter* she hates it. Since the two burn tokens each include different reactions, they are tokens of different pain types. The fact that they involve qualitatively identical sensation kernels but have different intrinsic values is thus unproblematic.

This section sets out the composite view. §3.2.1 is an overview. In §3.2.2 I'll sample some of the extensive scientific literature discussing the factors which potentially influence the reaction component. Then in §3.2.3 I'll set out the nature of the reaction component of pain. In the next section —§3.3— I'll explain how the existing accounts of pain's evil fit with the composite view, and then argue that we should reject these views. I'll close this chapter by setting out an alternative account on which pain's intrinsic badness lies in a disjunction of all the traditional candidate accounts of pain's evil —dislike, unpleasantness, et cetera— as well as some of the affective, desiderative, conative, and cognitive states identified in the present section. Then in the next chapter, I'll argue that this is not pain's only intrinsic evil.

3.2.1 Overview of the composite view

The composite view's answer to Q2 —what are pains insofar as they are normatively significant?— is straightforward. Considering two cases will help bring out the formal relationship between the painful sensation kernel, the reaction component, and the context.

> *Normal Day*: My day so far isn't either especially good or bad. While putting some papers away, I accidentally slam my finger in a drawer. On an arbitrary scale of 0-100, the resulting pain is bad to degree 12 (bad_{12}).

and

> *Bad Day*: I'm having a bad day. I'm feeling downtrodden, anxious, irritable, and generally on edge. I accidentally slam my finger in a drawer. The sensation coupled with my preexisting affect, and the explosion of negative emotions makes the pain bad_{20}.

In the second case, the reaction component of my pain is influenced by my dispositions to think negatively and to react explosively. Hence my pain in Bad Day is intrinsically worse than my pain in Normal Day, even though they involve the same sensation. Similarly the fact that a cancer patient's headache throbs *memento mori* causes her to have a very strong negative reaction to the otherwise innocuous sensation. More outré contextual elements can also affect the reaction component. For example, the gender of those present can cause one's reaction to be more positive or negative than it would be otherwise. These influences are no more mysterious than the way the presence of sour cream

causes me to decline the avocado served alone but partake of the proffered guacamole.[9] I now turn to a sampling of what these influences can be.

2.2 Contextual factors

The factors which can influence the reaction component are myriad, and some are surprising. It is therefore important to have a sense of the breadth of what these factors can be. I shall approach this with a very brief survey of some of the relevant scientific literature on pain. All of the factors I shall survey can have significant effects on a pain's reaction component. Though their actual influence differs case by case.

I shall not assume that any of these features are actually part of the pain as it is normatively significant. Instead, we should think of them as dimensions of the painful experience or parts of the context in which the pain occurs. For some dimensions —especially states like fear and anxiety— the claim that they are dimensions of the experience of pain but not parts of the pain itself may seem rather awkward. And for good reason. In §3.2.3 I shall argue that many of these dimensions of the experience of pain are actually part of the reaction component; that they are part of the pain itself. But that is an important substantive thesis that must be established, not assumed.

[9] There are two possible relationships between the context and the reaction. The causation version holds that the elements of the context —including my dispositions— cause the particular reaction. On the reasons version, the elements of the context are (or provide) reasons for reacting in a particular way to the sensation kernel. This distinction, and the issues it raises, bear on important metaethical questions about the nature of

The McGill Pain Questionnaire (Figure 1), the gold-standard for evaluating clinical pain, contains seventy-eight adjectives for pain along twenty different dimensions.[10] These further divide into roughly three categories the sensory-discriminative, affective-motivational, and cognitive-evaluative dimensions of the experience of pain. I shall first give some examples of what composes each of these. I'll then briefly discuss some features of the contexts in which a pain occurs that can influence the reaction component of the pain.

The literature and topics I'm now going to skim is vast and I have no room in this chapter to discuss more than a few features in each category. I have selected these features for two reasons. First, the features I shall discuss are hopefully diverse enough to give a sense of how complex the experience of pain and the associated contexts can be. Second, many of them will be central to my discussion of pain and its evil in the rest of this dissertation.

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reasons and rationality. I shall not discuss these herein, and will assume the causation version in what follows.

[10] See Melzack (1975); Tursky (1976); and, Melzack and Torgerson (1971).

Figure 1

3.2.2.1 The sensory-discriminative dimension

Let's begin with the sensory-discriminative dimension of the experience of pain. This includes the way a pain burns, itches, tears, and throbs. That is, it contains the complex phenomenology which §§1-10 of the McGill Pain Questionnaire attempt to capture. The sensory-discriminative dimension is thus what exhausted the nature of pain on the kernel view —it is, I think, the pain kernel. On the composite view, the sensory-discriminative dimension is what the reaction component is a reaction to.

The attractiveness of the kernel view shows that this is the most intuitively straightforward dimension of pain. I thus shall say little about it here. I'll limit my remarks to pointing out that sensory-discriminative dimension can have its character determined independently of the presence or influence of the other dimensions of the experience of pain.

This is easy to show. For one, the sensory and affective dimensions can be experimentally manipulated separately. A dose of the tranquilizer diazepam diminishes a pain's affective dimension but leaves the intensity of the sensation kernel unchanged. Whereas, fentanyl diminishes the intensity of the sensation

kernel but tends to exacerbate the affective dimension —it makes it more unpleasant.[11]

Indeed, painful sensations can occur without any significant affective concomitant Price writes that

> we can experience nociceptive sensation [kernels]…*without any experience of unpleasantness whatsoever*. This possibility has been verified several times in my own experience as well as that of my colleagues in pain research. We have all administered well-controlled nociceptive heat stimuli to our own skin to check the reliability of our thermal stimulators. Although the resulting sensation [kernels] are intense and even have burning, throbbing, or stinging qualities, they serve merely to remind us that our thermal stimulators are working properly. The sensation [kernels]…*are not unpleasant*.[12]

With some forms of hypnotic analgesia, subjects give similar reports.[13] And, in cases well-loved by philosophers —especially those favoring dislike-theories— certain patients who have undergone prefrontal leucotomies report feeling painful sensations but being completely untroubled by them.[14]

Therefore, while, as we shall see, the character of the sensory-discriminative dimension of the experience of pain can be influenced by other dimensions, it can also exist and have its character independently of these influences. That is, the sensation kernel can be separate from the reaction component.

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[11] See Gracely, McGath et al. (1978); Gracely, Dubner et al. (1979); Gracely, Dubner et al. (1982).
[12] Price (1999), 6. Italics original. I have added 'kernel' to fit his claim into my terminology.
[13] See, for example, Price (1999), Ch. 8; Price and Barber (1987); Price (1996); Hilgard and Hilgard (1983); Hilgard, Morgan et al. (1975); and, Hilgard, Morgan et al. (1974).
[14] See, for example, Trigg (1970); and, Hardcastle (1997).

3.2.2.2 The affective-motivational dimension

The affective-motivational dimension of the experience of pain covers a wide range of broadly emotional and conative states. It is very roughly what we mean when we talk about pains being 'unpleasant'. Though since it can include some of the character of disliking the sensation we should not understand 'unpleasantness' here in the sense invoked by mental-state theories of pain's evil. Like all dimensions of the experience of pain, it can be both affected by and affect many of the other dimensions. Price writes that,

> even the *immediate* affective dimension of pain may be synthesized from [many different] sensory processes. Pain sensation may be a salient but not the sole determinant of the affective state during pain.[15]

Thus, we can get a sense of this category and its significance without worrying about these relationships to the sensory-discriminative dimension.

The role of negative emotions and affective states such as depression, anxiety, and anger, are most perspicuous in cases of chronic pains.[16] [17] [18] Indeed, it is clear that the more chronic a pain becomes, the more psychosocial factors — including these affective states— exert their influence.[19] But these negative states can have important roles in the acute pains that are our main focus herein. For

[15] Price (1999), 49. *Sic*. Italics original . See also Chapman (1995).
[16] For depression, see Banks, S.M. and Kerns (1996); Max (1995); Turk, Okifuji et al. (1995); and, Romano and Turner (1985).
[17] For anxiety, see, McCracken, Gross et al. (1996); McCracken, Gross et al. (1993); Brown, Robinson et al. (1996); Asmundson, Norton et al. (1997); and, Atkinson, Slater et al. (1991).
[18] For anger, see Fernandez and Turk (1995); Kerns, Rosenberg et al. (1994); Schwartz, Slater et al. (1991); Kinder and Curtiss (1988); Gaskin, Greene et al. (1992); and, Taylor, Lorentzen et al. (1990). Though anger is the least studied of the three.
[19] Gatchel (1996).

example, depressed patients are more likely to interpret sensations as painful and are more likely to report aches and pains.[20] These patients also seem to have a decreased tolerance for experimental pain.[21] That suggests an important role for these affective states in influencing the reaction component of the pain. This is especially the case where these states are yoked with more cognitive dimensions, particularly one's beliefs about a pain's meaning and her preexisting expectations about the pain.[22]

3.2.2.3 The cognitive-evaluative dimension

The cognitive-evaluative dimension of the experience of pain contains various beliefs about the pain's meaning, as well as states that may more properly be thought of as desires, for example, the judgment that a pain is terrible. It also contains less clearly cognitive states such as perceiving oneself as threatened and invaded by the pain. Price writes that

> Pain-related sensations may not only be intense and persistent, but can be perceived as spreading, penetrating, and sometimes summating [getting worse the longer they persist]. They are experienced as an invasion of both the body and consciousness because their intensity and qualities are perceived as intense and penetrating. Therefore, a frequent meaning given to painful sensations is that of *intrusion*, a meaning that requires little reflection and occurs somewhat (although not entirely) automatically.[23]

[20] Pennebaker (1982); and, Salovey and Birnbaum (1989), respectively.
[21] Zelman, Howland et al. (1991).
[22] The interrelationships between these various constituents of the affective-motivational dimension, and their relationship to the sensory-discriminative dimension present several important empirical questions. For a good overview of the relevant issues, views, and literature, see Robinson and Riley III (1999).
[23] Price (1999), 50. See also, Buytendijk (1961); and, Bakan (1968).

In the next chapter I shall argue that this feature of pain lies at the heart of its intrinsic badness.

Pains can, and often do, have meanings. When one has cancer, the symptomatic pains can present themselves as signifying her condition. A pain which throbs *memento mori* is much worse than a pain that consists in the same sensation kernel but with no such meaning. Price gives this example

> Suppose two patients have mild abdominal pain sensations, which both rate as 3 along a 10-point scale of pain sensation intensity. One patient has a history of indigestion and attributes her present abdominal sensation to just having eaten. She rates this experience as 2 along a 10-point scale of pain unpleasantness. The other patient has just been diagnosed as having cancer. He cannot help but consider the possible implications of this mildly intense abdominal sensation. Thoughts of these implications dominate his experience, and the sensation itself serves as a persistent reminder of them. He rates this experience as 8 along a 10-point scale of pain unpleasantness.[24]

There appear to be two instances of the same pain type where one is much worse than the other because of the meaning it carries. Thus it seems that the meaning of the pain influences the reaction component and makes the cancer patient's pain much worse, even though both patients experience the same sensation kernel.

There are myriad cases where pain tokens of the same type have large differences in intrinsic badness due to differences in meaning. Think, for example, of qualitatively identical chronic and acute pains. A mild pain in my otherwise healthy back may be a small annoyance. But someone with chronic

back problems may experience the same sensation as signifying the onset of another painful bout and as intrinsically much worse. Similarly, some women report less pain in childbirth because the pain is experienced as the coming of a new child whereas those who experience their pain as just a pain report it to be excruciating.[25] In his famous study comparing the pains of a soldier injured in war and that of a civilian with a comparable injury, Beecher writes that

> Strong emotion can block pain. That is common experience. In this connection it is important to consider that position of the soldier: his wound suddenly releases him from an exceedingly dangerous environment, one filled with fatigue, discomfort, anxiety, fear, and real danger of death, and gives him a ticket to the safety of the hospital. His troubles are about over, or so he thinks they are. He overcompensates and becomes euphoric….On the other hand, the civilian's accident marks the beginning of disaster for him.[26]

Thus we can imagine that when a professional athlete and I both break an ankle, her pain is much worse than mine. Her pain suggests the end of her career. I can still do philosophy on crutches.

More generally, beliefs can heavily influence the reaction component, both through their effects on the sensory and affective dimensions, and on their own. In particular, this is true of the beliefs a person has about the cause, likely outcome, control of, and responsibility for, her pain.[27] It is well-established that

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[24] Price (1999), 7.
[25] The literature of pain in childbirth is extensive and fraught with complications. For example, many expectant mothers (regardless of their previous experience with labor) underestimate the painfulness of labor. See Norvell, Gaston-Johansson et al. (1987); and, Fridh and Gaston-Johansson (1990). But underestimating the severity of an expected pain often leads to the pain being more severe than it otherwise would be. See Arntz, Hout et al. (1991).
[26] Beecher (1946), 445. See also Beecher (1956); and, Wall (1979).
[27] DeGood and Shutty (1992); Skevington (1995), Ch.5; and, Jensen, Turner et al. (1991).

patients suffer the least when they believe that they have a measure of control over their pain, that the medical care they are receiving is effective, that their family and friends care for and support them, and that they are not seriously disabled by their condition.[28] Moreover, beliefs and expectations are also heavily implicated in the placebo effect which does have a significant analgesic effect on many types of pain.[29]

As with the other dimensions, these psychosocial factors exercise progressively more influence as the pain becomes increasingly chronic. But it is clear that they also affect the intensity and character of acute pains.[30] Indeed, a patient's expectations can influence whether a particular sensation kernel is perceived as painful or pleasurable. In one famous experiment, volunteers were told to place their finger in a machine containing only a vibrating emery board. Those who had been told to expect a pleasurable sensation reported a mild and pleasurable tickle; those who had been told to expect a painful sensation reported feeling a painful electric shock.[31] In another, one hundred paid volunteers were told that the shock they would receive from an electrical stimulator might produce a headache. Unbeknownst to them, the machine

[28] Jensen and Karoly (1991); Jensen, Turner et al. (1991); Jensen and Karoly (1992); Jensen, Turner et al. (1994).
[29] Though placebo effects are extraordinarily complex. For an overview of the topic, see Price (1999), Ch.7.
[30] Williams, Robinson et al. (1994) and Williams (1996) show that certain beliefs affect acute postoperative pain. Williams and Keefe (1991) and Shutty, DeGood et al. (1990), respectively, show that a patient's beliefs can predict both the intensity of her pains and the outcome of her treatment for pain.
[31] Anderson and Pennebaker (1980); and Pennebaker (1982).

produced no shock, only a low humming sound. Yet fifty-percent of the subjects reported feeling pain.[32]

Beliefs about self-efficacy —about one's ability to control her pain— are probably the most central and most crucial cognitive dimensions of the experience of pain.[33] These beliefs can be central to the experience of a pain, and have some of the heaviest influence upon the reaction component. For example, one study of over a hundred post-surgical patients found that a patient's pre-surgical expectations about her ability to control and cope with her pain was the variable most strongly associated with total pain experience.[34] In the next chapter, I shall argue that the heavy weight of the (perceived) ability to control one's pain is extremely important to understanding the nature of pain's evil.[35]

3.2.2.4 Attention and context

In addition to cognitive elements, the attention one pays to her pain has some of the greatest significance in determining the reaction component. This is

[32] Bayer, Baer et al. (1991). In another case, patients suffering from irritable bowel syndrome undergoing a procedure involving the inflation of a rectal balloon were told that the balloon was being inflated for a second time, when in fact it was not. Still many reported again feeling pain. Silverman, Munakata et al. (1997). Similar results have been found with patients undergoing arteriotomies Austan, Polise et al. (1997) and various minor surgeries Wallace (1985). Some philosophers have made something like this point with the example of a (perhaps apocryphal) fraternity prank wherein pledges are told that they will be branded on their backs with a hot iron. When they are touched with a piece of ice instead, they believe that they have been burnt, until the melting ice and laughter tells them otherwise. Stuart Rachels gives this example in Rachels (2000), 11.

[33] For just a few examples, see Kanfer and Goldfoot (1966); Kanfer and Seidner (1973); DeGood and Shutty (1992); Jensen and Karoly (1992); Skevington (1995), 223-226; Turk, Okifuji et al. (1995); Arnstein, Wells-Federman et al. (2001); Asghari and Nicholas (2001); Porter, Keefe et al. (2002); Strong, Westbury et al. (2002); Barry, Guo et al. (2003); Cremeans-Smith, Stephens et al. (2003); and, Keefe, Ahles et al. (2003).

[34] Bachiocco, Scesi et al. (1993).

well-established by the empirical research.[36] But it should also be clear from personal experience. If you are in pain and become engrossed in a conversation, while the pain may be there in the back of your mind, it is much less bad than it was before. This is true even for relatively severe pains. Of course, the worse your pain is, the more difficult it is to distract yourself from it.

Many forms of palliative care exploit this connection between the reaction component and the degree of attention paid to the pain. The power of distraction is part of what makes hypnosis effective in pain relief for many types of pain.[37] And, in recent years, doctors have found that virtual reality devices are effective in attenuating many severe pains —most notably the agony burn patients suffer during debridement.[38]

There are many features of the context in which a person experiences a pain which can influence the reaction component. Social cues, for example, affect the experience of pain. If a person is given an electric shock after watching a model tolerate the pain well, her pain thresholds are significantly higher than if

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[35] Eccleston, Chris, Williams et al. (1997) draw a connection between pain and the way it assaults one's personal identity that resonates with the account I shall give of pain's evil.
[36] For example, Kahneman (1973); Eccleston, C. and Crombez (1999); Rode, Salkovskis et al. (2001); Kuhajda, Thorn et al. (2002); Legrain, Guerit et al. (2002); Lenz and Treede (2002); Van Damme, Crombez et al. (2002); Villemure and Bushnell (2002); Wade and Hart (2002); Legrain, Bruyer et al. (2003); Roelofs, Peters et al. (2003); Villemure, Slotnick et al. (2003); Tsao, Dobalian et al. (2004); Van Damme, Crombez et al. (2004).
[37] See Barber, T.X. (1959); Hilgard, Morgan et al. (1974); Hilgard, Morgan et al. (1975); Barber J, and Mayer (1977); Hilgard and Hilgard (1983); Banks, W. (1985); Price and Barber (1987); Baram (1995); Gracely (1995); Price (1996); Kochs and Schneider (2002).
[38] Hoffman (2004); Hendrix and Barfield (1995); Hoffman (1998); Hoffman, Doctor et al. (2000); Hoffman, Patterson et al. (2000); Hoffman, Garcia-Palacios et al. (2001); Hoffman, Patterson et al. (2001);

the model had been absent (or, worse, handled the pain poorly).[39] These social and situational cues can extend to some surprising factors. For example, as I've mentioned before the gender of those present in the room, and even the gender of the person inflicting the pain, can influence the reaction component.[40] Also, one study has found that the décor of the room in which an experimental pain is inflicted can also have an effect.[41]

Many features of the individual's background and personality also influence the reaction components of her pains. The relationship between gender and the many features of pain is extremely complex. I do not have space to delve into the extensive literature herein.[42] Similarly, a patient's social, cultural, and historical, background, for example, can be rather significant. The researcher David Williams writes that, for example,

> [a person's] culture's tendency to be emotionally expressive or stoic, beliefs about the meaning of pain and its controllability, and learned models for illness behaviors [all] influence how a patient responds to pain.[43]

Hoffman, Carlin et al. (2003); Hoffman, Garcia-Palacios et al. (2003); Hoffman, Richards et al. (2003); Hoffman, Patterson et al. (2004); Hoffman, Richards et al. (2004); Hoffman, Coda et al.

[39] See Craig and Weiss (1971), . Also interesting are studies which show that that children shown films of kids like them receiving their treatment and being calm, are themselves less anxious and experience less complications with their own treatments. See Craig (1978); Melamed and Siegel (1975); and, Melamed, Yurcheson et al. (1978).

[40] Levine (1991); Kallai (2004); Haley (1985).

[41] Williams (unpublished)

[42] To get a sense of how gender permeates every component of pain and its treatment, here's a sample list: Rollman, Hapidou et al. (1990); Feine, Bushnell et al. (1991); Kepler, Standifer et al. (1991); Strong, Ashton et al. (1992); Ruda (1993); Vallerand (1995); Unruh (1996); Paulson, Minoshima et al. (1998); Keogh, Hatton et al. (2000); Keogh and Herdenfeldt (2002); Sarlani and Greenspan (2002); Wise, Price et al. (2002); Chesterton, Barlas et al. (2003); Sarlani, Farooq et al. (2003); Kim, Neubert et al. (2004); Sarlani, Grace et al. (2004); Keogh, McCracken et al. (2005).

[43] Williams (1999), 158. See also Bonica (1990); Morris (1991), (1999); Friedman, Gaughan et al. (2000); Ansary, Steigerwald et al. (2003); Raj, Steigerwald et al. (2003); Zborowski (1952); Zborowski (1960);

Other significant features include the patient's own memories of past pains and how she dealt with them, as well as her exposure to her friends and family's reacting to other people's pains, impacts her own experiences of pain.[44] The attitudes —especially their solicitousness— that a patient's caregivers, friends, and family, express toward her can also have a large impact.[45]

All of these features of the experience of pain and its context together determine the nature and strength of the pain's reaction component (and, in some cases, the character of the sensation kernel as well). The list I have given is a small subset of the factors unearthed in the literature. At this point, the list may seem to lack order; to lack a unifying theme. We shall see in the next chapter that many of these factors in fact coalesce around a specific kind of helplessness which I believe lies at the heart of pain's evil. Now that we have a sense of what can influence the reaction component, let me turn to what it is.

3.2.3 The reaction component

I have argued that, given that the kernel view is false, the intrinsic properties of a pain must contain some additional component which, by being affected by the context, can be responsible for a difference in intrinsic value between two pains with identical painful sensation kernels. We then saw that the

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Lipton and Marbach (1984); Bates, Edwards et al. (1993); Greenwald (1991); Sternbach and Tursky (1965); and, Faucett, Gordon et al. (1994).

[44] Edwards, Zeichner et al. (1985); Haley, Turner et al. (1985); Bachiocco, Scesi et al. (1993); Koutantji, Pearce et al. (1998); Spertus, Burns et al. (1999); Fillingim, Edwards et al. (2000); Kovacs, Gestoso et al. (2003); Fillingim (2000).

elements of the context are extremely diverse and tightly bound up with the reaction component. That completes this answer to Q2.

Given the composite view of pain, Q3 —why is pain intrinsically bad?— now becomes: What properties does the reaction component contain? Different substantive theories of intrinsic value explain the nature of the reaction differently. Coupled with the composite view, the dislike theory entails that the reaction component of pain is the dislike of the sensation. The mental-state theory entails that the reaction component is the sensation's appearing unpleasant.

I shall now argue that, while formally compatible with these substantive theories, the composite view strongly suggests an alternative substantive account of pain's intrinsic badness which was logically unavailable on the kernel view. I'll begin by arguing that the reaction component can contain a substantially more diverse array of affective, desiderative, conative, and cognitive states than the traditional accounts have supposed. In §3.3 I'll argue that we should reject the traditional answers to Q3 in favor of a more catholic account —the aversion theory— which is truer to the diversity of the reaction component.

I believe that the logical relationship between affective, desiderative, cognitive, and conative attitudes, and a painful sensation is identical to the

[45] See Skevington (1995).

relationship between the putative reaction component (e.g., dislike) and the sensation. That will show that these attitudes are also part of the reaction component. The argument is most perspicuous assuming a stance view like the dislike theory. I'll return to containment views in a moment. Consider:

> *Operation*: You must undergo a painful operation without anesthetic. The intense pain you feel at the first incision elicits a heavy dose of fear. You've been told that the pain will only get worse. The fear thus makes the present pain much worse than it would be otherwise.

On the composite view coupled with the dislike theory, the fear is not part of the pain. Its contribution to the pain's intrinsic badness is mediated by the reaction component. In Operation, the sensation and context cause the fear which, in turn, causes a greater dislike of the painful sensation. Because this is a change in the pain's intrinsic properties, the pain has become intrinsically worse —it doesn't matter that the change was caused by a non-intrinsic property.

I think this is a mistake. I shall now argue that fear's contribution to the pain's intrinsic badness need not be mediated by a separate attitude such as dislike. Instead, fear stands in the same relationship to the painful sensation as the putative reaction component. We should, I think, take the fear to be part of the reaction.

In Operation, the fear's badness need not depend on the reaction which it influences. This can even be true on the dislike theory. The victim of a serious accident could have two separate, but causally interacting, attitudes: a dislike of

her fear of dying (which the pain arouses), and a dislike of the painful sensation. Morphine would alleviate one but not the other. This is compatible with the fear influencing her dislike of the sensation (and it does not entail the problematic conclusion that she dislikes the sensation in virtue of the fear's badness). Thus the fear itself can be bad in Operation.

The sensation may cause the accompanying fear. But the painful sensation does not on its own determine the level of fear. If, for example, you knew that the forthcoming pains will be no worse, you may fear them much less. Thus the context's effect on the degree of the fear's evil is at least partially determined independently of the painful sensation.

Your fear in Operation need not be restricted to future pains. When I am running from the axe-wielding psychopath and hit a dead-end, I certainly fear my impending death. But I can also fear her as she slowly approaches. Similarly, it is possible to fear the present painful sensation in Operation.[46]

Therefore, in Operation, your fear is a response to the painful sensation; it is itself bad; its badness is influenced by context; and it (partially) determines the badness of the pain. That should sound familiar. Fear and the putative reaction

[46] It may seem conceptually awkward to claim that one can fear something that is present —fear may be a diachronic attitude like regret. But I need not legislate on this. Being terrified is an essentially affective state. However, it can still be an attitude toward something. Thus, if necessary, we can substitute 'is terrified of x' when I say 'fears x' herein.

component can stand in the same relationship to the painful sensation. That is, both attitudes:

(1) Arise because of the painful sensation.
(2) Have the painful sensation as their object.
(3) Can be bad per se when accompanying the painful sensation.[47]
(4) (Partially) determine the pain's intrinsic badness.

I think (1)-(4) are jointly sufficient conditions for an attitude being a constituent of a pain's reaction component. There are myriad and interrelated, affective, motivational, and cognitive attitudes which satisfy these conditions. Anger, despair, the impulse to escape, and feelings of helplessness, among many others, are parts of the reaction component. They are therefore intrinsic properties of the pain.

§3.3
Against the traditional accounts

I shall now argue that understanding the reaction component in this capacious way undermines existing views of pain's evil.

3.3.1 The alleged gap

As we saw above, the proponents of the traditional answers to Q2 hold that states like fear influence the intrinsic badness of pain by influencing the dislike which wholly composes the reaction component. Thus (4) —the claim that

fear (partially) determines the pain's intrinsic badness— seems to beg the question against this view. By adding 'partially' to (4) I claim that dislike and fear affect the value in the same unmediated way. But that is precisely what is at issue.

However, I think we have shifted the burden onto my opponent. We know that when the fear of the sensation kernel is greater, the pain is intrinsically worse. Coupled with the claim that fear is an intrinsic property of the pain, this seems to be a complete explanation of fear's contribution to pain's intrinsic badness. Thus, given the metaphysical capaciousness of the composite view, the dislike theorist owes us an account of the alleged gap between fear and the pain's value which, she holds, dislike must bridge.

More importantly, to claim that we need dislike to fill this alleged gap, she owes us a substantive account of the normatively significant form of 'dislike'. It cannot simply be a negative attitude toward the painful sensation kernel. Fear satisfies that requirement; and we've seen that the relationship between fear and the sensation is very tight as it stands. There must be something more to the substantive conception of dislike. But this will be hard to come by. One of the

[47] There is a complication here. It may seem that the state of disliking x is not bad per se, instead it's only x that's bad. That seems disanalogous to fear which is itself bad. This raises some larger issues about the bearers of intrinsic value which I shall address in §5.2.

perennial strengths —and most frustrating aspects— of dislike-based views is that the attitude is so non-specific and thin. I shall return to this in a moment.[48]

The same conclusion follows for containment views. On a containment view like the mental-state theory, the reaction component and kernel together compose the way the pain feels. The pain takes on a certain distinctive felt character —its unpleasantness— when it involves certain meanings or is accompanied by certain emotions. That is the source of its intrinsic badness.

But it's not clear why we would appeal to the particular change in the pain's phenomenology caused by being fearful to explain why the pain in Operation is worse than it would be otherwise. It seems that the fact that one is fearful does all the work. Indeed, even if the presence of fear affected the qualitative character of the sensation kernel, the fact that the fear is present would still do all the explanatory work.

Moreover, emotions like fear (and even cognitive states like perceiving a meaning) have their own phenomenological content. This makes the alleged phenomenological boundary between the fear and pain (the composite of the kernel and the reaction component) hazy at best. The borders are further smudged if the presence of fear affects both the reaction component and the character of the painful sensation kernel. These vague boundaries suggest that

[48] C.f., Scanlon's treatment of desire which imbues normatively significant desires with rationally

things like fear are part of the pain after all. But as with the dislike theory, this conclusion may have been obscured by the looseness of the term 'unpleasantness'. And again, this looseness may have contributed to the specious attractiveness of these traditional theories.[49]

3.3.2 The aversion theory

Thus once we accept that the reaction component of a pain can contain fear and other attitudes which satisfy (1)-(4), we must abandon the traditional accounts of pain's evil. Fortunately, the composite view's metaphysics suggest (but do not entail) an alternative answer to Q3 —in virtue of what is pain intrinsically bad? On the composite view, a pain is a complex of a painful sensation kernel and a reaction to it. I have argued that this reaction can include a diverse array of mental states. On this account of the reaction component, the reaction is an aversion, that is, a complex of interrelated affective, motivational, desiderative, and cognitive responses to a painful sensation kernel. Thus, accepting the composite view pushes us to an aversion theory of pain's intrinsic badness. That is, pain is intrinsically bad in virtue of the kernel and the constituents of the reaction component.

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assessable features. That makes dislike more plausibly akin to fear, and less something special and basic in our conceptions of value. See, Scanlon (1998), 37-41.

[49] The same conclusion follows mutatis mutandis for other containment views such as the motivation and representation theories.

This theory, I think, comports with the attractiveness and power of a thin conception of dislike. I suspect that part of the attraction to dislike theories lay in the relevant aspect of the experience of pain being much more complex than we can plausibly capture with, for example, my having a desire that the pain cease. More importantly, we can find all the traditional candidate sources of pain's intrinsic value in the aversion. The reaction component contains unpleasantness, dislike, motive power, and the representation of damage. If I'm right, when we accept the composite view as the answer to Q2, we are led to an irenic answer to Q3 on which a pain's intrinsic badness lies in all of the traditional candidates.

3.3.3 The composite view and my methodology

In the last chapter I promised that, by suspending the univocality assumption and focusing just on pain to the exclusion of broader theoretical concerns, we would make new progress on old issues. We have now harvested my strategy's first fruit. We have found that all of the traditional accounts of pain's badness are false. We have also found that the intuitive distinction between stance views and containment views obscures the correct account. Let me explain.

As I characterized them in chapter one, stance views hold that pain is bad because we take a certain attitude toward it. This certainly seems true of the aversion theory. An aversion is a complex negative reaction to a painful

sensation kernel. For example, our fear of the pain seems to be a stance in the relevant sense. Indeed, I argued that fear is part of the reaction component by pointing out just how analogous it is to dislike —the paradigmatic evaluative stance.

But the aversion theory is also a containment view. On a containment view the presence of the pain is both necessary and sufficient for its badness. Everything that goes into a pain's badness is part of the pain. On the aversion theory, the reaction component is an intrinsic property of the pain. That is, pain is bad because of our reaction to the painful sensation kernel, but the reaction itself is an intrinsic property of the pain.

Thus once we expand our understanding of what pains are we find that all of the existing views were onto part of the truth. I suspect that they failed to see it because they were looking for the source of pain's evil to lie in either the pain kernel or in the reaction to it. Certainly, when the battle-lines have been drawn by the dislike and mental-state theories, it is hard to even make sense of the possibility that pain's evil lies in both. It is only when we resolve to approach pain directly and not through the lens of broad theories that this answer becomes available.

In the old Indian parable, three blind men encounter an elephant for the first time. The first, seizing hold of the trunk, declares that elephants are a kind of

snake. The second, upon touching the massive leg, demurs. Elephants, he avers, are a kind of tree. The third touches the ear and declares that elephants are a kind of fan. Each held part of the truth. Part of the elephant is like a snake. But they were all wrong.

The proponents of the traditional accounts of pain's intrinsic badness are like these blind men. The dislike theory claimed that pain is intrinsically bad because we dislike the painful sensation kernel; on the mental-state theory it was because the sensation kernel is unpleasant. I have argued that each held part of the truth, but that they've all been blinded by a mistaken assumption about what pain is. Elephants are not snakes, and pains are not kernels.