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An Analysis of Pleasure Vis-à-Vis Pain

MURAT AYDEDE
The University of Chicago

I take up the issue of whether pleasure is a kind of sensation (in particular, a feeling *episode*) or not. This issue was much discussed by philosophers of the 1950's and 1960's, and apparently no resolution was reached. There were mainly two camps in the discussion: those who argued for a *dispositional* account, and those who favored an *episodic feeling* (sensational) view of pleasure. Here, relying on some recent scientific research I offer an account of pleasure which neither dispositionalizes nor sensationalizes pleasure. As is usual in the tradition, I compare pleasure with pain, and try to see its similarities and differences. I argue that pain and pleasure experiences have typically a complex phenomenology normally not so obvious in introspection. After distinguishing between *affective* and *sensory* (informational) components of these experiences, I argue that although pain experiences normally consist of both components proper to them, pleasure, in contradistinction to pain, is only the affective component of a total experience that may involve many sensations proper and cognitions. Moreover, I hold that although the so-called "physical" pleasure is itself not a sensation proper, it is nevertheless an episodic affective reaction (in a primitive sense) to sensations proper.

INTRODUCTION

In 1949, Gilbert Ryle launched an attack on the then popular conception of pleasure as a *feeling episode* or as a kind of *sensation*, and argued in its stead for a purely *dispositional* account of pleasure. This was in accordance with his behaviorist program. Subsequently, the following two decades witnessed a very lively discussion of whether pleasure was a disposition or a sensation. My aim in this paper is to revive this unresolved discussion that seems to have withered away after around 1975. There were various historical determinants of the discussion of the 1950's and 60's. Most of the participants to the discussion did not feel an urge to look at what scientists had to offer. Many confusions followed, at the source of which, I believe, there was the failure to distinguish between sensations proper and the non-sensory affective feelings. Of course, there were at the time various reasons for this failure. Basically two of them are of special importance: one was the predominance of the sense-datum model of any kind of felt qualities to which behaviorism can, in a certain sense, be considered to be a reaction; the other was the persistent contrast between pleasure and pain in the attempts to understand what pleasure was.

The contrast between sensational and dispositional accounts was generally thought to be exhaustive among the parties involved in the debate. This was because any qualitative mental episode was equated with a feeling episode. The primary reason for this equation was the influence of the so-called sense-datum theory introduced in the early 1900's and developed with great force throughout the first half of the century. The sense-datum theory itself was, of course, the descendent of British empiricists' conception of sensations, ideas, or impressions. The essence of the sense-datum doctrine was a kind of purely phenomenological and introspective *esse est percipi*, or more accurately, *esse est sentiri* conception of any qualitative constituent of our conscious experiences. The mind was thought to be essentially transparent to itself. But *percipere* or *sentire* was thought to be a mental episode, and a strong distrust for mental episodes was in vogue among behaviorists and ordinary language philosophers.

Although sense-data were originally introduced for epistemological purposes to capture the most primitive and consciously accessible first constituents that are putatively given by our senses, they quickly became to signify whatever conscious *quality* one is directly and immediately aware of. Sense-data were generally supposed to be mental items that are intrinsically private and subjective, apprehended in consciousness immediately and directly rather than by inference, transitory in that their existence essentially depends on their being sensed, incapable of being other than what they appear to be, hence, the source of incorrigible knowledge. These characteristics constituted the essence of the model on which any qualitative mental item or episode was to be understood. So the real discussion was whether pleasure was a mental episode with *these* characteristics.

The target was obvious enough: pleasure as conceived on the basis of the sense-datum model. Ryle took the conception of pleasure on such a basis as the received doctrine and vigorously attacked it. Many followed him. Why was this strong reaction against the sensation view of pleasure? There are basically two sorts of reason. One is a more generic worry about sense-data. The other is more specific to pleasure: pleasure just didn't seem to be the right sort of experience to lend itself to a sense-datum view naturally.

The *ordinary* or *common-sense* conception of pleasure was basically a feeling conception of it, and the sense-datum model, as I have said, seemed to be the only model on which sensations, feelings, in short, the qualitative dimension of mind could be conceived at the time. This model was of course the legacy of a Cartesian way of viewing the mind. In this, the problem was a perfectly general one: what to do with sensations, feelings, etc.? They seemed to be essentially problematic and resistant to physicalistic, or more generally, naturalistic accounts. Given the generally anti-Cartesian spirit of the times, it is not difficult to see why one might want to argue for a dispositional character of pleasure if the alternative was a conception of pleasure on

the sense-datum model which attributed to it an episodic qualitative character with characteristics like being private, immediate, subjective, incorrigible, etc. Thus, there were ontological as well as epistemological worries about such characteristics in the first place. They were not specific to pleasure of course. The notion of pleasure was taking its share in a larger critical project: Ryle was to set out to destroy "Descartes' Myth." And the severe ontological commitments of the sense-datum model were simply not appealing: it seemed to posit phenomenal *objects* or *properties* that were clearly immaterial.[1]

A second source of the worries, more specific to pleasure, is quite clear in Ryle's criticisms of the feeling view of pleasure. The extremely wide scope of the uses of the term 'pleasure' (especially with respect to the so-called "mental" or "psychological" pleasures) made it very implausible that experiencing pleasure always involved a certain type of feeling episode qualitatively peculiar to that experience. Indeed Ryle's examples were typical in this respect: "his digging was his pleasure, and not a vehicle of his pleasure" (1949, p. 108), "[w]hat sort of a difference is the difference between taking a walk which one enjoys and taking a walk to which one is indifferent?" (1954a, p. 135). Likewise, people talk about the pleasure of whacking a good backhand return, reading a sophisticated detective novel, meeting an old cherished friend, and so on. In his objections, Ryle constantly exploited such uses of 'pleasure,' 'enjoyment' and the like. He was of course right to draw attention to such uses of the relevant terms as they especially seemed to be more predominant in ordinary discourse. *Given the then popular conception of feelings on the sense-datum model and the rising tide of behaviorism*, it seemed to many, at the time, just plain wrong that these kinds of pleasures involved any kind of feeling episode. Indeed, in this respect, Ryle was quite explicit in his worries:

> The enjoyment of a walk is not a concomitant, e.g. an introspectable effect of the walking, such that there might be two histories, one the history of the walk, the other the history of its agreeableness to the walker. (1954a, p. 138)

I think Ryle's reaction was too strong in his attempt to pattern all pleasure states after what he thought to be the best account of his favorite examples. In what follows, I will not attempt to evaluate his positive dispositional account of pleasure, though I will assess the force of some of his criticisms in the light of my own account later on. Given the extremely wide

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[1] Pitcher, for instance, is quite explicit about these worries in his 1970a. Although he distinguishes between "act-object" version of the sense-datum view and adverbial interpretation of it, he views them as on a par with each other in that they are committed to either non-physical things or properties. And he argues against them by holding a naive realist view of pain perception. See also Hirst (1967) and Cornman (1971), and my (forthcoming).

range of uses of 'pleasure' and the associated mental states, let me draw a few distinctions here which we will need later.

On the face of it, there indeed seems to be a difference between the pleasure we get in appropriate circumstances when we eat Ben & Jerry's chocolate ice cream, smell Channel No. 5 in the right circumstances, step into a warm shower on a cold day, or in the paradigm case, experience orgasm on the one hand, and on the other, the pleasure we receive, for instance, when we play tennis, take a walk in the woods, read a powerful novel, or learn that the bloody war has ended in Bosnia. Sometimes the pleasure of the former kind is called "physical pleasure" and is thought to be the proper counterpart of physical pain. Since physical pain is classified as a kind of sensation, pleasure, in the sense in which it is contrasted with physical pain, is understood to be a kind of sensation too.[2] Since they are opposites of each other in some sense and admit of degree, they are thought to constitute a continuum at the one end of which there is the pleasure-sensation of increasing intensity, and at the other end, there is the pain-sensation of varying degree again. As you move toward the middle, the intensity of both pleasure and pain decreases till the vanishing point which constitutes indifference. Call this kind of pleasure, $\text{pleasure}_{\text{P}}$. Also, we should be careful not to confuse $\text{pleasure}_{\text{P}}$ experiences *qua* mental states with their sources, causes, and objects

On the other hand, it is usually acknowledged that the pleasures of the latter ("psychological") variety are not to be contrasted with physical pain as a bodily sensation. Rather, they are thought to be the proper counterpart of psychological or mental pain. This dimension is again a matter of degree forming a continuum in the middle of which there is a neutral point representing indifference. Call this kind of pleasure, $\text{pleasure}_{\text{M}}$.

Throughout the debate, it has become increasingly clear among all the parties that if $\text{pleasure}_{\text{P}}$ were a kind of sensation in this sense of being an episode of sensing a mere qualitative feel (with perhaps bodily location), it must surely have been a significantly different kind of sensation from pain—as we will appreciate in a moment. But the analogy was between pain and pleasure, and as in the case of every analogy, significant differences tended to break the analogy. In effect, the sense-datum model prevented people from realizing that although $\text{pleasure}_{\text{P}}$, and *a fortiori* $\text{pleasure}_{\text{M}}$, might not be sensations of any kind, they nevertheless might be (or involve) episodic feelings of some sort.[3] The peculiar epistemology of the sense-datum model

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2 See, for example, Gallie (1954), Hospers (1961). Cf. Momeyer (1975), Edwards (1975), Penelhum (1957), and Cowan (1968). For more recent statements of the comparison, see Davis (1981a, 1981b), P.W. Taylor (1978) and R. Taylor (1984).

3 It seems that Penelhum (1957) and McCloskey (1971) were exceptions in this respect. Yet, in his otherwise excellent article (1957), Penelhum seems to be so much so under the influence of what I have called the sense-datum model that at the end despite his efforts to secure his claim that pleasure is a mental episode, strangely enough, he feels forced to

didn't leave any room for such distinctions with its exclusive reliance on introspection.[4] This is partly why I will not rely *solely* on introspection in this paper, and will look at some of the results of recent scientific and clinical research relevant to the subject at hand. In particular, I will prefer to use, most of the time, the more modern terminology of the recent philosophy of mind in talking about qualitative mental states.

Let me briefly recapitulate. The discussion of the 1950's and 60's was in effect trying to solve what appeared to be a paradox. On the one hand, it seemed that at least some kinds of pleasure (the paradigm cases of pleasure$_P$) undeniably involved a qualitative dimension (often, of episodic character), but the sense-datum model, being supposedly the only available model on which to make sense of it, was unappealing for its undesirable ontological (as well as epistemological) commitments and for some unintuitive consequences in some application cases. On the other hand, it was felt, attempted dispositional accounts of pleasure could at most be appropriate for only some kinds of pleasure (mostly, cases of pleasure$_M$).[5] At the same time, even the so-called "physical" pleasure seemed to many quite different in certain respects from its counterpart, physical pain, with which it was standardly compared; pain was clearly a sensation and physical pleasures, naturally enough, did not look like sensations *in exactly the parallel way* pain was a sensation.[6] There was something strange and curious about pleasure that did not quite match pain experiences in certain parallel respects. In the absence of a good theoretical account of what counts as a sensation and in the light of risking severe ontological commitments, this amounted to, in the eyes of many, having strong reasons to think of even physical pleasure as nothing more than a disposition.[7] As in the case of Ryle, those who favored the dispositional account had sometimes in mind even the paradigmatic cases of physical pleasures.[8]

The contrast between pain and pleasure is indeed important for a proper understanding of what pleasure is and what it is not. However, as will be apparent in what follows, there is also a certain danger in this contrast, especially in the absence of an account of what sorts of things count as sensa-

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accept that pleasure is not only not any kind of sensation but it is not a feeling of any sort either, but a noncognitive mental episode!

4 It is interesting to note that although some older hedonic tone accounts of pleasure conceived it as a kind of vague feeling surrounding a much broader mental state involving, *inter alia*, cognitive elements, such conceptions seem to have disappeared when the sense-datum model came to be the received view of qualitative mental states. See, e.g., Duncker (1940), who himself was a psychologist, for a detailed phenomenological analysis of pleasure in terms of hedonic tone.

5 See Gallie (1954) for an explicit statement of the worry.

6 See, for instance, Penelhum (1957) and McCloskey (1971).

7 See, for instance, Quinn (1968).

8 To cite a few, see Quinn (1968), Manser (1961), Williams (1959), C.C.W. Taylor (1963), Gallie (1954).

tion. Almost all the attempts to understand pain and pleasure were operating at the introspective and phenomenological level, and the sense-datum model provided the necessary framework for the discussion. This model and behaviorism were the two predominant poles available to philosophers. This in turn made the discussion an all-or-none issue: pleasure was either a feeling episode (=sensation, after the sense-datum model) or a disposition.[9] Neuroscientists and psychologists, it seemed, had little to offer. In particular, the recent discoveries in scientific pain research and brain-stimulation experiments were mostly unavailable to philosophers.

In what follows, I will try to bring in some of their results and examine their bearings on a proper understanding of what pleasure and pain are, and thereby try to solve the paradox without necessarily committing myself to these two philosophical poles. In fact, as my discussion will make it clear, I will be less interested in the solution of the historical debate as I set it up here than in putting forward the framework of a general account of pleasure and pain experiences in a philosophically insightful way. Thus, ontological concerns will not guide me in the analysis of pleasure in what follows, although I will nevertheless say a few things on this later on. So, in a way, I will flout one of the basic constraints that motivated the historical debate: don't admit such ontologically queer entities like sense-data. I think that presently the ontological worries have more or less satisfactory answers especially within informational and functionalist approaches, and these worries should not be an obstacle in viewing pleasure in qualitative terms.[10] For that reason, the discussion of ontological issues regarding qualia should be kept distinct from a proper analysis of what the nature of a pleasure state is. For even if we settle on the ontological status of qualia, the problem of what kind of an experience pleasure is (e.g., whether it is a sensation or not) still needs to be settled. I am more interested in analyzing pain and pleasure

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9 To be fair, there were also some other attempts. Dissatisfied with the Rylean type of dispositional account and also with an episodic feeling account, some, like von Wright (1963), Trigg (1970), and more recently, Brandt (1979), gave a quasi-cognitive, quasi-dispositional account. For instance, von Wright writes: "In a first-person hedonic judgment the subject is judging of a sensation, which he is himself experiencing or having, that it is agreeable or pleasant, that he likes experiencing or having... [In these judgments] the judging subject values his sensations. They are not true or false. In *a* sense of the word, no 'judgments' even" (1963: 72–74). Also, consider the following quotation from Sidgwick given by Alston (1967): "To get pleasure is to have an experience which, as of the moment, one would rather have than not have, on the basis of its felt quality, apart from any further considerations regarding consequences." There are, of course, many nuances among the views of these authors, but they all emphasize having appropriate cognitive attitudes as part of a proper understanding of pleasure. It is also interesting to compare them with the view of Davis, perhaps the most radical cognitivist among recent writers, according to which to be pleased that *P* is just to believe and desire that *P*, although he also insists, somewhat surprisingly, that pleasure is a *feeling*.

10 Of course, this needs to be argued for, which needs another occasion. But see below and my (forthcoming).

against the background of a rich set of qualitative mental states and their kinds.

In the next section, I will look at the scientific literature on pain and try to outline what seems to emerge from it: I will argue that scientific accounts and some clinical data give substantial support for a distinction to be drawn between sensations proper and non-sensory affective feelings that are episodic in character, and that pain experience seems normally to be somewhat unique in its clear-cut incorporation of both (among other things). In particular, I will argue that although pain is primarily a sensory submodality, it has usually a complex phenomenology—normally not so obvious in introspection—consisting in *at least* two dimensions one of which is *sensory* (proper to pain) and the other *affective*. As a consequence, I will claim that when we experience ("physical") pain, we normally experience these two dimensions as "fused" or "intermingled" with each other so that we are usually under the illusion that what we experience is a simple and uniquely homogeneous qualitative feel "characteristic" to pain.

Drawing again on the recent scientific research, I will then turn to the discussion of pleasure, and argue that although "physical" pleasure is not itself a sensation (in contradistinction to pain), it is nevertheless an affective reaction in a certain primitive sense to sensations proper. But I will hold that this affective reaction is basically an occurrent feeling, non-sensory and episodic in character, that when we experience pleasure, we always experience some non-sensory feeling as an affective reaction to certain sensations proper (among other things, like cognitive mental states). So, similarly, my claim will be that the total experience we have when we experience pleasure has again a complex phenomenology, the components of which are somewhat fused or intermingled with each other. I will end the paper by replying to some of Ryle's well-known objections to the episodic feeling account of pleasure.

2. PAIN

Whatever one's position is with respect to the relationship between pain and pleasure, one thing seems clear: a proper analysis of pleasure owes much to its being contrasted with pain. It is also clear that the relevance of scientific research in the philosophical understanding of pain can no longer be ignored especially in the light of recent discoveries and theoretical developments in the field of pain research. After the publication of Melzack and Wall's paper in 1965 that revolutionized the whole field of pain research, although a few papers appeared in the philosophical literature analyzing the philosophical implications of the theory,[11] there is still, I believe, a great deal more to say

[11] E.g. see Dennett (1978), Pitcher (1970b), Nelkin (1986), Graham and Stephens (1987), Grahek (1995).

about it. In what follows, I will exploit the results of this scientific research on pain in developing my account.

2.1 The Gate Control Theory of Pain

Instead of examining meticulously each aspect of what has come to be known as the Gate Control Theory of pain, I would like to lay out only those parts of the theory that are relevant to my purposes. Although there are experimentally controversial aspects of the theory, today it is widely accepted at least in its general outline, and those controversial parts are in the details that do not affect our discussion here. Recent developments both in neurosciences and in the techniques of experimental design have tended to confirm the theory since it was first proposed in the mid sixties, and additions and revisions have been in progress since then.

According to the theory, noxious stimuli from the peripheral nociceptors are carried to the spinal cord through basically two types of fibers: large myelinated fibers ('L' in Figure 1 below) with faster conduction velocity (A-beta fibers), and small fibers (S) with slow conduction velocity (small myelinated A-Delta and unmyelinated C-fibers). (Although A-beta fibers are involved in the noxious stimuli, they are not specific to noxious stimuli.) Before entering the gray matter of the spinal cord the axons of A-Beta fibers branch out and project to the thalamus in the brain. The other branch and the small fibers enter the Subtantia Gelatinosa (SG) (laminae I and II) and laminae IV and V, in the dorsal horn of the gray matter of the spinal cord. The gating mechanism is postulated to be somewhere in these laminae. This gate is a neural mechanism that acts like a modulating or regulating system that controls the amount of nerve-impulse transmission from the periphery to the transmission cells (T-cells) further deep in the spinal cord, i.e. cells that would transmit the modulated output of the gate to the brain structures.

Under normal circumstances, it is a necessary condition for the systems in the brain to interpret the incoming signals as pain that the output of this gate reach or exceed a certain critical level. This output is regulated in the gate by various excitatory and inhibitory factors. From a theoretical view-point, the most interesting of these is the descending inhibitory signals from the brain. Indeed, it had long been known to psychological and clinical researchers that even before the noxious stimuli arrived at the relevant brain areas to invoke pain experience, they must somehow have been influenced and modulated by higher brain mechanisms. For it was a known fact that relevant past experiences of the agent, her perception of the present painful situation, cultural factors, etc., greatly influence the occurrence and perceived intensity of pain.[12]

[12] Such factors are known to influence even reflex movements in some cases. There are various reflex mechanisms postulated by the theory. Here I skip these mechanisms except the one that can be seen in Figure 1 below.

One of the merits of Gate-Control Theory is its ability to explain such phenomena by means of such confirmed structures as the descending neural pathways from the brain to the relevant gates in the spinal cord.[13] Although postulation of a gate mechanism in as early as the spinal cord was the major revolutionary aspect of the theory, it was by no means the only one. Melzack and Casey (1969) expanded on the first formulation of the theory by emphasizing the parallel *central* processing of noxious stimuli. For our present purposes, the way it changed the picture in terms of what happens after the noxious stimuli pass through the T-cells is more important.

After the noxious stimuli are modulated in the gate, they are projected through various pathways to two different brain areas to be processed. One of the systems is phylogenetically older: the reticular formation, limbic system, and hypothalamus. Melzack and Wall call this system the motivational-affective system. Indeed, the limbic system has long been known to be responsible essentially for emotional and motivational processes. They call the other one the sensory-discriminative system. It involves the ventrobasal thalamus at which the noxious stimuli arrive through the spinothalamic and neospinothalamic projection systems and go directly to the somatosensory cortex, the basic *sensory* component of the system. These two systems are also monitored and controlled by what Melzack and Wall call "a central control trigger" that is usually already aroused by the signals carried through the aforementioned fast conducting A-fibers that branch out before entering the gray matter in the dorsal horn. The behavioral output in the broadest sense is supposed to be a varying function of these three systems. The simplified functional organization of the underlying structures proposed by the theory can be seen in broad outlines in Figure 1 below.

Given this rough and ready characterization of the theory, it is important to be clear about its status. One might plausibly ask, "All this seems just wonderful and interesting, but where exactly is the pain I experience when I do in the picture?" (cf. Dennett 1978). Indeed, for an experiencer, the feel of pain seems to be just a matter of crude presence of this nasty feeling; apparently nothing can be more obvious to the experiencer than the awareness of this presence. But such inquiries, as Dennett rightly notes, are naturally enough at the *personal level*: the phenomenology of pain is a matter of

[13] Mainly fast conducting A-fibers, especially those branching out before the entry to the gray matter in the spinal cord, are believed to be essentially involved in the process. For they project directly to higher cortical systems. There has been accumulating evidence that there are in fact more than one gating mechanism in the dorsal horn segments of the spinal cord—see Wall 1989.

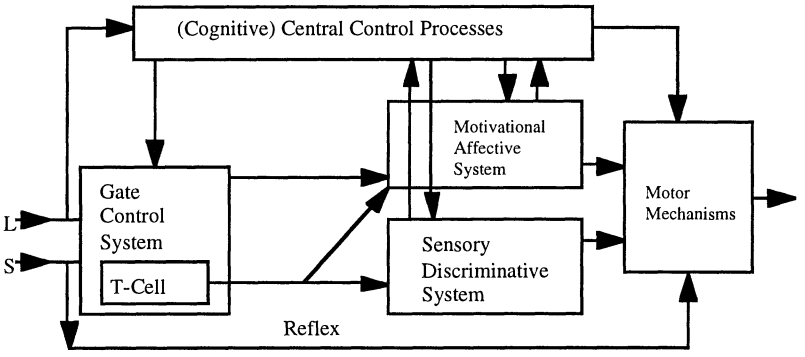

FIGURE 1
(Adapted with slight changes from Melzack and Wall, 1983)

personal introspection. The gate control theory of pain, being a (functional) neurophysiological theory is at the subpersonal level. I will adopt this terminology for what follows not because I think it carries any ontological significance, but for its methodological usefulness for my present purposes. Similarly, I will talk about parallelisms between these two levels without endorsing any dualism or epiphenomenalism. But, of course, these two levels are not independent of each other: after all, scientists are trying to understand, at least initially, what pain is as experienced by people. For the moment, I will be concerned about drawing parallelisms between these two levels relying on the experimentally detectable systematic co-variations between them. In order to bring out the relationship vividly, let us look at some abnormal cases, and see how the theory can account for them.

2.2 Reactive Disassociation

Is it possible to experience an intense pain without sincerely being bothered by it in the least, without minding it at all, without finding it in the least distressing, discomforting, awful, abhorrent, hurting and the like? Many thought that this is like asking "can a married bachelor be found somewhere?" On the other hand, some thought that such a situation is clearly conceivable, though apparently empirically impossible.[14] However, it seems that it is not only an empirical possibility, but also *is* the case in certain abnormal pain phenomena, as has been well known to clinical pain researchers for some time.

The phenomena seem to have rather a common phenomenology on the part of the patients. In typical cases, they report quite sincerely that they have the pain as intensely as ever, but say that it does not bother them; they do

[14] See, for a lively discussion of this question, Pitcher (1970b) who divides the disputants into two groups as the Affirmativists and the Negativists according to their replies.

not mind at all the intense pain they are experiencing, so to speak! Such reports are made typically by patients who have undergone successful prefrontal lobotomy as a last resort for their intractable severe chronic pain (such as phantom limb pain, neuralgia, causalgia, severe psychogenic and cancer pains, etc.) Also, nitrous oxide (laughing gas) and some opium derivatives like morphine are known to produce the same effect in patients in severe pain. There are other known cases where the same phenomenon seems to occur: in asymbolic patients,[15] and especially in involutional-type severe depression cases. There is also strong evidence that some patients who are congenitally insensitive to pain are in the same condition: although they experience pain, they do not develop aversive reaction or drive in response to it.

This phenomenon is sometimes called 'reactive disassociation' in the literature. From both a common-sensical and philosophical point of view, it is indeed odd, to say the least. There have been disputes about its authenticity, because it is a phenomenon the interpretation of which may lend itself quite easily to various criticisms: there are indeed many plausible philosophical and empirical grounds to impugn the literal interpretation of what is reported in such cases. However, I will not enter the discussion of these grounds. Presently it is fairly widely accepted by many philosophers and scientists alike that reactive disassociation is *in typical cases* what it is reported to be.[16] But what is it? If you have the "standard" conception of pain as most people do, you might wonder how it is possible to have that awful, horrible, hurting feeling and quite sincerely not mind it in the least. There seems to be a conceptual confusion, or a contradiction here. Maybe these patients do no longer have the "same" feeling, or maybe their pain thresholds are considerably lowered after the medical treatment so that they do not mind the remaining bit of their usual pain. Maybe, such patients are so much so under the influence of the unknown effects of the operation or the intake of drugs that they somehow do not know what they are talking about. The fact of the matter, however, is that they often insist that they have the same pain

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15 What triggers the asymbolia for pain is still not completely known, though certain limbic system structures are implicated in its etiology. Trigg (1970) takes the asymbolia for pain to be the most typical and noncontroversial paradigm case of the phenomenon, while he raises some doubts about the effects of lobotomy. However, Melzack and Wall (1983) and Dennett (1978) seem to take the lobotomy and morphine patients as the established exemplars of the phenomenon. Melzack and Wall also cite the asymbolia for pain as another example of reactive disassociation. See also Pitcher (1970a) who gives lobotomized patients as empirically established actual examples for the possibility of experiencing non-hurting intense pain.

16 See Pitcher (1970b), Trigg (1970), Dennett (1978), Melzack and Wall (1983), Nelkin (1986) among others. Indeed, in the abstract of a paper on the topic, we read: "That a lobotomy, an incision into frontal brain lobes, removes all unpleasantness and intrinsic badness from some sensations we label physical pain is current philosophical orthodoxy." (Irwin Goldstein, *APA*, Vol.62, #3, p. 638, January 1989.)

as intensely as ever, but that it does not *hurt* them any more while exhibiting all the conceptual competency they have always had with language and having no difficulty in applying 'pain' correctly to others.[17]

A sketchy explanation of reactive disassociation is relatively straightforward in terms of the outlined structures of the gate control theory. The sensory-discriminative system (perceptual system), as its name suggests, is responsible, among other things, for the identification of certain peripheral stimuli as pain, as well as for the inner measurement of intensity and the specification of the spatio-temporal properties of noxious stimuli. The motivational-affective system is responsible for our aversive reaction or drive in response to the noxious stimuli. It is also important to keep in mind that the anatomical site of the latter system is mainly the limbic system structures, whereas that of the former is primarily the somatosensory cortex.

Given this rough and ready picture, it seems clear that, in reactive disassociation, the motivational-affective system somehow is not working properly as it is supposed to function, it is impeded, while the activity in the perceptual system remains intact, so that although the incoming signals from the periphery are processed and properly registered as pain along with its various characteristics in the perceptual system, they either do not reach the motivational system or they do not produce their normal effects to activate it in the appropriate way. Indeed, during the 1970's as the effects of many different addictive drugs on brain structures were discovered, it became clear that most opium derivatives have direct effects on different structures of the limbic system and the midbrain with no or little effects on the cortex.[18] Later, it was also discovered that the brain has its own opium-like substances (endorphins) that are found mostly in the same structures (as well as in SG).

The case of lobotomy seems to be a little different: the operation is not performed directly on the limbic system, though there are other operations close to the limbic system; instead, by cutting the connections between limbic structures and frontal lobes, the limbic system is deprived of a very rich source of input from the lobes. With the discovery of the unique role of the limbic system in emotional experiences, it became possible to explain why severely depressive patients do not care about their physical pains, if they happen to experience any. Also, in at least some cases of congenital

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17 In some cases this confuses even the patient: "...it is significant that the patient soon realized that his lack of reaction to pain was interesting to examiners, and he felt a need to explain it. It looks as if he understood the concept of pain well enough to realize that failure to react to pain was abnormal. ...[but] he still insisted that it was 'pain' which he was feeling." Hemphill and Stengel report: "He tried to explain his reactions by such expressions as: 'I am not a man who cannot stand pain' or 'I am used to that, because I have worked on the road' or 'labourors are always hurting themselves: we don't take any notice of it. On the other hand his wife assured us that he had always been susceptible to pain...'." (Trigg 1970, p. 71).

18 See, for instance, Restak 1988, 1994.

insensitivity to pain, there is strong evidence that the limbic system impairment is implicated.

We need to delineate clearly what is suggested at the personal level by the account that the gate control theory gives for reactive disassociation, and make some consequences explicit. The literal interpretation of what is reported at the personal level by patients in disassociation cases, combined with its explanation at the subpersonal level by the best scientific theory of pain we have got so far, strongly suggests that the inner phenomenology of pain experiences is, contrary to what has been traditionally thought by the folk and philosophers alike, a highly complex matter. At first blush, it seems that we can distinguish at least two qualitative components of this complex phenomenology on the basis of the above picture of pain mechanisms and the psychological/clinical data. Apparently, what makes pain experiences phenomenologically hurting, awful, or abhorrent, in other words, what makes them "disliked," is the working of the affective/motivational system. When, in the presence of noxious stimuli, it is deactivated by certain drugs or when it is isolated surgically from the perceptual or other higher systems as in the case of successful frontal lobotomy, the awful or hurtful qualitative aspect of pain seems to disappear. This is after all what is reported by the morphine patients or by people who underwent frontal lobotomy. These patients, however, often insist that what they feel is pain and that it is there as intensely as ever. This suggests that the inner identification and individuation of what is felt *as pain* and the perception of its intensity are components of the complex phenomenology of pain that should be kept distinct from the awful, hurting, or "disliked" character of pain (which seems to be what makes pains morally relevant). The inner identification of pain and the registration of its intensity and other characteristics seem to be the job of the perceptual system. As in the case of other sensory modalities, the site of *sensory processing* of the noxious stimuli is in the cerebral cortex, namely in the area called somatosensory cortex. (Indeed, introspectively, we seem to have no difficulty in detecting and conceptually distinguishing between shooting and throbbing, or burning and pricking pains, and so on.)

The complexity of the phenomenology of pain *within its sensory dimension* was also empirically explored, though in an indirect and slightly ambiguous way, by Melzack and his colleagues. They try to understand the different sensory qualities and varieties of pains by studying the words used by the sufferers to describe their experiences. Melzack himself actually prepared a questionnaire, the McGill Pain Questionnaire, to collect information in this respect as well as to measure in a more precise way different effects of different analgesics.[19]

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[19] In fact what Melzack and his colleagues are after in this questionnaire study seems to be what qualitatively distinguishes numerically distinct pains, though there are also passages

The idea that even what seems to be the most simple and homogeneous phenomenal quality of an experience (in any modality) might be very complex is an idea that should be considered more seriously. If it is true, we need not appeal to wild thought experiments in order to show the vulnerability of incorrigibility claims in introspection.[20] Since the relations among the subsystems are *causal/functional* (see Figure 1, where the arrows indicate causal relations and their direction), the working of any subsystem and subsubsystem can *in principle* be disassociated from any other, or so it appears. It would be an interesting exercise to play with the idea of what would happen at the introspective level when different substructures were to be isolated from the rest. The phenomenon of reactive disassociation and the gate control theory of pain with its emphasis on parallel processing and interacting subsystems imply that the experience of pain does not consist, contrary to what introspectively it appears to be, of a simple and homogeneous qualitative feel. It is complex.

2.3 The Phenomenology of Reactive Disassociation

Before passing on to the discussion of pleasure, one important point needs to be brought out for our purposes. One might wonder, indeed as I do, about how it would feel to experience an intense pain but not to mind it at all. Given the predominance of common-sense intuitions about pain, it is quite natural to be curious about the phenomenology of such an experience: having an intense pain, but not being distressed or discomforted by it in the least, not having a desire, for instance, that it should cease because of its discomfort or hurt. We have already seen in outline how a scientific account of this strange phenomenon can be given at a subpersonal level.

It is important to re-emphasize that although reactive disassociation with its strange phenomenology is hard to conceive at a personal level, it does seem to occur. It is not simply a thought experiment for the convenience of the theorist. It cannot be dismissed offhand on intuitive grounds, whether these be philosophical or not. What is significant here is to realize that having a pain is essentially having a *sensation* that is at the same time usually distressing, awful, abhorrent, etc., to varying degrees. But not always. Thus, as the two primary processing systems, sensory and affective,

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that seem to suggest that one and the same pain experience can have different sensory qualities at the same time. See also Melzack & Torgerson (1971).

[20] This idea is considered even by Dennett who himself is an eliminativist about qualia: "Consider the results of "educating" the palate of a wine taster, or "ear training" for musicians. What had been "atomic" or "unanalyzable" becomes noticeably compound and describable; pairs that had been indistinguishable become distinguishable..." (1986, pp. 49–50). He also gives a nice example illustrating the complexity of experiences in his "intuition pump #15: the guitar string" in (1986) about the harmonic sounds of the strings. The idea of the complexity of experiences is also hinted at by Lycan against the qualia based objection against functionalism (1987, pp. 59–61).

are contingently connected to each other at the subpersonal level, so are the two primary dimensions of pain experience at the personal level. Identification of a certain experience *as pain* seems to be independent of its affective aspect. The subpersonal basis of this claim lies in the fact that the sensory processing of the noxious stimuli occurs for the most part in the somatosensory cortex which seems to be the seat of all bodily sensations proper. This is hardly surprising given that noxious stimuli are processed from the periphery to the somatosensory cortex areas by highly specialized mechanisms primarily reserved for such stimuli. Pain, from a physiological point of view, is primarily a *sensory submodality* like touch, warmth, proprioception, and as such (*qua* sensation) it is affectively neutral.[21]

However, we may still wonder: how does it feel to have an intense pain sensation that is affectively neutral? Any sensation proper at the personal level can be said to have a content, a qualitative one. What is the qualitative content of a pain experience *qua* sensation if it is not that awfully hurting, distressing, abhorrent quality we feel when we are in pain? Trigg proposes the name 'pain-quality' for the sensory content of pain experiences:

> The concept of a 'pain-quality' becomes necessary when it is realized that pains are not defined as merely unpleasant sensations. It cannot be the case that we just group some sensations together without any basis for doing so. We must be able to explain our ability to cope with completely new types of sensations. We do not have to think of our reaction to the sensation or the context in which it occurs before saying whether they are new types of *pain* or not. There is clearly something about a sensation in itself which prompts us to declare that it is a pain, and if this element is absent, we deny that the sensation is to be classed as a pain. (1970, p. 26)

What is truly remarkable about Trigg's observation is that he seems to have reached such a conclusion while being unaware about the (then) new developments in the scientific pain research, i.e., in the absence of the knowledge of Melzack and Casey's expansion of the Gate Control Theory.

It might be objected that postulating a non-abhorrent pain-quality as the sensory content of pain experiences is an *ad hoc* way of denying what is obvious. This is hardly so: as we have seen, there is a substantial body of experimental and clinical data that point to the ability of patients to unequivocally identify certain experiences induced by noxious stimuli as pain. Moreover, we have to remember the abnormality of reactive disassociation cases. Normally, the affective and sensory dimensions of what might be called "the total experience of pain" are somewhat fused together to normally give the phenomenological impression that we experience a singularly homogeneous quality of pain. Indeed, as in so many other cases, the phenomenological

[21] This is indeed how it is usually laid out in any classical physiology textbook: the somatosensory submodalities are correlated by the types of corresponding receptors. See, for instance, Kandel & Schwartz (1985: 288); Bennett (1982: 163); Woodworth & Schlosberg (1954, p. 273).

complexity of total pain experiences seems normally not to be introspectively noticeable by the experiencer.

However, I do not think that the phenomenological complexity of total pain experiences solely consists of the affective and sensory dimensions. There is much more to be said about the complexity. In the first place, there is the complexity of the sensory dimension in itself as suggested at the subpersonal level by the spatio-temporal and intensity analyses of the incoming signals in terms of their various properties. If we conceive a total pain experience as an ongoing process, it is also easy to see other effects of various functional pain mechanisms and of their interactions. Think, for instance, of what might be called the second-order emotional aspect of an intense pain induced by a serious bodily injury: the pain anxiety. Pain anxiety can be induced by the arousal of the autonomous nervous system. Connected to this, think of the possible sudden emotional distressing feeling evoked by the cognitive realization that one might be fatally injured upon seeing, say, the horrible damage to one's body. You can multiply the examples. Of course, one might want to keep *emotional* (affective) and *cognitive* aspects of pain distinct from the pain experience proper, here understood as sensational, i.e., as processing of information coming from the peripheral "sensory" (detector) cells. In this, I view sensation essentially as information processing, where information is understood as natural information à la Dretske (1981), to which I will turn later briefly.

The point here, however, is that as an ongoing complex process, all these aspects and dimensions (sensory, affective, cognitive) are somehow fused with one another in our total pain experiences in a way that is often very difficult to distinguish introspectively, if not impossible. This is the basis of the illusion that pain is essentially that singularly horrible, awful, abhorrent feeling.[22]

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[22] It might be objected (as was done by Georges Rey in conversation) that just because abnormal cases separate the two components of pain does not mean that when their subpersonal mechanisms work together properly the experience will not be simple; this would also rule out emergent properties by fiat. First, it should be pointed out that the introspective analyses that converge on the complexity of pain experiences seem to be proliferating (see below and the next fn.); I do not claim that it is *impossible* to penetrate into the complex phenomenology of experiences (for some examples of coming to realize the complexity of some experiences, see Dennett's expert coffee and wine tasters and his *Intuition Pump #15*, "the harmonic sounds of guitar strings," 1986). Second, in psychophysiology, many psychological hypotheses about normal cases are derived from abnormal ones. Although they are not as clear on this as one might wish, Melzack and Wall themselves seem to be arguing for the complexity of pain experiences (see above). Third, how are we going to settle the dispute of two introspectionists, one arguing against the other that pain experiences are phenomenologically complex, if we remain at the purely introspection level? Fourth, ultimately I don't care (much) about ruling out emergent properties by fiat, there are good a priori reasons to rule them out on ontological grounds anyway.

It is interesting to point out that similar conclusions were reached in the literature with respect to pain perception on the basis of purely phenomenological and introspective analyses.[23] I welcome this convergence and take it to show that the conclusions I draw from scientific research do not necessarily fly in the face of phenomenological and introspective analyses.

3. PLEASURE

Let me state, at the very outset, my view about pleasure states in general outline before getting into the details. Although I believe that some of what I will say below apply to pleasure_M I will restrict my analysis to pleasure_P in what follows.

So, here is the thesis: physical pleasure, even in its paradigm cases, is *not* itself a sensation, though pleasure states do typically involve sensations; but this does not prevent pleasure from being a feeling *episode*. In other words, to experience physical pleasure is to experience, among other things, some qualitative feel that is never the content of a proper sensory (informational) state. Here, as should be clear by now, the use of the term 'sensation' is somewhat technical. We can roughly specify this technical sense for our purposes in the following way. Sensory processes are those that are subserved at the subpersonal level by certain *specialized* functional mechanisms whose job is to process incoming information from peripheral (detector) cells for its "informational" content, i.e. to extract information about the causes of the stimulation that may potentially have vital significance to the organism.[24] Thus we can properly speak of gustatory, visual, tactile, etc., sense modalities, as well as the sensory submodalities of proprioception, pain, warmth (thermal sensations). The common feature of sensory processes is that they are subserved basically by neural information processing systems, specially dedicated for the relevant modalities, beginning as early as the receptors, and, in the somatic system, through the spinal cord, ascending to the higher cortical areas in the brain. These systems *qua* sensory systems are affectively neutral, even in the case of pain.

At the personal level, we can say that the *sensory* content (or, sensory qualia) of a subjective experience is one that is subserved by (and, for that reason, co-variant with) the relevant subpersonal *sensory* brain mechanisms.

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[23] See Duncker (1940), McCloskey (1971), Tatarkiewics (1976), Trigg (1970). Apparently, the American introspectionist psychologist E.B. Titchener is an early example who reached similar conclusions: "The pain of a toothache is localized at a particular place, 'in the tooth'; but the unpleasantness of it suffuses the whole of present experience, is as wide as consciousness. The word 'pain' ...often means the whole toothache experience." (The quotation is from Melzack 1961, p. 47, who does not specify the reference.)

[24] See Dretske (1981) for the notion of information involved. Roughly, it is the notion of *natural* information produced by nomic dependencies between appropriate property instantiations.

Therefore, we might reserve the term 'sensation' for the sensory component (sensory qualia) of our experiences which also seems phenomenologically complex. Thus, the affective component of our total pain experiences at the personal level, for instance, does not count as a sensory component (as a sensory content or quale).

3.1 Subpersonal Mechanisms of Pleasure

There is no such thing as a *sensory* "pleasure-quality" whenever we experience pleasure, as there *is* sensory pain-quality whenever we experience (physical) pain. The reason for this is:

(1) that there are no specialized subpersonal *sensory* mechanisms subserving it, and

(2) that pleasure($_P$) is basically a "reaction" (in some primitive sense) to sensations proper that has its subpersonal basis mostly in the limbic system structures.

Let me elaborate on these. It is a little surprising to see that there are very few psychological and neurophysiological studies of pleasure as such in the scientific literature, whereas studies on pain are abundant. Part of the reason is that technically pleasure does not count as a sensory modality. Typically, there is not even an entry for 'pleasure' in the indices of many relevant textbooks, and whenever it is touched upon, it is where motivation and emotion are treated in general, and never where sensory processes are discussed. You see its discussion under curious names such as 'reward,' 'positive drive states,' 'approach responses,' etc., probably a legacy of behaviorism. But one thing is quite clear: there is no evidence whatsoever for a sensory subsystem as a sense modality or even submodality that is specialized in processing all and only "pleasant" stimuli. In this respect, pleasure is clearly not on a par with (physical) pain, which is primarily a sensation.

The so-called pleasure centers in the brain are another matter and should not be confused with the sensory brain mechanisms. For they are typically certain centers in the limbic system the function of which seems not to be sensory information processing for analysis.[25] Let us look at some scientific and clinical data. This will also help to ground the second claim.

Since the late 1950's and early 60's, when electrical stimulation experiments of limbic structures began, it has been well established that the stimulation of certain areas in the limbic system in conscious human subjects causes reports of experiencing very intense pleasure often with sexual overtones. The septal area and the lateral hypothalamus of the limbic system are

[25] See, for instance, Olds (1956), Wauquier and Rolls (1975) and Zangwill (1987).

well depicted as such pleasure centers. But such centers are by no means restricted to the septal area. Some other (mostly limbic) areas (such as amygdala, diffuse thalamic system, midhypothalamus, and perhaps posterior thalamus) that are known to be the sites which, upon stimulation above a certain level of electrical intensity, cause abrupt aversive responses, also yield pleasure experiences below a certain level.[26] With the advances in the studies of the effects of certain addictive drugs during 1970's, similar results were found in *chemical* stimulation experiments. For instance, the highest concentration of opiate receptors in the brain was found to be in the limbic system, especially in the amygdala. This seems to correlate well with "the euphoric effects of opiates: 'the rush,' the warm, joyous feeling after taking an opiate that is often compared to an orgasm" (Restak 1988: 129).

Also, it seems to be no coincidence that some opium derivatives are used as analgesics some of which produce the reactive disassociation phenomenon. Electrical stimulation of the limbic system is sometimes used in fighting intense chronic pain. This is also no surprise:

> These effects [of electrical stimulation of certain limbic areas], which may be due to overlap of 'aversive' and 'reward' structures, are sometimes a function simply of intensity of stimulation, so that low-level stimulation elicits approach and intense stimulation evokes avoidance. Complex interactions among these areas may explain why aversive drive to noxious stimuli can be blocked by stimulation of reward areas in the lateral hypothalamus or septum. In fact, in the lateral central gray, there is a strong correlation between current thresholds of brain stimulation to block pain and those for [electrical] self-stimulation. (Melzack & Wall 1983, p. 166)

This suggests that the underlying mechanisms of "approach" and "avoidance" responses (more colloquially, likings or dislikings) are subserved by a single functional organization the site of which seem to be (mostly) the limbic system structures. In other words, our likings or dislikings are, apparently, a function of a single underlying organization.

There are very interesting findings in electrical self-stimulation experiments: some of the subjects, for instance, are reported to have deep and successive orgasms one after the other during the self-stimulation, while others are reported to show addictive tendencies.[27]

However, although there seem to be some clear and neat cases, we have to be careful in labeling these reported experiences as *the* pleasure experiences. Whatever kind of pleasure the subjects are experiencing, in most of the cases, the pleasure is clearly "objectless": it is not directed to (or, caused by) certain

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[26] Bozarth (1991, 1994) thinks that the mesolimbic domapine system is *the* key mechanism underlying pleasure experiences.

[27] Here, unfortunately, I have no space to go over such experiments, the literature is huge, but the interested reader can look at the following: Buck (1976), Campbell (1971), Heath (1964), Isaacson (1982), Nathan (1987), Olds (1956), Pfaffmann (1966), Wauquier and Rolls (1975), Restak (1988, 1994), Rolls (1975), Routtenberg (1978), Willner and Scheel-Krüger (1991), Zangwill (1987).

thoughts or sensations proper. This is why, I think, the reports are usually of a feeling of immense well-being, euphoria, or elation. This feeling is aroused almost suddenly five to fifteen seconds after the electrical stimulation is applied, even in the case of serious pathological depressives (see Buck 1976). The present point is that if there is any "center" in the brain that is related to pleasure, it is located in the limbic structures. And clearly the data so far suggest that the limbic system plays a substantial role in the experience of pleasure however cautious we might be in calling the subjects' reports "reports of pleasure experiences." There is further evidence of course. For instance, no stimulation experiment of the cortical areas in the brain elicited pleasure reports as such, though the reports were usually of certain (visual, olfactory, somatic) sensations, which is to be expected given the sensory functions of certain cortical areas.[28] As a result, the subpersonal sites of pleasure are to be found mostly in the limbic system structures that are typically not viewed by the scientists to be *sensory* information processing systems. Instead, the limbic system has long known to be firmly affiliated with motivational and affective phenomena.

Here it needs to be emphasized that the sudden arousal of the reported pleasure feeling as a result of electrical stimulation seems by itself sufficient to construe the feeling as *episodic* rather than dispositional.

One very interesting anatomical feature of the limbic system is that it receives nerve fibers from all somatosensory subsystems. As in the case of noxious stimuli, the axons of all other ascending fibers at some point in the spinal cord branch out and reach the limbic system structures. It receives also a huge number of input from other sensory cortex areas through the corpus striatum and the frontal lobe which itself is thought to play an important role in high-level *cognitive* processes. The significance of this feature seems to be that these connections serve to stimulate limbic system mechanisms in a way similar to stimulation with electrodes:

> The wires, so to speak, have been shown to be there, but nobody knew what they were for. If those wires, those neural links between peripheral sense organs and limbic regions, were concerned in the production of pleasure, then certain things would inevitably follow. Almost by immediate inference, one could say that... animals would press a lever (or do some other task) at their own volition, purely in order to obtain stimulation of peripheral sense organs. It should be possible to demonstrate peripheral self-stimulation. No electrodes in the brain, no electric currents to the brain, just [a patterned] stimulation of the eye or the ear or the skin or whatever. (Campbell 1971, p. 16)

Indeed, experiments were conducted and the results were more or less as expected. Natural stimulation of the pleasure areas in the limbic system

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[28] See, for instance, Rolls (1975, p. 29) who writes: "Emotional feelings such as anger, joy, pleasure, and sexual excitement are almost never evoked by electrical stimulation of the (easily exposed) cerebral cortex".

occurs as a reaction to the incoming nerve signals from the sensory areas. Here the term 'reaction' should not be taken necessarily to suggest a serial or sequential process. This seems not to be the case especially in the processing of somatosensory signals. As in the case of noxious stimuli, somatic stimuli seem to be processed in parallel ways as they are projected to limbic areas *and* to the somatosensory cortex, although there are fiber bundles looping back to limbic areas from the somatosensory cortex through different routes. However, the fact that a great majority of signals from other sensory systems are received by the limbic system mostly through the frontal lobe seems to make a sequential process a bit more dominant in the case of these non-somatic sensory signals. Many of them seem to reach the limbic system after having been processed in their sensory sites. Clearly, this opens the further possibility that these signals are modulated in their way to the limbic system especially in the "association" areas of the frontal lobes. This in fact correlates well with some observations. The pleasure we get from the stimulation of our body seems to be more direct and strong in many cases when compared with the pleasure we experience in other sensory modalities (except, perhaps, smell and taste). Moreover, given the commonly known fact that various cognitive and emotional factors play an important role in modulating some pleasures we experience, it is not surprising to find out that a lot of connections are *via* frontal lobes that are known to be substantially involved in some higher cognitive and control functions. More generally, what we believe and desire seem to affect very much what and how we experience.

Of course, the subpersonal picture is much more complicated than can be covered here. The functional complexity of the central nervous system and especially the brain is very fascinating. But, a rough and ready picture arises here to give an idea about the subpersonal mechanisms of pain and pleasure experiences, which gives, I believe, substantial support to the theses that (1) there is no sensory pleasure-quality as the sensory content of pleasure experiences, and (2) that pleasure is not itself a sensation but a (primitive) reaction to sensations proper. It is basically our spontaneous reactive attitude to certain sensations we are having. But pleasure is still a feeling, episodic in character. When we experience pleasure, we experience some non-sensory qualitative feel. So my claim is that this feel *is* in fact our affective reaction to certain sensations proper.

The term 'reaction' is used much by philosophers in discussing pleasure, and it is indeed a many-faceted concept. My use of it here is somewhat restricted. Just think of some examples such as the pleasure you get when you taste a delicious chocolate ice cream, or an old French wine, or smell Channel No. 5, step into a warm shower on a cold day, scratch an itch, so on. In all these cases, you have certain sensations, gustatory, olfactory, and bodily; most often they are mixed (not to mention also cognitive factors heavily involved usually): e.g., you both taste and smell the wine, and see its

beautiful color as it is refracted through the wine glass, etc. But these sensations occur with an overtone of pleasure as if an "ineffable" aura, so to speak, were surrounding them which "makes you want to continue having the sensations."[29] But the last expression seems somehow much too cognitive and self-conscious. We greatly desire to have them in appropriate circumstances, and create the opportunity for such circumstances, of course. But this is not what I mean. The sense in which I like to continue experiencing them is much more immediate and spontaneous belonging to the very moment. This does not seem to be a cognitive reaction, but a reaction in a more primitive sense that seems to defy exact description at the personal level.[30] It seems that only in this way can I come to know what it is like to "react" to sensations in this particular way. To say that there is no experiential content (or, feel) involved in the overall experience apart from the sensory contents involved seems to be wrong. To see this more clearly, I have to emphasize the parallelism of this case with that of pain.

In the normal cases of pain experience, nothing can be more obvious to the sufferer than that nasty, horribly hurting, awful, and abhorrent feel she experiences; nothing, in other words, seems to her clearer than that what she terribly wants relief from is that awful feel. And, as we have seen, this is the affective dimension of pain, the reactive "attitude," as it were, of the sufferer in the same primitive sense. When you disassociate that reaction by certain medical interventions from the sensory dimension of pain experience, this awful, hurting feel disappears. The sufferer becomes a non-sufferer, she no longer wants the remaining sensory feel (which she still identifies as pain) to cease *simply because* it is hurting, at least she becomes indifferent to that feel. Now, it is difficult to say that this affective dimension of pain experience is just a "colorless" reaction. My claim is that the primitive affective reaction involved in an overall experience in which we receive pleasure from certain sensations proper is as much a feeling episode as the hurting, awful qualitative component of a total pain experience which is itself the reactive dimension of pain in the same primitive sense. A total experience of pain has its own specialized underlying sensory mechanisms, pleasure doesn't: rather it seems to be a general purpose mechanism reacting (certainly in subtly different ways) to relevant sensations proper in different (sub)modalities, apparently, without discriminating among them. Indeed, the reason I have spent so much time in elaborating the subpersonal mechanisms of pain and pleasure experiences in the light of recent scientific and clinical discoveries was primarily to show that this claim can be made cogent not purely on philosophical grounds, as some tried and almost came close to doing, but also on

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29 This is in fact the definition of pleasure Brandt (1979) gives.

30 Echoing the sense in which it has been said that there is something primitive about 'pro-' and 'con-attitudes' which cannot be defined *at the personal level* except perhaps circularly. See Nowell-Smith (1954) and D.L. Perry (1967).

empirical ones: it gives the best picture that fits well with what scientific research suggests. At the subpersonal level, the similar functions and parallel sites in the limbic system of reactive aspects of total pain and pleasure experiences on the one hand, and the "odd" results of certain experiments and treatment techniques on the other, suggest very strongly something like the above picture at the personal level.[31]

Before moving on to discuss some of Ryle's objections to an episodic reading of pleasure, let me say a few things on how viewing qualitative dimension of mental states as having a complex phenomenology can help in the naturalization of qualia. Recently, a few philosophers have argued that qualia are nothing over and above informational properties of certain brain states underlying our experiences.[32] On this conception, qualia are not intrinsic features of experiences, rather they are relational as they are essentially and exhaustively representational. I am sympathetic to this view. Indeed, I think that identifying sensory qualia with informational properties is the right way to go in answering the ontological worries about qualia. But it seems also clear to me that this view cannot account for what I have called the affective qualia—the affective qualitative character of our pain and pleasure experiences—if I am right in distinguishing their complex phenomenology into (at least) two components. On the other hand, I believe a *psychofunctional* approach would be best suited to accommodate this aspect of our experiences. Let me briefly elaborate.

When I talked about the character of reaction to sensations being primitive, my aim was to suggest that perhaps this notion could be cashed out by identifying it with the distinctive way in which the incoming sensory information is processed, not for analysis to extract the information about the proximal or distal properties of the stimuli, but rather for its significance for the effector or motor systems, to set motivational parameters for action on the basis of stimuli's informational content. There is in fact strong supporting evidence for such a thesis in the evolutionary stories of different organisms at different developmental hierarchies. Unfortunately, inquiring into this has to wait for another occasion. Here, I can only give the gist of the proposal in the following way.[33]

The idea is *inspired* by the computational treatment of desires with propositional content (conceptualized content). According to the Language of Thought Hypothesis (LOTH), desiring/wanting (*qua* cognitive attitudes toward a propositional content) is to be understood as having a distinctive functional/computational profile. Although the canonical way of picking out desires is by way of that-clauses that specify a certain proposition (e.g., desir-

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31 The similarity of this picture to certain "hedonic tone" accounts of pleasure, which have been formulated mostly on introspective grounds, should also be noted here.

32 See Dretske (1995, forthcoming), Tye (1995), Lycan (1996).

33 For a bit more elaboration, see my (forthcoming).

ing that *P* and wanting that *Q*, where '*P*' and '*Q*' stand for specific propositions), picking them out *qua* desire alone is supposed to be purely (narrow) functional. Within a computationally implemented LOT paradigm, then, desiring/wanting is given an account in terms of the functional/computational role that the propositional content (implemented in the brain as data-structures) plays within the overall mental economy of the organism in question to direct behavior.

Now, we may perhaps extend this style of explanation to cover non-conceptual sensory/informational content. First, identify affective qualia with a certain kind of desiring or reacting ("desiring to get more" or "desiring to avoid") in some primitive sense to be defined. Call it desiring*. The job, then, is, similarly, to explain desiring* functionally in terms of our attitudes toward the sensory qualia. Since sensory qualia are to be identified with a subspecies of (roughly, analog, non-conceptual) representational properties, desiring* can be functionally defined in terms of our attitudes (reactions) toward them in a fashion roughly analogous to propositional desiring/wanting. In other words, desiring* is the peculiar way in which sensory qualia/information are processed. Put it crudely, the suggestion is not that we feel something first (say, pleasure) and then desire it. It is rather that the very feeling of pleasure metaphysically consists of our desiring* whatever sensory qualia (= sensory information) we[34] are simultaneously processing or reacting* to. As I tried to show above, there is enough neurophysiological evidence at the subpersonal level. So this kind of psychofunctionalist proposal can actually be made to work, which would take the form of explicating what desiring* or reacting* comes down to in psychofunctional terms. I think that such an approach has many attractions in addressing the ontological problem about qualia.

3.2 Ryle's Objections

We may recall that Ryle raised a series of objections to the view that pleasure is a feeling episode. Let us see whether we can meet some of them that were extensively discussed in the literature.[35] Ironically, Ryle's standard objections are rather illuminating and often support my own account, as we will see in a moment. The conclusion of the objections (1) through (4) is supposed to be that since pleasure differs from pain in the relevant respect it cannot be a feeling episode (= sensation) in the same way that pain is, as is often argued by the defenders of the sensation view of pleasure.

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[34] The use of 'we' should not mislead: "we" are processing or desiring* sensory qualia in the same sense in which "we" are regulating our glandular activity or heart beat.

[35] The following objections are in fact my reconstructions of Ryle's own objections. They persistently appear in one form or another in all his three writings, 1949, 1954a, and 1954b.

(1) If pleasure is a feeling episode, it should be possible to isolate that feeling from its "object." But it is logically impossible to separate and isolate pleasure, and emotions in general, from their objects. In this respect, pleasure is obviously different from pain.

What Ryle had in mind was of course primarily the examples of pleasure_M. Although his objection seems to have a stronger force in his chosen examples, it is obvious that it can be applied to pleasure_P cases. The distinction between pleasure_P and pleasure_M lies in the former's being a "reaction" *primarily* to sensations proper. We have already seen the subpersonal mechanisms that support this claim. Nevertheless, I don't think that the distinction can be made sharper than what is suggested by those mechanisms. The reason for this is that even in the paradigm cases of pleasure_P our cognitive states, such as the perception as well as the conception of the situation, our past experiences, etc., play an important role — at least a modulating one. In pleasure_M cases such as taking a walk in the woods, there are also typically many sensations that obviously have some effects upon the overall pleasure one gets. But the fact that the distinction is vague does not make it worthless, as long as there are clear and paradigm cases and non-cases of pleasure_P and pleasure_M. Moreover, nothing important hangs on this distinction from the view-point of my own account.

Let us examine Ryle's general point with respect to emotions. Here is a relevant quotation from a neuroscientist:

> Excitation of certain parts of the temporal lobes produces in the patient an intense fear; in other parts it causes a strong feeling of isolation, of loneliness; in other parts a feeling of disgust; and in others sorrow or strong depression. Stimulation of some parts causes a feeling of dread rather than of fear, a dread without object, the patient being unable to explain what it is he dreads. Sometimes there is intense anxiety and sometimes a feeling of guilt. Often such stimulation causes stronger and purer emotion than occurs in real life. (Nathan, 1987, p. 527)

This would seem to refute Ryle's logical impossibility claim on empirical grounds. And it indeed does if we take Ryle to be claiming that by necessity you cannot experience pleasure at all without also having an object of your experience.[36] However, we should be cautious in jumping to the conclusion too quickly. I think Ryle has a deeper point to make. What we have to ask is this: Can the very dread I experience upon realizing that the murderer is behind me be quite the same qualitatively as the one I undergo upon stimulation? It is notoriously difficult to answer such questions. But a few remarks can nevertheless be made. It is plausible to claim that the qualitative character

[36] In (1954a), Ryle asks for instance: "Is the *hedonic tone* the sort of thing that could, conceivably, be induced by drugs or hypnosis—as Dutch courage and somnolence can be induced? Could a person be qualified by *hedonic tone*, without his doing or having anything in particular to enjoy doing or having?" (pp. 138–39, my emphasis) His answer is of course negative.

of our emotional experience somehow changes its quality when it becomes directed on a certain object.[37] This change is not big enough for us to misclassify it as, say, euphoria instead of dread. Now what Ryle had in mind might be that it is impossible to separate and isolate *that* particular dread from its object; it is the very dread *of* realizing that the murderer is behind you.

In the case of pleasure$_P$ the situation is a bit more straightforward as there are no stimulation experiments causing an experience of pleasure as if upon, say, tasting an old French wine. Indeed, as I have mentioned earlier, the usual reports of many electrically stimulated subjects are of an immense feeling of well-being, euphoria, and not exactly of a specific pleasure as such. It seems that the pleasure I receive from a quality French wine is a pleasure I can get only from *that particular* wonderful taste.[38] Does that really count against the feeling view of pleasure? This only shows that the total experience the taster is having has a complex phenomenology consisting of various components (including cognitive ones, especially in this example) fused somehow with each other. The example can be explained easily by saying that the affective reaction component is a "reaction" to *that particular* taste. Here the connection is of course not logical but a causal one. It can be said that in general when the causal connections between sensations and affective components are cut, the particular affective reaction becomes "objectless", hence possibly changing their particular felt qualities. Only when the affective "generic" feeling that can be produced by direct electrical stimulation of pleasure areas in the limbic system is directed toward (actually, is caused by) certain sensations, do we experience the particular pleasure we do on certain occasions; it becomes somewhat fused, intermingled with the particular sensations proper we are having. So it is true in one sense that the particular pleasure we experience is always of something, that it is impossible to experience the same *particular* pleasure without also having the causally relevant sensations (and cognitions). But as far as I can see this does not militate against the view that pleasure is a feeling episode that is not itself a sensation proper.[39] I

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37 There is indeed scientific evidence for such a phenomenon. See Buck (1976, ch. 10), where he discusses Schachter's self-attribution theory of emotion. See also Lindsay & Norman (1972), the discussion of the famous experiment conducted by Schachter and Singer, ch. 17.

38 Let us forget, for the sake of the example, the interesting fact that it is, say, the 1972 French burgundy from a particular region in France bottled and labeled by a particular vineyard that we go crazy about, and not simply any liquid that tastes *exactly* the same. This point counts for something, but not against my position here. This example is a bit misleading in this respect.

39 As I have said, that it is episodic is already clear on the basis of stimulation experiments. That is by itself sufficient against construing pleasure$_P$ states as dispositions. It is also possible to draw a parallel with the case of pain. Direct stimulation of limbic areas above a critical current level by itself rarely causes reports of "pain"; instead it usually causes reports of strong distress, "unpleasant" experience, and the like. Apparently there is a

have no doubt that if all the necessary components could be produced artificially, exactly the same total experience would be experienced in any particular pleasure case; fortunately, for the moment, this is technologically, perhaps even empirically, impossible.

(2) Pains are spatially localizable in our body whereas pleasure is not.

The answer to this objection is quite straightforward: spatial properties of our experiences, as I have mentioned earlier, are processed at the subpersonal level by *sensory* mechanisms. So only sensations proper have spatial properties, and pleasure is not such a sensation. However, you can, of course, most often identify the location in your body the *source* of the sensation to which the pleasure you experience (when you do) is a reaction as specified above, and you can loosely call this "the location" of your pleasure. As far as the ordinary parlance is concerned, this is harmless.

(3) Pains in themselves are temporally specifiable, whereas pleasure cannot be temporally specifiable independently of the temporal properties of its object.

This is of course true, and the reason for this is, again, that pains are sensations proper (similarly, temporal properties of pain are processed in the sensory cortex). This only shows quite correctly that pleasure is not a sensation proper.

(4) It is possible to numerically identify two distinct pains in your body even if they are qualitatively similar. But you cannot identify as distinct "two pleasures" you happen to be experiencing simultaneously.

Again, the numerical distinctness of two pains depends on the spatio-temporal properties of their sensory (informational) contents, and since the properties are different, you identify them as distinct. The reason you cannot do this in the case of pleasure is, again, the same: pleasure is not a sensation. You can at most identify the two distinct sources of your pleasure.

As is rather obvious, especially the last three objections are not really objections at all once we distinguish between sensations proper and affective feelings that are not sensations as such. In fact, they almost serve the purpose of showing the need for such a distinction. Let us look at two more objections.

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resistance to call such experiences 'pain' on the part of subjects, and this is quite as should be expected, since the sensory component of pain is apparently missing in these cases.

(5) It is always possible to say of any given feeling that it is pleasant, unpleasant, or neutral. If pleasure is a feeling, the same should be true of it. But if on a given occasion the latter two could be said of pleasure, we would contradict ourselves. And if it is indeed possible to intelligibly say the former of pleasure, then this would yield either "a redundancy or worse."

I do not see that there is much substance in this objection. But since it is widely discussed in the literature, let me say a few words on it. I do not think that there is any normal situation in which we might sincerely think that we do not experience any pleasure when we actually do. If we think there is, it must always be some abnormal case that can lend itself to a plausible explanation in terms of the account I have been developing here. I need to be shown such a case. Redundancies do not make theories false. As to the meaning of 'worse,' I think Ryle has in mind an infinite regress objection: if pleasure is a feeling and we think of that feeling as pleasant, we have to be able to explain the meaning of this 'pleasant'; but in that case we have to appeal to another feeling since any "pleasant" experience has to be cashed out in terms of feelings that are uniquely peculiar to them, and *ad infinitum*.

Now this is a strange objection and it stems, I think, basically from a confusion of feeling with sensation proper. Usually when we experience pleasure we affectively "react" to sensations proper (and cognitions). Now, as I have said, there is a certain sense in which this reaction is primitive and immediate in that we experience this reaction as a sort of qualitative component intermingled with the relevant sensory contents in our total experience. The reason that the alleged infinite regress is blocked is that we do not in quite the same way "react" to our affective reactions. If you think of the subpersonal mechanisms, this should become obvious. However, we can of course have some cognitive attitudes towards that affective reaction. In plain language, we can of course come to *realize* to our surprise, say, that we get pleasure from something which we believe somehow we ought not to. And this might in turn cause us to feel morally guilty, and so on. But this kind of cognitive reaction causes no problem. These might in turn contribute positively or negatively to the total pleasure we happen to experience.

(6) Under certain conditions, it is often possible for a sensation or a feeling to occupy the whole consciousness of the experiencer so as to distract her from whatever she is doing. If pleasure is a feeling episode, then the same thing should be true of it. But this is hardly the case, as is well known. On the contrary, we usually focus better on whatever we get pleasure from.

This should hardly be a surprise in fact. I have never understood why there should not be a kind of feeling that has the effect of inducing a pro-attitude on the part of the experiencer. The affective reaction component of normal pain experiences is an aversive reaction, or more generally, a "con-attitude"; we do not like what we are experiencing. Likewise, when we experience pleasure, we affectively react in fact to certain sensations proper, and that has the opposite effect. Pleasure is an affective "pro-reaction" that reveals itself in consciousness as a qualitative component of a total experience. So it is hardly surprising that when we get pleasure from something, we focus our attention better on that something. Pleasure is not a sensation, therefore it cannot distractingly occupy one's consciousness as a sensation can. Being in fact a reaction to sensations proper it has the effect of directing our attention. But this by itself has no tendency to show that pleasure cannot be a feeling episode and that therefore it must be a disposition. This objection, I presume, stems again from expecting too much from the dissimilarities between pain and pleasure. Furthermore, the distracting effect of pain, ironically enough, does not arise from its sensory basis, but from its affective dimension. Pain *qua* sensation is not distracting more than any other sensations from different modalities. Moreover, is it true that *any* sensation can distractingly occupy the whole consciousness? Now, the ambiguity in this question is that it is not clear what we mean by 'distractingly occupy the whole consciousness.' Any sensation can be liked or disliked. It is true that usually the sensations that are disliked are distractive. But this has nothing to do with the intrinsic nature of the sensations themselves.[40] They are only causal/functional factors in the invasion of our consciousness, not the invaders. I think, we can see here clearly the drawback of not distinguishing the affective dimension of experiences from their sensory one, and of viewing the two on a par with each other by assimilating the former to the latter on the basis of the sense-datum model.

4. SUMMARY AND CONCLUSION

As I have said in the beginning, during the 1950's and 60's there were two important factors in the discussion of whether pleasure was a feeling episode or a sensation. First, both the pro and con arguments heavily drew on the contrast between pleasure and pain. Second, no clear and careful distinction was drawn between sensations and non-sensory (affective) feelings. The

[40] Just think for example of visual sensations and the ways they can distractingly occupy your whole consciousness. The ways they can be so are numerous: they can become physically painful (too much brightness, say), mentally painful (but this has nothing to do with the sensations themselves *per se*), or you can find them very much interesting for some reason (but this is hardly an invasion of your consciousness), and so on. I really do not see how a sensation proper *per se* like visual, auditory, etc. can invade your whole consciousness to the degree of mentally paralyzing you without also inducing any affective reaction on your part.

reason for this was the sense-datum model with its heavy dependence on phenomenology and introspection, after which any kind of felt quality (sensory or affective) was patterned. When the somewhat unique character of pain in its incorporation of both the affective and sensory components was added to these factors, many confusions followed. Furthermore, many did not pay attention to the differences between pleasure_P and pleasure_M. Given the inflexibility of the sense-datum model, there was even no need for this. The comparison of "physical" pain with pleasure_M, as was much exploited by Ryle in his favorite examples, confused the issues all the more. But it was apparent that even when the examples chosen for contrast were that of "physical" pain and pleasure_P, pleasure_P did not look like a sensation in the parallel way pain was a sensation. On the other hand, there were many examples of pleasure_M that seemed to involve very intense feeling episodes. This was also true in the case of "mental" pains, and this made some (of different persuasion) even think that pain might *not* be a sensation (=episode) either.[41] It is of course true that any analysis of pleasure has much to gain from a proper understanding of what pain is. But, as we have seen, especially in the absence of good theoretical resources with which to distinguish satisfactorily between many different types of qualitative mental states, the dangers are also great in such a comparison between pain and pleasure where there are indeed many profound similarities as well as dissimilarities.

The paradox was this. Affective feelings and sensations proper as experienced by people seemed to have categorically different properties, but the sense-datum model and behaviorism were apparently the only available models on which any qualitative mental state had to be analyzed. The former did not allow for an intelligible distinction between affective feelings and sensations proper; the latter was chosen by people who rather wanted to explain away feeling episodes altogether at the expense of common-sense. So, those who emphasized the similar, or better, parallel aspects of pain and pleasure felt a need to count pleasure as a sensation because they thought that pain was obviously a sensation. On the other hand, those who emphasized the dissimilar aspects were inclined to view pleasure as a disposition; pleasure for them was not a sensation, and this was usually enough for pleasure not to count as any sort of feeling. But each party in the discussion was clearly in serious difficulty in satisfactorily analyzing the favorite examples of the other party.

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41 To some, such as C.D. Broad, it was clear that pleasure was a "hedonic tone" sort of feeling. Because of the insistence on viewing pain and pleasure as constituting two opposite end-points of a single continuum, this led them to view pain also as an unpleasant feeling surrounding (but not identical to) sensations and thoughts. That is, they treated pain in exactly parallel terms as they did pleasure. Pain did not count as a sensation, though it was clearly an unpleasant feeling.

My own account of pleasure escapes this apparent dilemma and solves the paradox by distinguishing between affective and sensory components of a total experience. My view of pleasure, even in the paradigm cases of pleasure$_P$, is that it is not a sensation, though a total experience of pleasure involves many sensations proper. Pleasure is predominantly an affective reaction in a certain primitive sense to incoming sensory information to set motivational parameters for behavior. But this does not prevent pleasure from being a feeling *episode*. In brief, when we experience pleasure we typically experience *inter alia* some qualitative feel that is never the content of a *sensory* state (in fact, never identical, I would like to claim, to a representational/informational property, but rather is identical to a psychofunctional property). This commits me to viewing these experiences as having a complex inner phenomenology normally not so obvious in introspection. But this is quite welcome, especially at the present mentalistic era, as it is also suggested strongly by scientific and clinical evidence. As the sense-datum model and behaviorism were rejected long ago, I think, it is important to give an account of pleasure, which has been neglected for almost the last two decades, by neither sensationalizing it, nor dispositionalizing it, but most importantly, nor by mystifying it.[42]

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