

PAIN, WHAT IS IT AND WHY DO WE CARE?

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ABSTRACT

In the first part a series of methodological remarks are presented mainly concerning the use and relevance of concepts such as pain and suffering, the 'observer-oriented' vs. the 'ego-oriented' approach, the principle of parsimony vs. the principle of caution, and the ethical vs. the factual approach. The general conclusion is that the concepts of pain and suffering have their proper value, conditional upon their use being restricted to their specific domain. In the second part some suggestions are made about the way in which a foundation for an ethics of pain and suffering may be laid.

Keywords: Pain - Suffering - Ethics - Methodology - First-person approach

WHAT IS IT?

In what follows I ask the question what *pain* is and, by extension, what *suffering* is. I also try to determine why we want to avoid pain and why we consider it a justified ethical objective to safeguard others from having such experiences. Research regarding facts of such a specific type and concerning the relations between facts and values, raises certain methodological problems which will form the main focus of the first part of this paper. Being an opponent of 'the principle of non-distinction of the distinct', I intend to comment on a number of concepts and their divergent meanings (see note 1).

Pain and suffering as ambivalent concepts

The American philosopher C.L. Stevenson (1944) has introduced a distinction between two types of dissent that may arise in intellectual discussions: 'disagreement in belief' and 'disagreement in attitude'. The former type may be settled by advancing evidence concerning the facts; in the latter case this would not help: the dissenting opinions are determined by individual or group values, and these values themselves are emotionally loaded: in such cases persuasion is only possible by evoking in the other person a sensibility for the values which one fosters oneself. In a third type of discussions it may not be clear at the outset which form of disagreement we are dealing with.

I propose to extend this distinction - which refers to *beliefs*, and hence to propositions - to the domain of *concepts*.

(a) Some terms can be used conveniently in strictly scientific discussions: 'atom', 'virus', 'blood pressure'; (b) others belong undoubtedly to the evaluative or normative domain: 'good', 'beautiful', 'unacceptable'; but still others (c) seem to have both factual and evaluative connotations: 'health', 'illness', 'well-being', 'happiness', and also '*pain*' and '*suffering*'. It is useful to be aware of this kind of ambivalence and sometimes it may be important to clarify whether the evaluative or the factual aspect is meant.

There is of course ample scientific literature about the neurophysiological processes related to 'pain' and to its bodily expressions. These studies refer to objectively detectable *facts*; but pain also has an *evaluative* dimension. The study of the facts suggests that pain plays a positive role in the functioning of living organisms but in our daily life we essentially consider it as something negative, something we want to get rid of. Whereas curiosity about the factual aspects of pain is a drive to *scientific research*, the evaluative and emotional aspects stimulate another type of interest: viz. *ethical concern*.

'Observer-oriented' vs. 'ego oriented' approach

The neurophysiological analysis of pain processes evidences some useful connection between pain signals and damage to tissues: through pain we become aware of injury or danger to the organism. We get a similar impression when studying the overt behaviour related to harm: bodily movements, facial and other expressions, show that the 'aim' of the organism is mainly to escape from the *cause of pain* (or to warn others against it). This leads us to the para-

doxical conclusion that the pain system is an essentially *positive, valuable* component of organisms, which prevents injury or promotes recovery.

The source of a *negative* evaluation of *pain*, and hence, the source of our *ethical rejection* of it, lies in a form of awareness which is inaccessible to the external 'observer approach'. Only through *recognition by my conscious 'I'* do I know that some types of damage to *my* tissues, some neurophysiological processes in *my* organism, some expressions of *my* body, are linked to an *experience* which I qualify as 'unpleasant' to different degrees: e.g. 'distressing', 'awful', 'intolerable'. This characteristic form of sensation concerning our body, which we have learned to call 'pain', is our most original referent of the word "pain". We know what pain is (i.e. what we mean when we use the word "pain") without any (explicit) knowledge of its overt expressions or its neurophysiological basis (note 2).

Only because we have experienced how dreadful this 'self-experienced' pain can be, do we try to escape from it and do we deduce the so-called *ethical aspects* of it: we want to avoid a similar experience for ourselves in the future and to protect those we care for against it. Hence, the original definition of "pain", which is also linked to its most *humanly relevant* aspects, has to be found through an '*ego oriented approach*'.

Pain is an experience which I can only acquire about myself (without using the classical senses aimed at external perception) and which, as a general rule, is negatively evaluated, to different degrees: unpleasant, awful, unbearable,.... This experience concerns my own body, sometimes localised in specific parts, sometimes diffusely spread over the whole organism (note 3).

This pain sensation as such cannot serve as a *direct* object of scientific research, which, due to its intersubjective and sometimes instrumental character, is necessarily '*observer-oriented*'.

This does not imply that pain is something unimportant, totally inaccessible to science. Pain, or rather its occurrence, and sometimes its localisation, quality and intensity can be expressed. These verbal or other manifestations are often associated with tissue damage and specific neurological processes. However, when investigating these processes objectively, we should constantly be aware of the fact that then our object is not the pain itself of an organism, but its *pain system*, i.e. the neurophysiological processes (or the overt expressions) which occur in an organism that experiences pain.

From the insight that science does not *directly* study pain itself, some people have deduced that this 'pain' is no object of research at all, or that it plays no role as a causal factor in behaviour, or even that it does not exist. (note 4). They are wrong. Since I am not aware of the neurophysiological processes in my every day pre-scientific life, they cannot determine my conscious decisions; but the pain itself, and

intense pain in particular, is an important drive of my activities and even of the way of structuring my world view. Moreover, the firm conviction that pain does really exist, as a distressing, awful aspect of my own and of other people's life, is one of the fundamental building blocks of my ethical attitudes.

It seems obvious that the mere knowledge of the existence in other organisms of neurophysiological, so called 'no-ciceptive' processes - which are often biologically useful - does not provide a basis for empathy and compassion; but the conviction that others are acquainted with the *awareness* of pain and its unbearable aspects, certainly does.

This remarkable fact that pain (but also pleasure and a series of other emotions) is not directly accessible to an 'observer-oriented' approach is a necessary consequence of its essential feature: it is an exclusive experience *by an organism of internal states of that organism itself*. Some people are inclined to think that the 'observer approach' is concerned with material things, whereas the 'ego approach' is about immaterial ones, but there is no reason to suppose that activities of an organism (e.g. experiences and their contents) are less material when they refer to the organism itself than to the external world.

We have to admit, however, that we cannot reliably *translate* into observer language those sentences and terms which refer exclusively to 'self-experience'. Therefore, on the one hand, a theory about the self-experienced given (e.g. a theory about 'consciousness'), formulated in *ego-language*, will always lack intersubjective clarity and verifiability and will never fit into a truly unified ('materialistic') science; but on the other hand, such a theory formulated in *observer language*, cannot be more than a hypothetical construct credited with a lower or higher degree of plausibility. This is annoying, but we have to live with it (note 5).

Since both universes of discourse (of the ego and of the observer) have distinct origins, there is no guarantee of isomorphism or even of a one-to-one correspondence between the terms and their referents in both domains. It follows that deficiencies and ambiguities in one domain cannot be compensated for by borrowing from the other one. For this reason all attempts to define "pain" which rely on both the 'observer' and the 'ego' approach are inherently flawed and become a source of methodological errors.

A striking example is the definition of pain by the *International Association for the Study of Pain (IASP)*: "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage" (IASP, 1986). Tissue damage is, as a general rule, detected from the 'observer' point of view, whereas an 'unpleasant sensory experience' can only be detected by an 'ego'. This raises the question whether e.g. someone who has a headache presumes (or should presume) simultaneously the occurrence of 'actual or potential tissue damage'. It would be worthwhile of course to find out whether the ex-

perience of pain is *invariably* connected to tissue damage (or whether it can be 'described' as such), but the answer to this question depends on the results of scientific inquiry and should not be a key notion of a definition which precedes that inquiry.

In order to avoid these confusions I suggest that we restrict the use of the word "pain" to the *ego-oriented* context and that we use the expressions "*pain system*" and "*pain processes*" to refer to whatever is the object of the 'observer approach' concerning an organism that claims to feel pain, expresses pain, or undergoes tissue damage (or tissue strain). In the study of organisms incapable of providing us with 'ego-oriented' information (babies, non-human animals), or when the existence of a pain feeling subject is only surmised or even improbable, it is perhaps preferable to use the more general and more neutral expression "*actor-oriented approach*" when speaking about hypothetical internal states ('experiences') and "*nociceptive systems and processes*" (instead of "pain system, - processes") (note 6).

A last *caveat* in this context might be the following one. The 'self-experienced' pain is the one directly known to us and the object of our most intense concern. This might suggest that it provides us with indisputable insights. One should not forget, however, that the findings based on self-experience cannot be noted down and controlled externally or at successive moments; as far as discrimination, identification and memory are concerned, their reliability is therefore rather limited. It follows that even the self-experienced pain, although the most intimate and the most relevant to us as human beings, can only be adequately - although indirectly - studied within the framework of a broad 'observer-oriented' neurophysiological theory.

Parsimony vs. caution

There is a well-known principle in comparative psychology, the so-called *Lloyd Morgan's Canon*: "In no case may we interpret an action as the outcome of the exercise of a higher psychological faculty, if it can be interpreted as the outcome of one which stands lower in the psychological scale".

The scientific usefulness of such a '*principle of parsimony*' is evident. Science aims at explanation: one wants to show that all processes and phenomena in a given domain can be reduced to a small number of more elementary processes and phenomena. The introduction of entities of a 'higher' order that seem irreducible to more elementary ones can at best be a transitory solution. This means that explaining the behaviour of animals by reference to faculties or experiences which have not been demonstrated to exist, such as a human-like 'consciousness' or 'pain awareness', could only be acceptable when reduction of the latter has been proved impossible.

Next to this point of view, to which I subscribe, I propose the complementary thesis that in cases where the strictly scientific issues are not at stake, but rather the *ethical ques-*

tion how we ought conduct ourselves towards animals (and babies), another principle should be given priority: *the principle of caution*. As long as we have no unmistakable proof to exclude the possibility of consciousness or feelings of pain (as is the case with e.g. organisms that lack a central nervous system) we have to presume their existence, at least to a certain degree. After all, the 'ego-oriented' approach has familiarised us with the horrible character of some pain experiences and until science comes up with decisive disproof of their occurrence, it is unacceptable to take the risk that other beings be exposed to this type of suffering.

Both principles, *parsimony* and *caution* are equally legitimate in their own domain: the former concerning *theorising about*; the latter concerning *our behaviour towards* human beings and animals.

To put it rather sharply: from a *theoretical* point of view we ascribe the cause of an aversive behaviour (and expression) in animals - and babies - to a mere nociceptive system until we have solid arguments to consider it a 'pain system' (comparable to the human one); but in our *ethically loaded* conduct towards them, we start from the supposition that they have an authentic pain system, until we have decisive proof that it is a bare nociceptive one (note 7).

Pain and Suffering

In many contexts (e.g. in Encyclopaedia articles) the concept of pain is linked to that of suffering, probably because 'suffering' has in the most extreme way the connotation of negative evaluation and hence the most direct link to an *ethical appreciation* (remember Bentham's famous question "do they suffer?"). It can be said indeed that the ethical relevance of pain is most eminent when it is presumed to be a form of suffering.

We ascribe the characteristic of 'suffering' to a number of negatively valued emotions when they reach an intensity which we express with the words 'awful', 'unbearable', or 'intolerable'. These qualifications can sometimes refer to bodily localised experiences such as a disgusting smell or taste or an intense pain, but in many cases they express high degrees of grief, anxiety, shame, ..., i.e. emotions pertaining to the way in which a conscious person experiences his/her condition 'as a person' - not necessarily his body - and more specifically a condition which is considered to be extremely undesirable and from which he/she wants to escape (note 8).

The theoretical and ethical relevance of 'suffering' is linked to the following characteristics. (a) The definition "something from which one wants to escape with all means" implies a drive to action in order to avert it from ourselves and from those we care for; hence it leads to a direct ethical involvement, more than e.g. bearable forms of pain. (b) When suffering is intense and of long duration it seems to lack any function and this absurd character makes it even more intolerable. (c) At present no neurological explanation has been provided for its agonising aspect: it is known

exclusively through ('ego-oriented') self-experience and it is related to other self-experienced elements: awareness of continuity in past, present and future and to other emotions such as intense pain and anxiety. (d) Perhaps this may explain why many people are still convinced that 'real' suffering is typically human and that expressions of pain in animals (and even in babies) should rather be interpreted as merely 'nociceptive'.

The extreme human relevance of suffering shows how important and how urgent it is to find an answer to the question whether, and in what sense animals (and babies) can suffer, or, more specifically, whether a neurophysiological substrate for 'suffering' exists.

Ethical vs. factual approach

The 'ego-oriented' as well as the 'observer-oriented' approach result in propositions, that may be true or false and that, if they are true, *express facts about reality*.

That an injury to some of my tissues provokes the firing of a series of neurons to the dorsal horn of the spinal cord, from there to the reticular formation and the thalamus in the brainstem and then to the frontal cortex and the somatosensory cortex (cf. e.g. Hardcastle, 1999, p 102) is an *observable* fact; and equally factual, although detected via 'ego approach' is my experience of e.g. a stabbing pain, notwithstanding its being linked to a *feeling* which will induce me to react.

When, however, a similar neurological process is going on in *another person*, I may realise this also as a fact, but that I have *the duty to help* this person to escape from this pain, does not belong to the domain of facts, but to the domain of ethical values and norms.

This *ethical approach* consists in an assessment of facts, which leads to the immediate execution of an action or to the approval or disapproval of some actions or dispositions to act. This assessment itself, however, is not based on *facts*, but on *attitudes*, i.e. tendencies (often emotionally loaded) to evaluate positively or negatively some specific actions or situations (note 9).

Nevertheless, when pronouncing ethical statements, we mostly give the impression of uttering factual propositions. E.g. I said before: "...it is unacceptable to take the risk...". This sounds as if it were a true proposition, a statement about the factual reality, but in correct language use I should have added: "According to my value hierarchy it is unacceptable..." or: "I have the attitude to find such behaviour unacceptable".

In addition to the tendency of everyday language use to encourage a confusion between statements about facts and norms, there are at least two other reasons why we are reluctant to abandon this bad habit. (a) Presenting a value or a norm as a fact and not as the object of personal preference, supplies it with strong persuasive power. (b) We are inclined to confer the status of facts to those norms and values which we consider so precious that they seem self-evident.

But even things that are very dear to us should not allure us to make methodological mistakes (or, to put it more correctly "It follows from my cognitive insights and my value hierarchy that things that are very dear to us ... etc.").

WHY DO WE CARE?

The second part of this paper can be split up into three sub-questions: "why do we care about ourselves?", "why do we care about other people?" and "why do we care about animals?". These are three formidable questions about the foundations of our ethical appreciation of pain and suffering, and, hence, it should be clear that we cannot adequately treat them in a few pages. I only want to make some suggestions about how these problems could/should be approached.

Caring about ourselves

One of the factual features of pain, especially of 'intolerable' and 'excruciating' pain, consists of the urge it generates to mobilise all our energy to put an end to it. The necessity to escape from intense pain is so strong a drive in our biological organism, that this 'norm' or 'value' thrusts itself upon us in an almost irresistible way: we do not need any persuasive communication! As far as the more bearable forms of pain are concerned, our reactions depend on their importance within our whole value hierarchy. Education may have convinced us e.g. that it is preferable to endure instead of avoid some forms of pain in order to strengthen our character or because of religious motives. As *autonomous* human beings, the final decisions about the value hierarchy are of course ours. From a rational point of view, however, it is advisable that our appraisals should be founded on adequate knowledge of facts and that the value hierarchy is planned for the long time.

Caring about other people

The degree to which we take into account the pain and suffering of *other people* in our conduct towards them, does not seem to depend on a biological impulse and if it does, this is probably limited to the care for the offspring. Yet a *culturally determined* care for the suffering of others is a rather general characteristic of human beings, even though it is mostly restricted to people of the immediate surroundings. This seems reasonable from a point of view of 'survival', since injury to neighbours or next of kin often implies danger to the individual himself. Along the same line of reasoning one can explain how values and norms could develop to approve of tendencies towards mutual assistance; and, more specifically, how feelings of 'compassion' (co-suffering) could greatly enhance the spontaneity of activities in that direction. However, when we take into account the many manifestations of extreme cruelty of which human beings have given evidence throughout the centu-

ries, especially during wars, we have to conclude that compassion was not originally a generalised feeling directed towards human beings as such. But when studying the development of ever larger kingdoms (Egypt, Mesopotamia, the Indus-plains etc.), we notice a growing tendency of people to recognise those belonging to the same kingdom as fellows who undergo the same fortunes. This awareness seems to have led to a growing identification with each other and hence, to compassion. This is illustrated by the emergence in several cultures during the first millennium B.C., of the so-called *Golden Rule*: "Do not do to others what you would not like done to yourselves". And, much earlier already, in Ancient Egypt, it was highly valued if a person could say at his death: "I have not caused anyone suffering, I have not made anyone weep..." (Pritchard, 1955, p. 34).

It is my thesis that to the extent to which the interactions between human beings of the whole world will become more intense and more diversified, the value of identifying with all other people, and hence the standing of the Golden Rule and of universal compassion will become stronger. (cf. also Vermeersch, 1994). The rational component of an attempt at persuasion in this direction lies in the contention that a universal mutual goodwill - as expressed e.g. in the Universal Declaration of Human Rights - forms the best guarantee of a better life for all. This conception, however, as is the case with all views concerning values, can be defended with good reasons, but it can find no compelling force in the facts themselves.

Caring about animals

The above-mentioned tendency to identification with and to universal goodwill towards other people can easily be converted into caring about pain and suffering of human beings in general, because there are strong arguments (*analogypostulate*) for ascribing to our equals the same liability to pain and suffering as we are susceptible to ourselves (see note 10).

With regard to the *pain and suffering of animals*, neither the cultural traditions nor the philosophical elaborations evolved in a way similar to those concerning human beings.

There has been concern for the pain of animals in Ancient Egypt, as is proved in the 'Book of the Dead': "I have not mistreated cattle" (Pritchard, 1955, p. 34), but in the western tradition the ability to suffer has often been associated with the typically human form of consciousness; self-awareness. It is plausible indeed that the form of self-knowledge typical of human beings, which enables a simultaneous view of past, present and future, increases their potential to suffer, because, amongst other things, an awareness of the duration of pain in the past, or the anticipation of it in the future, can arouse feelings of anxiety or exhaustion, which, without this knowledge, could hardly be present to the same extent.

But once this argument has been introduced, one should be aware of all its consequences. As soon as human suffering

has been associated with this typically human form of consciousness, one cannot avoid the conclusion that, whenever the *level of consciousness* is diminished or not yet present, as is the case with severely mentally handicapped people or with very young children, the *potential for pain* will be reduced to an equivalent degree.

If we assume, what is highly probable, that some higher animals dispose of a form of consciousness which exceeds that of these babies or mentally disabled, what I call *the crucial hypothesis* forces itself upon us: *the potential of some higher animals to suffer, might be greater than that of certain human beings*.

Since we can never directly assess the quality of pain of other human beings, let alone of members of other species, this hypothesis certainly cannot be refuted. It is even a plausible one, because research of expressions of emotion as well as the analysis of the central nervous system, show that they are more complex in certain animals than they are among the human beings mentioned above. If we consider that authentic forms of suffering should always be avoided (a reasonable claim to those who accept the Golden Rule, our 'principle of caution' and our definition of suffering), we have no right to reject the possibility that this crucial hypothesis may actually be true. If we care about the possible pain of young and very young children, the reality or the quality of this pain being unknown to us, it would be inconsistent to disregard the possible pain and suffering of animals, which, given the complexity of their facial and bodily expressions, seems almost unquestionable.

Although (contrary to Peter Singer, 1975) I stick to the principle that human beings, *all human beings*, have specific and equal rights as far as suffering and death are concerned - which entails the acceptance of a certain gap between humans and other animals - I do not admit that this principle be used to disregard the pain and suffering of animals.

It would, however, be a second misconception to argue that, concerning rights, the principle of equality, which is so valuable for human beings, must also be applied to *animals in general* (which is proposed by the adversaries of so-called 'speciesism').

After all, there is no denying the fact that there are enormous differences between animals regarding the complexity of their central nervous system (including their nociceptive system) and the typical expressions that suggest pain. It follows that our concern should increase in function of their potential for real pain.

One of the important assignments of 'observer-oriented' research - next to a better understanding and treatment of pain (and suffering) of human beings - lies specifically in the progress that can be made concerning the question in which species and to what degree the nociceptive system can theoretically be considered a pain system.

Some people may find the tendency of this article to stress the limits of our rational capabilities rather disheartening, not only on the level of research and theory, but also, and even more, concerning the foundations of ethics, but, or so I suppose, enthusiasm and wishful thinking might be

of help to motivate our engagement in an enterprise, but, when reliability of results is at stake, it is preferable to avoid all types of bias.

NOTES

(1) Honesty requires mentioning that I am not a specialist in pain research. As a philosopher I have some acquaintance with logic and methodology and with the literature concerning 'consciousness'. My knowledge about pain and suffering is based on rather eclectic reading - the most recent being the stimulating book by Valerie Gray Hardcastle: *The myth of pain* (1999). If my remarks are either naive or wrong, rebutting them might still have some value for other non-specialists.

(2) This does not exclude the possibility that we have learned to use the word by detecting connections between these inner experiences and verbal expressions of other people in comparable situations, but this learning process will have been almost unconscious, and certainly unanalysed.

(3) The nuance 'as a general rule' refers to (a) the fact that some experiences which I, considered separately, would qualify as pain, can be accompanied by other 'self-experienced' sensations, e.g. pleasure, in such a way that the whole composed of the two may be positively evaluated; (b) the existence (e.g. under the influence of drugs) of sensations which are qualified as 'pain' without a marked characteristic of unpleasantness (cf. Hardcastle, 1999, p. 104). The use of the terms 'I' and 'mine' in these contexts, stresses the fact that some types of experiences and the qualifications of them, are, in their full sense, exclusively proper to the 'self-experiencing' organism and can only be attributed to others by the (mostly spontaneous) use of an 'analogy postulate'. The expression 'self-experience' refers here to the exclusive experience by the ego of immediate contents of consciousness. The distinction 'ego-oriented vs. observer-oriented' is sometimes called 'actor-oriented vs. observer-oriented' which I consider to be a more general one, where the existence of a conscious ego is left open. In discussions concerning 'consciousness' many authors use the expressions 'first person' and 'third person' point of view.

(4) For a lucid explanation concerning these different positions, see the remarkable 'An essay on mind' by Samuel Guttenplan in his *Companion to the Philosophy of Mind* (1996).

(5) The most convincing approach for obtaining a high degree of plausibility would consist of using an 'observer' theory about pain to construct a *machine* whose internal structure and external reactions closely resemble those of a human being in pain (or, more generally, the construction of a machine displaying all the characteristics of consciousness and self-consciousness).

(6) Some tissues and organs of animals are provided with nerve endings which cause neurons to fire when damage (or stress) is exerted on these tissues; these signals spread along a rather complex neurological system which may itself provoke different types of 'aversive' behaviour and other bodily changes. Since this system seems to play an important (mostly protective) role in the reaction to *noxious* impacts or influences, it may be called a *nociceptive system*. In adult human beings some processes occurring within this system are experienced (by the ego) as 'pain'; therefore, this nociceptive system can be called a *pain system* (although not everything that happens in it is causing pain). The question whether other, non-human, nociceptive systems should be considered as pain systems will depend on the results of research.

(7) As soon as certain machines will become sufficiently complex by (a) having internal connections comparable to the pain system of human beings (or higher animals) and (b) exhibiting verbal or other expressions characteristic for pain, the principle of caution will also be applicable to them. For there can be no sensible reason why artificial constructions could not be capable of consciousness or pain experiences. The death agony of the computer HAL in Kubrick's *2001: A Space Odyssey* is still science fiction now, but that will not necessarily be the case forever.

(8) The expression "from which he wants to escape" should be interpreted in a subtle way. When someone is in a state of profound grief due to the loss of a beloved one, he/she would certainly prefer not to have to endure this. Primarily, this means that the *loss* he/she undergoes is extremely undesirable. Such a person could nevertheless refuse a tranquilliser (to relieve his grief), convinced as he/she is that it would be unworthy not to experience the grief which normally accompanies such a loss. In other words, within a total view of the personality, the refusal to mourn authentically could be perceived as shameful such that not mourning could provoke more suffering than the grief itself. Within certain religious convictions, some forms of suffering can be accepted or even searched for because the hierarchy of values assess them as a condition to the realisation of a higher value. In all these contexts suffering is accepted in spite of and even because of its being a state *from which one wants to escape in normal circumstances*.

(9) Strictly speaking, these attitudes, when present in an individual, are also facts, but they have a contingent character: they may or may not be present in specific individuals or groups, and they are liable to change. What I contend here is that sticking to these attitudes, or changing them is not determined in a compelling way by the knowledge of facts, but rather by feelings, or forms of persuasion of a non-cognitive nature.

(10) Due to the limits of time and space the problems concerning infants cannot be treated here. In some aspects they are similar to those of people in general (since they are subjects of human rights), but in other aspects they are com-

parable to those of higher animals (lack of verbal communication and probably of self-consciousness).

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