

The Perception of Pain and Suffering of the Weak, the Innocent and the Marginalized from Evolution and from Christian Theology

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Abstract. The subject of pain and suffering is complex and requires a holistic view. This article begins by clarifying concepts to understand pain as a biological, psychological and social phenomenon that has an evolutionary history whose maximum expression emerges in humans. Having established this common ground, it explores animal altruism and cooperation as incipient phenomena of caring for others. It then points out that the difference with humans is that humans perceive caring for the weak, innocent and marginalized as a moral duty and a path to personal flourishing. Finally, in the face of human weakness and from the perspective of Christian theology, God shows with deeds a way of caring for the weak by becoming weak, suffering and remaining innocent.

Keywords: pain, suffering, evolution, ethics, anthropology, theology.

Introduction

The issue of pain and suffering is studied from different disciplines. Making a journey from biological levels to theological levels is a task as overwhelming as it is necessary. This article addresses the issue starting with an intuitive approach to pain and suffering as biological and psychological dimensions of a common reality.

It begins by clarifying the concepts, since there is a continuity between pain and suffering, as well as a social dimension of this phenomenon. This should be reflected in a definition of pain that holistically contains its biological, psychological and relational dimensions. Subsequently, the article explores the biological-evolutionary dimension of pain and its relationship with the suffering of those who perceive it, synthesizing the current state-of-art.

From this moment on, the article adopts a more proactive and daring approach. It explores the sense in which animals can have an altruistic behavior of cooperation in which they care for individuals of their species who are in pain. And it is pointed out that in humans an ethical character appears by which the care of the other becomes not only a duty but also a virtuous behavior that improves them as human beings.

Finally, it is suggested that evolution, to the extent that it allows for altruistic cooperation, favors the survival of what is imperfect and maladapted to the environment and therefore what must be taken care of. From an anthropological and ethical point of view, caring for the weak results in a moral flourishing of humans as individuals and as a society. And from a theological point of view, since humans have failed in this task with painful consequences and because of their weakness, God himself has become weak among the weak to save the weak (1 Co 9, 22).

1. Pain and suffering

In a recent article, Horvat (2023) has pointed out how pain affects our body and our consciousness, our state of mind, and our way of relating to the world and to others. Pain also changes our relationship with God,

leading to prayer for both healing and release from pain, or to anger that God is “indifferent” to our suffering (Exline 2020), even more so when it is understood as a kind of divine abandonment or punishment.

Theological reflection recognizes that pain, suffering, and death are a mystery. In fact, the gravity of evil, injustice, and crime can only be glimpsed indirectly by the degree of pain and suffering of the person who experiences it. So it is, in Jesus Christ giving his life on the cross for us and for our sins. But also, in the physical and emotional pain experienced by his followers. Especially under the figures of the weak, the innocent, and the marginalized, with whom Jesus Christ identifies himself.

But before addressing the theological, ethical, or anthropological plane of reflection, let us start by clarifying a few terms. First, in spoken language, we differentiate between a biological or objective dimension called pain and a psychological or subjective dimension that we tend to call suffering. With this distinction, we would have those who are in pain but do not suffer; and those who are suffering without feeling pain. However, this objective/subjective distinction is above all a distinction of reason that refers to Cartesian *res cogitans* and *res extensa*. In real life suffering ends up causing or fostering physical pain, and continued or unknown pain accentuates psychological suffering.

Initially, pain seems to be an immediate sign of a possible evil suffered by a living being; and consequently, feeling pain would be negative. However, sometimes enduring pain is not bad in itself, but is the consequence of a meaningful effort, such as practicing a sport or learning to play an instrument. Another good example of this is the pain endured during labor, which has been reported to elicit self-transcendent experiences (Lumbreras 2020). Because of this, pain is not immediately indicative of the presence of an evil (Stump 2010, 4–6). Sometimes pain seems like a problem, when in fact it can be part of the solution (Nesse and Schulkin 2019, 1).

The distinction between physical pain, as a biomedical phenomenon which can be eliminated or reduced, and suffering, as a psychological response that is more difficult to alleviate, is unclear and in need of revision (Denny 2018, 125–40). In particular, it is known that unwanted break-

ups cause emotional pain or suffering that activates the same neural architecture as feeling physical pain (Kross et al. 2011), and studies have shown consistently that emotional and even social suffering can effectively be alleviated by painkillers (Slavich et al. 2019; Durso et al. 2015). This shows how connected the two phenomena are. Pain and suffering are terms that are often used synonymously, and for a reason.

2. Redefinition of pain

A second clarification to be made regards the redefinition of terminology. In recent years there has been an attempt to redefine the concept of pain, broadening its meaning so that it can be applied not only to humans but also to animals, focusing on the more biological and functional dimension of pain and pointing to its evolutionary origin (Walters and Williams 2019).

A biological perspective on pain seeks to answer the questions of how and by what mechanisms the sensation of pain arises in living beings, which species can feel pain, how the ability to feel pain leads to selective benefits, etc. (Nesse and Schulkin 2019). Today, the mechanisms that mediate and regulate pain are known, from genetic levels through tissues and organs to molecular levels; but there is still debate about how its evolutionary origin took place and which areas of the brain are responsible for pain (Walters and Williams 2019).

The commonly accepted definition when discussing pain is that of the International Association for the Study of Pain (IASP), which defines pain as: “An unpleasant sensory and emotional experience associated with actual or potential tissue damage or described on terms of such damage”. From the definition we can see the dual facet of pain as a physical sensation and as an emotional experience that can precede pain, as an intrinsic characteristic, or be a consequence (Craig and MacKenzie 2021).

But there are proposals for a new version emphasizing the distressing subjective experience, redefining pain as: “An aversive sensory and emotional experience associated with actual or potential tissue damage”. Or in the case of Zimmermann’s proposal, emphasizing the protective and

motivational functions of aversive pain states induced by bodily experience, without reference to subjective experience: “An aversive sensory experience caused by actual or potential injury that elicits protective motor and vegetative reactions, results in learned avoidance and may modify species-specific behavior, including social behavior” (Zimmermann 1986, 1).

In fact, there are debates to refine the definition of the concept of pain so that the focus is not so much on sensory and emotional characteristics, and subsequently cognitive and social characteristics are sufficiently emphasized (Craig and MacKenzie 2021). This refinement requires an anthropology less shaped by a dualistic individualism (subjective/objective; psycho/bio; mind/body) and more open to the social, relational, and intersubjective dimension of the person (Boddice 2017; Herce 2022). People are relational and experience pain when they lose social status, are heart-broken, or suffer social marginalization (Craig and MacKenzie 2021).

As suggested by Walters and Williams (2019), the definition of pain could be improved by emphasizing that: (1) pain is a personal experience; (2) there are biological, psychological, and social factors that contribute to the phenomenon of pain; (3) pain is distinguished from nociception, to avoid reducing it to sensory perception; (4) nociception activity is often the trigger for pain; (5) its amplification increases pain; and finally, as it is a personal experience, (6) pain is learned through experience (Cordier and Diers 2018). So subjective experience must be respected when talking about pain.

3. Functional pain

If we focus on how pain sensation is triggered in the human body, we see that the body's receptors perceive, transmit, and encode information from our body and the external environment. Receptors on the surface of the skin perceive stimuli that physically or chemically damage the tissue. Certain substances escape from the damaged cells, causing an electrical current to be conducted to the back of the spinal cord. From there, the signal travels up to the thalamus in the central part of the brain, and from

the thalamus to the cerebral cortex. The nerve endings that trigger the sensation of pain are called nociceptors. The signal causes different brain centers to be activated, leading eventually to the sensation, or feeling of pain. (Horvat 2023)

Pain then has a function: it warns us that our body is in danger. In addition, we learn and remember dangerous and painful situations and adjust our behavior to avoid these situations in the future. Our past experiences of pain can influence how we will experience and respond to similar pain stimuli, so pain is a tool for survival. This is why people who cannot feel pain have a much shorter life expectancy.

This aspect of pain is extensible to some animals and some even argue that there are signs that point to plants feeling pain, such as their response to anesthetics (Draguhn et al. 2021). In fact, just as attempts were being made to refine the definition of pain by focusing on the human being, especially by emphasizing the subjective experience, there are also attempts to focus the conceptualization of pain on the more biological dimension. The reason is that subjective experience is verbally mediated, and animal communication does not allow for verbal expression of painful states. While most humans can give information about the pain they feel, how do we define pain in relation to non-verbal animals?

One way is to assume that there is a conscious experience of pain as in humans, looking for strong evidence or analogies with humans, such as that they are mammals, have large brains or pain sensors like ours. Another is to look for analogous functional properties, as is done with invertebrates (Walters and Williams 2019, 2).

We now know that mammals process neuroanatomical and neuropharmacological components involved in the transduction, transmission, and perception of noxious stimuli (Allweiler 2023). Therefore, it can be assumed that they can feel pain. In addition, certain fish species possess a nociceptive system, the biology of which is similar to that of mammals (Sneddon 2019). However, for some scientists the prerequisite for feeling pain is phenomenal awareness. Unlike mammals and birds, fish do not have the neural architecture for phenomenal awareness and therefore do not feel pain (Key 2015).

In invertebrates, subjective issues are set aside, and pain is defined based on functional properties. Elwood notes that the greatest insights can be gained by observing the behavior of the organism when confronted with noxious stimuli that might indicate the experience of pain. Results from studies with octopuses led to the conclusion that they are likely to feel pain and have the capacity to suffer (Elwood 2019).

These studies often point to the realization that pain in animals can be perceived in ways that we humans are unaware of and elicit behaviors that are not like our own, such as the defense or avoidance mechanism of paramecia (Brette 2021). This argument goes philosophically back to the well-known article by Thomas Nagel “What is like to be a bat” (Nagel 1974).

These studies and many others are part of growing evidence indicating a complex evolution in the experience of pain. Humans are not the only living beings to feel pain but it is difficult to detect which animals feel pain and how they feel it. Pain is older than us and is an important part of life because it contributes to the survival of living beings (Bonavita and De Simone 2011).

In addition to this positive value, pain also has a negative side when it harmfully impacts on the body or on social and psychological well-being. The prime example of this non-adaptive pain is chronic pain, where rather than elicit a response with the potential of improving wellbeing it has a detrimental effect that is harmfully difficult to overcome. Even though pain is something positive from a biological and evolutionary point of view, we humans try to avoid it with painkillers and medication; and pain is not just a matter of psycho-biological sensation: it is a socially conditioned phenomenon.

In conclusion, there is great difficulty in dealing with the question of pain. First, in defining pain as conscious or unconscious. Second, because it differs in each species: there is a gradation in the perception of pain that would even allow us to defend a special way of perceiving it in humans (just as one could do with a sensory gradation in sight, touch, or hearing). Third, although not addressed yet, there is the question of pain behavior, which is not always avoidant and there may be reasons or action strategies that lead to enduring it.

In the presence of pain, there are several main strategies that can be used to cope with it. Avoidance is the first line of action: if possible, the painful stimulus is abandoned. If fleeing is not possible but there are other possibilities to reduce it, fighting the stimulus is chosen. Last, if pain is unavoidable, one should endure it or, under some circumstances, even let oneself be carried away by it as a “purifying” element through some kind of behavior to express it (Bonavita and De Simone, 2011). For example, animals follow action strategies whereby, although they feel pain, they do not express it. Let us explore this third element in more detail.

4. Perception of the other’s pain-suffering

Franz de Waal’s experiment on fairness is famous among the many studies of animal behavior (de Waal 2009). Two capuchin monkeys that see each other are asked to perform a task for which they are rewarded with a piece of cucumber for the first one, and a grape for the second one. Both seem to accept their reward without complaint. However, when the first capuchin monkey performs her task a second time and is again given a piece of cucumber, she becomes vehemently agitated because she has not been given a grape like the second one. The second one, on the other hand, does not even flinch when she receives her grape again. In other words, the first one complains because she suffers from what she evaluates as “unfair” while the second one does not even flinch at the same scene.

One might wonder whether the capuchin monkey that always receives grapes for doing her job would be able to give her grapes to the other monkey when she sees the “unfair” behavior. It certainly does not happen in experiments.

With this example, we would enter the question of the perception of the pain or suffering of the other. What is at stake here is not objective or subjective pain in the face of an evil suffered, but the inter-subjective dimension whereby I put myself in the other’s shoes and take responsibility for their pain/suffering and try to help them to cope with it. Is this something genuinely human or is it possible to observe it among animals?

In the field of animal ethology, behaviors such as having sex, mourning the death of an offspring, or even a mother chimpanzee caring for her paralyzed offspring until it dies, have been observed. At the same time, deceiving or cheating behaviors are also observed. Wohlleben (2017) presents in his work examples such as: the roe deer that “barks” to frighten off a possible predator; the mother partridge, which runs away from the hiding place of her chicks, pretending to be injured; or the cuckoo, which lays its eggs in someone else’s nest so that others can take on the task of breeding.

This type of deception responds to strategies of action for survival not only for oneself but also for others. In this sense, animals know how to deceive, cheat, or seek their own benefit at the expense of others, but they also know how to cooperate and be altruistic, seeking the survival of the species. Then, even if only in an incipient way, in some animals we observe actions that could show concern for others.

5. Care for others as an overarching principle of action

Following this presentation of the question, we would like to explore whether what results from the evolutionary process seems to imply a care for weak, innocent, or marginalized individuals because they are perceived to be in some kind of pain or suffering. The answer we would give is that such behavior does appear in an incipient form in some animals, especially those that arise later in the evolutionary chain. However, this behavior appears as something contextual and not as a general applicable principle of action.

A specifically human indicator would be the capacity to take ownership of our actions through freedom and to propose global ends or lines of action. In this way, and especially in our most significant choices, we make ourselves, shaping our identity.

This is why human beings seem to be the only ones capable of rebelling against animal abuse in general. Not only in the face of the mistreatment of an individual close to me or of my species. But against the action

of mistreating an animal in general, because doing it or not, it makes me in a certain way. To clarify this idea, let us turn to another example.

When comparing higher animal communication with human language communication there seems to be a small but very significant difference. Animals can understand instructions given by means of sounds concatenated one after the other, associating sounds to their name, to actions, or to places. In other words, they identify themselves, and identify places and behaviors (MacIntyre 1999).

Humans are also capable of doing the same thing, but we also use a hierarchical, not merely linear, language. So, some words are more important to us than others, and we know how to identify them. Adjectives depend on nouns, adverbs on verbs, and predicates on subjects or actions (Berwick and Chomsky 2016). It is not difficult to postulate that this hierarchy of language responds to a hierarchy of thought.

This hierarchy of thought would translate into the ability to see oneself and one's own behavior eccentrically, when evaluating human behavior. Thus, the judgment of actions would become possible from a historical/narrative hierarchy capable of perceiving the whole of our life and not only a reaction that considers the current context, but does not encompass the totality.

In other words, we humans do not only act with action strategies that are convenient here and now. Rather, we can choose a lifestyle that orients our actions towards a hierarchical ultimate end and not only towards a contextual pragmatic end. For example, I understand that good is above evil and I choose it as a guide for my actions. So, I do not put hiding food on the same level as giving that food to someone in need. Action is not merely contextual, but also responds to a hierarchy that indicates which action is more convenient to follow, as a flourishing human being.

6. Conclusions and theological implications

"The evolutionary explanatory model largely revolves around concepts of competition, the survival of the fittest, suffering, and extinction" (Solleder 2019). Consequently, it seemingly provides limited space for the

consideration of care for the weak, the innocent, or the marginalized. In the best-case scenario, we observe instances of contextual care extended by individuals or groups. While not the predominant behavior, there are instances where incipient altruistic behavior emerges.

However, within the realm of humanity, a stark contrast emerges. This contrast is partially attributed to the fact that human infants are born remarkably ill-suited to their environment, necessitating more care than any other species. In this context, the act of caring for the vulnerable begins from the very outset of human life. Yet, it transcends mere context, unlike behaviors seen in the animal kingdom.

As highlighted by Novo (2019), the evolutionary process demonstrates that species with abundant populations, such as bacteria, exhibit finely tuned and tailored genomes adapted to their environments. In such scenarios, population numbers are high, reproduction rates soar, and individual cooperation bears minimal significance. The relentless battle for the survival of the fittest implies that even slight genetic variations provide crucial adaptive advantages.

As progress is made in the evolutionary chain, the number of individuals in the species declines, reproduction rate also decreases, cooperation between individuals increases and genomes accumulate “imperfections” because the collaboration among individuals facilitates the survival of individuals not so well fitted. This cooperation within the same species makes it less necessary for the singular individual to adapt to the environment to survive, so that genetic “imperfections” are perpetuated in the evolutionary chain.

Within the human realm, cooperation reaches its zenith when the defense and protection of the weak and marginalized are regarded as a profound responsibility, albeit for some individuals. It is not driven solely by the imperative of group survival in a context of vulnerability, but rather by our recognition that such conduct is morally superior and enhances our own character. We transcend the realm of the “is” and venture into the realm of the “ought,” representing a novel dimension of human behavior.

When considering these conclusions through a biographical-narrative lens, we can assert that humans possess the innate ability to recognize

and safeguard a sense of worth in others. They also tend to perceive themselves as the central character in a story, a protagonist engaged in a purposeful mission that extends its reach to the vulnerable, marginalized, and suffering individuals. This mission can be seen not only as a responsibility entrusted to us but also as a manifestation of humanity's profound capacity to comprehend the intrinsic value of every person and to express a love for others rooted in agapic affection. Neglecting to nurture this capacity results in a loss of an essential aspect of our own existence.

There is a growing body of research that links helping the suffering to human flourishing. The research papers propose that suffering can play a role in fostering human flourishing by nurturing vital qualities essential to a thriving life, such as empathy and a sense of personal responsibility towards the well-being of others (Hall et al. 2010). Additionally, suffering has the potential to stimulate compassionate and helpful behaviors (Staub and Vollhardt 2008). However, the paradox of suffering arises in the context of social justice education, where students endure their own suffering while learning about the hardships faced by others (Mintz 2013). The papers also underscore the significance of subjective information when it comes to diagnosing and addressing suffering, highlighting that mere objective knowledge is insufficient for alleviating distress (Cassell 1999). Collectively, the papers indicate that aiding those who are suffering can contribute to human flourishing by fostering empathy, personal responsibility, and caring behaviors. Nevertheless, the role of suffering in this process is intricate and warrants thoughtful consideration.

From the standpoint of Christian theology, this understanding delves even deeper, as it encompasses a facet of being created in the image of God within the human dimension. Regrettably, as humans, we often fall short in nurturing our personal growth, both individually and collectively, by neglecting to care for those in need. Consequently, when we, as protagonists, falter in fulfilling God's call to care for one another, God steps in. He incarnates himself, assuming the central role and acting on behalf of those who have faltered in carrying out His divine task.

Moreover, through this incarnation, God intimately identifies with the weak, the innocent, and the marginalized, showcasing how to act from a position of vulnerability, marginalization, and innocence in support of those who share these circumstances. By taking on human form and embracing his own vulnerability, Christ exemplifies his solidarity with the least among us, simultaneously shedding light on the profound significance of their suffering in the salvation of humanity. In this divine act, God places his trust in humanity once more, extending a helping hand to guide us in fulfilling this critical aspect of our personal development – a trust God has inherently bestowed upon us.

As John Paul II eloquently articulated, “Suffering seems to belong to man’s transcendence: it is one of those points in which man is, in a certain sense, ‘destined’ to go beyond himself, and he is called to this in a mysterious way” (John Paul II 1984, n. 2).

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