

Synopsis of Religious Experience and Pain: A Neuroscientific and Philosophical Probe

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Abstract

Faith based treatments were often claimed to reduce the intensity of pain. Most often, these treatments were connected to Placebo effect. In this regards, the basic question of the probe was, "Does religious experience reduce the intensity of pain?" The method of study is most often descriptive; at times it is analytic and synthetic. The aim of the study is to provide a holistic view of understanding of pain during religious experience.

Various studies of neural correlates of different types of religious experience, pain, reduction of pain and pain during religious experience were analyzed. The neuroscientific studies have concluded that there has been some activation of right ventrolateral prefrontal cortex during this process, which is unique to other means used to reduce pain. The philosophical examination shows the limitation of neuroscientific view and proposes a multidimensional conceptualisation of pain during religious experience.

Key Words: Neuroscientific, Hermeneutic, Phenomenology, Placebo, Ventrolateral, Prefrontal

I was perplexed by an incident, which happened in my life three years ago. I was an assistant to the Parish Priest in one of the village parish in Goa. A woman suffering from acute pain due to cancer requested me to come and pray over her. I went to her place that evening and prayed with her for some time. She called me up the next day to thank me as she could sleep peacefully that night without any pain. We find such incidents narrated by different people. It is most often taken for granted that the intensity of pain is reduced of a person having religious experience. Though I was convinced that there is something in religious experience that helps in reducing pain, I was curious to know how it happens.

The studies in neuroscience provided me an opportunity to explore my curiosity. Although religious belief is often claimed in religious circles to relieve physical ailments including pain,

there was another claim that it was a Placebo effect¹. In this regards, the basic question of my probe is, “Does religious experience reduce the intensity of pain?”

The literature on pain is colossal with varied pain expressed in different writings. Pain is classified as medical, juridical, military, athletic, magical (alchemical, purifying), educational, shared (communal, vicarious, sacrificial, imitation of a god and social bonding), and psychotropic.² Our aim in this dissertation is not to go to each type of pain classified above but medical, which is synonymous with physical. We had taken the definition stated by ‘The International Association for the Study of Pain’ as, “An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.”³

The physical pain is often connected with health. A person, who is ill, frequently suffers from pain. Pain is claimed to be direct or indirect outcome of ailments. There are several illnesses for which pain is an important symptom. Acute pain, chronic malignant pain and chronic non-malignant pain are major concern for the doctors. The experts in the annexure 4 on the issues (controversies, barriers, undesirable practices) in pain management in the ‘WHO Normative Guidelines on Pain Management’ opine that they can see a big difference while treating pain in the dosage of opioids⁴ given during non-drug modalities like faith based treatment.⁵ They acknowledge that there is something in the faith based treatment that reduces pain.

The reduction of pain due to religious experience can be probed from various angles. I have limited the probe to neuroscientific and philosophical. Neuroscience has made great strides in recent times in unraveling the constitution and role of the nervous system. The possibilities of finding the mysterious functioning of the brain have attracted and fascinated many researchers. Since neuroscience provides unimaginable wealth of data, facts, experimental findings, it has

¹ A placebo effect is a fake treatment given to deceive a patient, as if, it is a real medical treatment, which creates beneficial response.

² Ariel Glucklich, *Sacred Pain: Hurting the Body for the Sake of the Soul* (New York: Oxford University Press, 2001), 13.

³ Allan I. Basbaum and Catherine Bushnell, eds., *Introduction*, ed. Allan I. Basbaum and Catherine Bushnell, *Science of Pain* (Oxford: Elsevier, 2009), ix.

⁴ Opioids are the drugs or medication given to relieve a pain.

⁵ Neeta Kumar, *Who Normative Guidelines on Pain Management* (Geneva: World Health Organisation, June 2007), 33.

become a conceptualizing source for practical applications especially in the health sector. Neuroscience has provided us a new dimension of understanding the concepts of religious experience, pain and pain during religious experience. The philosophical probe on the other hand helps us to judge the authenticity of the conceptualization of the understanding based on data, facts and experimental findings.

The thesis of my dissertation is that religious experience to a large extent seems to reduce the intensity of pain. Though it was acknowledged that religious experience reduces pain, there were no empirical proofs to substantiate the claim. The recent neuroscientific studies have given supporting evidence to this claim. The neuroscientific probe in this regards has validated the claim, as only the right ventrolateral prefrontal cortex is activated, when the subject feels the intensity of the pain reduced during religious experience. The empirical and materialist view provided by neuroscientific probe offers religion a backdrop to dialogue with science. The philosophical examination shows the limitation of neuroscientific view and proposes a multidimensional conceptualisation of pain during religious experience. The aim of the study is to provide a holistic view of understanding of pain during religious experience. The method of study is most often descriptive; at times it is analytic and synthetic. I have divided the dissertation into four chapters.

The first chapter deals with the concept of religious experience and its neural connection. The investigation of this chapter is whether religious experience is aroused by the activation in some parts of the brain or religious experience is mediated by the activation in some parts of the brain. I have attempted to clarify the concept of religious experience by showing the historical progression from the philosophical perspective. The intensity, reliability and accuracy of religious experience are probed and a plausible definition that religious experience is awareness of or in the presence of often believed higher power through religious notions, symbols and images is proposed in the first section of this chapter. Various studies of neural correlates of different types of religious experience like meditation and prayers are analyzed in the next section. The last section scientifically answers the question of investigation. The neuroscientific research provided reasonable evidence that the brain is involved while a person is having religious experience. A further investigation on the implication of drugs points out that the physiological mechanisms too are involved in religious experience. The religious experience

during 'near-death experience' further steers religious experience beyond the brain. The first chapter drives the point that we cannot reduce religious experience to only the activation of the brain. The brain is only a mediating agency but not a necessary mediating location.

The second chapter expounds the notion of pain. It probes whether the activation or deactivation in some parts of the brain reduce the intensity of pain. Initially in the first section, various theories in the perception of pain in the history are looked into and the modern understanding is stated. The understanding of physical pain as felt in the emotion⁶ or sensed by the senses⁷ or how specific⁸ or intense⁹ it is or does it show any pattern¹⁰ or is it straight through the conduit¹¹ or can we control the pain by opening and closing the gate¹² or is it a matrix in our system¹³, which have evolved in history are elaborated. The understanding to a large extent has helped in the treatment of people.

The second section places before us the various means of reducing pain, which are often prescribed. Pain is being reduced by using a range of choices like meditation, drugs, placebo effect, surgery, acupuncture, physical exercise and other therapies. The neuroscientific studies during pain and while these means are used to reduce the intensity of pain are evaluated in the next section. The neuroscientific examination has shown how the activation and deactivation of parts of the brain have given conclusive evidence of the way pain is reduced. There have been conclusive proofs that activation of some parts of the brain induces pain and deactivation of the same parts and activation of some other parts reduces the intensity of pain. The philosophical analysis in the last section demonstrates the limitation of these studies while universal conclusions are inferred using inductive approach and concludes that activation of some parts of

⁶Aristotle, *Metaphysics* (Oxford: Clarendon Press, 1948), 80.

⁷Claudius Galenus, *Galen on the Passions and Errors of the Soul* (Ohio: Ohio State University Press, 1963), 85.

⁸F. Cervero, ed. *Pain Theories*, ed. Allan I. Basbaum and Catherine Bushnell, *Science of Pain* (Oxford: Elsevier, 2009), 99.

⁹Karl M. Dallenbach, "Pain: History and Present Status," *Journal of Psychology* LII, no. 3 (1939): 339.

¹⁰Cervero, ed., 6.

¹¹Rene Descartes, *The Philosophical Writings of Descartes*, trans., John Cottingham and Others, vol. 2 (New York: Cambridge University Press, 1984; reprint, 2005), 144.

¹²Ronald Melzack and Joel Katz, eds., *The Gate Control Theory: Reaching for the Brain*, ed. Thomas Hadjistavropoulos and Kenneth D. Craig, *Pain: Psychological Perspectives* (New Jersey: Lawrence Erlbaum Associates, 2004), 17.

¹³Ronald A. Cohen and Lawrence H. Sweet, eds., *Neuroimaging of Pain: A Psychosocial Perspective*, ed. Tamara J. Somers et al., *Brain Imaging in Behavioral Medicine and Clinical Neuroscience* (New York: Springer, 2011), 275.

the brain induces pain and deactivation of the same parts and activation of some other parts reduces the intensity of pain.

The third chapter which is the heart of the dissertation illustrates the relation between religious experience and pain. The core question of the dissertation whether a person having religious experience reduces the intensity of pain is explored in this chapter. The process of understanding and conceptualizing pain during religious experience depended much on the narratives of different religion. The first section states the tenets of the major religions of the world regarding pain. It also narrates various incidents of persons in pain during religious experience and how these persons feel joy in pain and do not show any visible sign in pain.

The second section examines the recent neuroscientific studies on subjects in pain during religious experience. The employing of neuroscientific tools has opened wide possibilities of perceiving pain. The neuroscientific understanding of the neuronal mechanisms is challenging the perception of hardcore scientists of how they consider these fundamental features of pain during religious experience. The main question of the dissertation is answered empirically with the advent of neuroimaging technologies. The neuroscientific research has made it clear which neural mechanisms trigger the influence of religious belief on pain. Some experiments¹⁴ have been conducted to locate the activities of the brain during religious experience and pain. The neuroscientists have concluded from these experiments that there has been some activation of right ventrolateral prefrontal cortex during this process, which is unique to other means used to reduce pain. It proposes a hypothesis that the reduced intensity of pain during religious experience is due to the activation of right ventrolateral prefrontal cortex of the brain, which is quite different from other modes of reducing the pain.

The empirical view of reduction of pain during religious experience offers religion a platform to dialogue with scientists holding strict physical and empirical views. The science-religion dialogue is discussed in the third section. Neuroscience provides us another way of apprehending the reality of religious experience and pain. This gives a stimulus to religion to begin a dialogue with science, which is empirical, logical and physical and relies on experimentation and

¹⁴Miguel Farias Katja Wiech and others, "An Fmri Study Measuring Analgesia Enhanced by Religion as a Belief System," *Pain* 139, no. 2 (2008).

prediction. This dialogue is only a possibility with scientists holding physicalist, reductionist or functionalist view.

The philosophical scrutiny in the last section discusses the reductionist, physicalist and functionalist view and points out some of the drawbacks of the neuroscientific view. Though neuroscience provides an empirical basis, it is also argued that neural correlates neither yield a causal explanation of mental events nor can these events be reduced to brain. They cannot explain how neural processes become mental events. Indeed correlation does not entail causation.¹⁵ The chapter concludes with the findings that religious experience reduces the intensity of pain, which is buttressed by the neuroscientific studies but the neuroscientific view only is inadequate to understand the complex reality of pain during religious experience.

The last chapter explores into the conclusion of the previous chapter about the inadequacy of the neuroscientific view. It probes whether pain during religious experience is understood by naturalizing phenomenology or Phenomenologizing Cognitive Neuroscience. The first two sections discuss naturalizing phenomenology and phenomenologizing Cognitive Neuroscience. Naturalizing Phenomenology argues that pain is relieved during religious experience, which is supported by the methodology and the results of the neuroscientific findings. Phenomenologizing Cognitive Neuroscience points out that there are no clear neuroscientific models of how humans can understand the intentions and other mental states promoting the behaviour of others. Though in Naturalizing Phenomenology, the methodology used by phenomenology seems to be corroborated by neuroscientific findings, Phenomenologizing Cognitive Neuroscience brings to light the inadequacy of any neuroscientific models to understand the intentions promoting the behaviour of the other person. A philosophical analysis points out the insufficiency of the one view. I put forward a proposal to link the two through hermeneutical phenomenology. Hermeneutical phenomenology advocates the neuroscientific results about the activation of the brain are open to interpretation.¹⁶ The empirical findings from the third chapter about the activation of the brain are open to interpretation. Their interpretation will depend upon the agenda, within which, one is functioning. The chapter concludes that no interpretation can ever

¹⁵Mario Beauregard, "Neuroscience and Physicalism ... A Key Letter " in *mindfulhack.blogspot.com* (2009).

¹⁶Hans-Georg Gadamer, *Philosophical Hermeneutics* (Berkeley: University of California Press, 1976), 22, 25, 201-202.

legitimately claim to be the definitive truth of pain during religious experience. The philosophical probe challenges the narrow way of analysing the concept. I propose a multidimensional conceptualization of religious coping and understanding of pain. Since “reality is complex and multi-layered, and it takes multiple perspectives to develop a complete and accurate picture of that reality”¹⁷, a single reality is “a multileveled unity, and multiple perspectives are needed.”¹⁸

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¹⁷Kevin S. Seybold, *Explorations in Neuroscience, Psychology and Religion*, ed. Roger Trigg, J. Wentzel van Huyssteen, and James I. McCord, Ashgate Science and Religion Series (Hampshire: Ashgate Publishing Limited, 2007), 2.

¹⁸Ibid., 143.

Seybold, Kevin S. *Explorations in Neuroscience, Psychology and Religion* Ashgate Science and Religion Series, Edited by Roger Trigg, J. Wentzel van Huyssteen and James I. McCord. Hampshire: Ashgate Publishing Limited, 2007.

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