

**Pain & Suffering
Workshop 2009**

Luxembourg (Luxembourg), 13-14 November 2009

Convened by:

BUSTAN Smadar

Pain, suffering and hurt – A multidimensional psychobiological perspective

Abstract

Fernand Anton and Gilles Michaux,

University of Luxembourg, FLSHASE/INSIDE, Psychobiology and Neurophysiology

Although pain has traditionally been discussed in the framework of sensory physiology and psychology of perception, it is fundamentally different from all other sensory systems. In addition to a sensory component related to information about the location, the duration and the intensity of the noxious stimulus, pain is almost always characterized by an emotional-motivational component (i.e. suffering), which drives us to avoid or to stop it. The cognitive-evaluative component is concerned with the appraisal of the current pain by retrieving comparable situations from memory stores. Within the brain, these components have been claimed to rely on distinct neural substrates, which are however closely interconnected. Two further elements to be discussed are the autonomic component (e.g. blood pressure, heart and respiration rate), which is closely related to the emotional and the motor component (withdrawal reflexes, facial expression etc.). The described multidimensionality points out that physiological and psychological mechanisms have to be considered concomitantly for the assessment and modification of pain.

Taking into account the different dimensions of pain processing, the second part of the talk will be devoted to the presentation of psychophysiological aspects of pain modulation. The placebo effect and its dependence on sensorimotor factors like associative learning and motivational factors like treatment expectations and the desire for pain relief will be discussed. Another interesting and related issue in this field is the modification of pain by hypnosis (i.e. hypnotic anesthesia), with its ability to independently modulate perceptual ('hurting') and emotional ('suffering') aspects of the pain experience. Both phenomena will be analyzed within a neurobiological and psychosocial framework with regard to their potential to disentangle pain perception and affect.

Placebo – Relief Beyond Belief

Dr. Gilles Michaux, Psychobiology, Uni. of Luxembourg

Abstract

Gilles MICHAUX

Although pain has traditionally been discussed in the framework of sensory physiology and psychology of perception, it is fundamentally different from all other sensory systems. In addition to a sensory component related to information about the location, the duration and the intensity of the noxious stimulus, pain is almost always characterized by an emotional-motivational component (i.e. suffering), which drives us to avoid or to stop it. The cognitive-evaluative component is concerned with the appraisal of the current pain by retrieving comparable situations from memory stores. Within the brain, these components have been claimed to rely on distinct neural substrates, which are however closely interconnected. Two further elements to be discussed are the autonomic component (e.g. blood pressure, heart and respiration rate), which is closely related to the emotional and the motor component (withdrawal reflexes, facial expression etc.). The described multidimensionality points out that physiological and psychological mechanisms have to be considered concomitantly for the assessment and modification of pain.

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Dr. rer. nat., Dipl.-Psych. Gilles MICHAUX, staff scientist

Faculty of Language and Literature, Humanities, Arts and Education (FLSHASE)

Integrative Research Unit on Individual and Social Development (INSIDE)

Laboratory of Psychobiology – Psychophysics and Psychophysiology

- Professional training: Psychologist, Hypnotherapist, Relaxation trainer (Autogenic Training, Progressive Relaxation, Biofeedback, Stress inoculation techniques for children and adolescents)
- Research interests: Psychophysiology and Psychophysics (e.g. mechanisms of the placebo response, associative and observational learning and pain, observer and expectancy effects in pain research), Stress inoculation
- Lectures: Psychophysiology (concepts, methods and applications), psychophysiology of the relaxation response, practical research seminars (experimental methods)

Address:

University of Luxembourg

Campus Limpertsberg

BC 3.03A

162A, avenue de la Faïencerie

L-1511 Luxembourg

Luxembourg

gilles.michaux@uni.lu

(+352) 466644-6652

Dr. phil. Dr. med. habil. Fernand Anton, Professor of psychobiology and neurophysiology

Faculté des lettres, des sciences humaines, des arts et des sciences de l'éducation

Unité de recherche INSIDE

Expertise in psychobiological and neurophysiological pain research. My main research interest is the impact of stress and altered stress hormone levels on pain sensitivity and the development of chronic pain. We are performing studies in humans and in animal models.

Address:

Research unit INSIDE:

“Stress and stress-related health problems”

University of Luxembourg, Campus Limpertsberg

162, avenue de la faïencerie

L-1511 Luxembourg

Luxembourg

fernand.anton@uni.lu

Pain from a sensorimotor perspective

Abstract

Erik Myin, Kevin O'Regan, and Yoshio Nakamura (order of presentation)

In recent years, a sensorimotor view has been proposed as an alternative framework to understand perception and perceptual experience. According to the sensorimotor view, seeing or touching for example, should be studied as the skillful exercise of activities, rather than in terms of the production, by neural processes, of an end-product (an internal representation of the seen scene). One of the claimed advantages of the sensorimotor approach to perception is that it provides a fresh and liberating view of the allegedly intractable problem of consciousness, by thinking of consciousness as a way of interacting with one's environment.

After briefly characterizing this sensorimotor approach to perception and perceptual awareness, Erik Myin will look at how it can be applied to pain. The crux, so it will be proposed, lies in looking at pain from an 'agentive perspective', the perspective from which a person can undertake actions, and experiences the world in terms of potential for action. Pain, so conceived, becomes an unwilling distortion of one's agency - an unmotivated motivation. This point of view makes visible a natural link between basic physiological pain and more abstract forms of suffering (as in depression), as both are related to a reduction of an agent's potential for action. Erik Myin will then discuss how this view relates to standard conceptions of pain as an internal object, a kind of perception, or as having both sensory-discriminative and affective-motivational aspects, and also how it sheds light on the question of awareness of pain.

Next, Kevin O'Regan will show how this outlook on pain has led to the idea that experienced pain has a cognitive component that is intertwined with the perceiver's notion of "self". Under this idea, if a person perceives part of their body as not belonging to them (as happens in some pathological conditions) then one might expect that pain in that body part should be reduced. This prediction was confirmed experimentally by using the paradigm of the "rubber hand illusion", in which, through simultaneous stroking of a person's unseen real hand and a visible rubber replica, sensed ownership of the person's hand is transferred to the rubber hand. O'Regan and collaborators have recently shown that under these conditions of transferred ownership, sensitivity to painful heat stimulation delivered to the person's hand significantly decreases.

Finally, Yoshio Nakamura will explore complex relationships between pain and suffering. The sensorimotor approach can make it possible for us to see a natural link between pain and suffering, since both can be understood as a reduction of an agent's potential for action. Having recognized this link, we are confronted with the question of why this link exists at all, almost universally in all cultures. Although scientific understanding of "how the link gets established developmentally or evolutionarily" remains elusive now, a potentially interesting insight may be gained by examining how clinical interventions directed at pain relief work with patients with chronic pain. Specifically, it will be explored how mindfulness-based interventions can lessen suffering without necessarily reducing pain in chronic pain patients. This example

should suggest that the natural link between pain and suffering is modifiable by mindfulness practices that can create neuroplastic changes in the brain. In order to make sense of this phenomenon, Yoshio Nakamura will consider measurements of pain and suffering from psychological (i.e., psychometric) perspective and will discuss how suffering can be conceptualized as a relational construct that reflects how pain impacts on quality of life in patients. To end, some speculations will be given on how suffering can be measured in empirically-oriented future studies.

Title and Expertise of the Speakers

Erik Myin, Ph.D.

Associate Professor

Department of Philosophy

University of Antwerp

Expertise: philosophy of cognitive science, philosophical psychology, philosophy of mind

J. Kevin O'Regan, Ph.D.

Director

Laboratoire Psychologie de la Perception (CNRS UMR 8153)

Université Paris Descartes

Expertise: visual perception, sensorimotor approach to consciousness

Yoshio Nakamura, Ph.D.

Director, Utah Center for Exploring

Mind-Body Interactions (UCEMBI)

Assistant Professor

Pain Research Center

Dept. of Anesthesiology, University of Utah School of Medicine

Expertise: pain measurement, placebo response, mind-body medicine, contemplative clinical science

Professional Contact Information

Erik Myin

Departement of Philosophy
Universiteit Antwerpen
Stadscampus - SD416
Prinsstraat 13
2000 Antwerpen
BELGIUM
Erik.Myin@ua.ac.be

J. Kevin O'Regan

Laboratoire Psychologie de la Perception - CNRS UMR 8158
Université Paris Descartes
Centre Biomédical des Saints Pères
45 rue des Sts Pères
75270 Paris cedex 06
FRANCE
Jkevin.oregan@gmail.com

Yoshio Nakamura

Utah Center for Exploring Mind-Body Interactions (UCEMBI)
Pain Research Center
Department of Anesthesiology
University of Utah School of Medicine
615 Arapeen Drive, Suite 200
Salt Lake City, UT 84108
U.S.A.
yoshi.nakamura@utah.edu

Feeling the unaware: converging approaches to acute suffering and pain (Part I: phenomenology)

Abstract

Dr. Smadar Bustan

'Suffering' and 'pain' name two sorts of phenomena whose differences may be overstated. Being known together as part of the innermost reality of the living being, the two notions are usually differentiated inasmuch as pain reflects bodily sensations while suffering emphasizes the broader psychological and social constituent encompassed in the corporeal experience. At the same time, since we seek to develop an integrative view, the two are taken as roughly equivalent terms for the purpose of this paper: pain can be that of the soul as much as it is of the body. For our aim is to show that their lived experience is closely entangled, proposing a phenomenological and neuroscientific account of acute suffering as a way to transcend the traditional pain/suffering dichotomy. We would demonstrate this model with the example of a state known as secondary alexithymia where people who suffer are comparatively less aware of their suffering (see Dr. Kerr's neuroscientific development).

In order to provide a view of Suffering and Pain, I adopt a phenomenologist approach that breaks with tradition. Hence, instead of an essentialist approach that looks for a pain/suffering invariant I suggest to look at their acute form. This kind of phenomenological observation of radicalized states enlarges our field of investigation. It includes cases that testify to the grey zones, where the command of cognition is no longer assured and conceptual accounts of these experiences become uncertain, despite the support of the neuroscientific accounts (Kerr).

In concentrating on the lived experience of these phenomena, we can see them in their outmost bareness and thus truthfulness. Influenced by a line of French phenomenologists, Levinas, Marion, Ricoeur, I suggest an account of the three components of suffering and pain: 1. Saturation 2. Extreme Passivity 3. Attenuation. Combined together they provide the basis for the model of acute suffering that is necessary for renewing the discussion on the topic.

Professional Contact Information

Dr. Smadar BUSTAN

Philosophy Department
University of Luxembourg
Faculty of Language and Literature (IPSE)
Campus Walferdange
Route de Diekirch / B.P. 2
L-7220 Walferdange, Luxembourg
smadyil@gmail.com

Feeling the unaware: converging approaches to acute suffering and pain (Part II: neuroscience)

Abstract

Dr. Catherine Kerr

Taking seriously the skepticism of efforts to quantify suffering, expressed most piquantly by Arthur Kleinman, the psychiatric anthropologist and ethnographer of suffering, this presentation proposes that neuroscience can contribute to the question of suffering by investigating neural substrates underlying present moment experience. For, it is this present moment experience (what Kleinman calls “the exigency of the here and now”) that is reported to be transformed by suffering. Since phenomenological philosophers have long made central the question of present moment experience, this paper draws from (and adds an empirical perspective to) the phenomenological model of the lived experience of suffering presented earlier (for details see Bustan abstract). To operationalize and make Bustan’s model of suffering concrete, the paper considers an empirical phenomenon called secondary alexithymia as a useful first order proxy for suffering. Secondary alexithymia (literally, “no words for feelings”) occurs commonly after a life-rupturing event (including serious diseases such as diabetes or cancer or manmade tragedies such as wartime refugee status or sexual assault). Reviewing in detail evidence accumulating in recent neuroimaging studies, the paper suggests that abnormalities in a circuit connecting a complex area of the brain called the insula to portions of the prefrontal cortex may characterize secondary alexithymia. The paper argues that circuitry connecting the insula to the prefrontal cortex can be parsed, from a phenomenological perspective, to mean that there are abnormalities in connecting “felt experience” (somatic and emotional inputs integrated across different parts of the insula) to “cognitive processing of felt experience” (taking place in different modules in the prefrontal cortex). From this perspective, it is suggested that the neuroimaging evidence provides preliminary confirmation of most of the components of Bustan’s phenomenological model (e.g., the acute sufferer’s inability to say, narrate, do and correspond [or more colloquially, empathize]). Further studies of neural processes connecting felt experience with the cognitive interpretation of felt experience should shed light on neglected aspects of suffering that have particular relevance for the suffering related to chronic pain.

Professional Contact Information

Dr. Catherine Kerr
Instructor
Osher Research Center
Harvard Medical School
401 Park Dr, Suite 22A
Boston, MA 02215, USA
catherine_kerr@hms.harvard.edu

Pain and Suffering – a brain perspective

Abstract

Dr. Predrag Petrovic

The relation between pain and suffering is complex and hard to grasp. While “pain” may suggest a nociceptive input to the brain, “suffering” suggest a psychological unpleasant state. In the present talk I will outline how unpleasant emotions (including suffering) and pain may be anatomically, functionally and evolutionary related in the brain. I will show that pain processing, pain anticipation, social pain and empathy for pain activate similar regions in the insula and the caudal anterior cingulate cortex, and suggest some mechanisms for how these states may be induced.

Professional Contact Information

Dr. Predrag PETROVIC

MR-Centrum, N8:00

Karolinska Hospital

171 76 Stockholm

Sweden

Predrag.Petrovic@ki.se

The effect of the other on the sufferer – The positive role (therapy)

Abstract

Dr. Hillel Braude

The medical ethics principle of beneficence, aiming to confer benefits and to remove harms, formalizes the imperative to treat illness and relieve pain through medical action. Over and above pain, physicians are increasingly expected to treat patient suffering, a term previously invisible from the medical lexicon. Physician-humanist Eric Cassell, an early advocate for medical attention to suffering, suggests that it is the role of physicians to interpret and make sense of first-person patient experience in order to relieve suffering. Thus, for Cassell, evaluating patient's reported experience may be as objective a medical phenomenon as measuring a fever with a thermometer. The treatment of suffering has gained especial prominence in oncology with the development of treatment protocols for survivors of cancer and palliative care for terminally ill patients. For this group, the treatment of suffering is the fundamental purpose of clinical medicine. Yet, is suffering a medical condition that can be treated with medical and surgical techniques? What is the relation between medical objectivity and subjective suffering? What effect does the therapist have in alleviating suffering and facilitating healing on the patient/sufferer? The problem may be stated as follows: On the one hand, as a purely subjective phenomenon, suffering, unlike pain, is irreducible to a medical taxonomy. On the other hand, there is no clear dichotomy between pain and suffering. Pain, which, according to a reductionist neurobiological approach results from excessive stimulation of sensory neural pathways linking peripheral nerves with the brain and spinal cord, may become suffering through conscious self-awareness, or is at least a necessary condition for physical suffering to occur. Research from various fields, including neuropsychology and cultural anthropology suggests, however, that pain itself is not merely a biological phenomenon, but is culturally specific. Evidence in support of the thinking behind the influential Gate Control Hypothesis, if not its details, suggests that the experience of pain may be modified through cognitive and affective interventions. If so, then the distinction between the experience of pain and suffering is not clearly distinguishable. If pain is the awareness of painful stimuli, then perhaps suffering is the awareness of this awareness of pain. Suffering may be either a transcendental phenomenon beyond medical ontology, or else as a continuation of the pain spectrum, provide a moral imperative for its relief through medical action.

I suggest in this paper presentation that the means of mediating between pain and suffering occurs through the person of the caregiver, or physician in the traditional doctor-patient relationship. To elucidate this point, I shall examine the effect of the physician on patient suffering through focusing on the physician as agent of the placebo response. More specifically, I shall focus on the patient's response to the patient-practitioner interaction that has been shown to enhance the placebo response to an administration of an inert therapeutic

substance. The placebo response is analogous to suffering in presenting a subjective phenomenon relating to deep structures of the self that has become “medicalized.” The placebo response, particularly the component enhanced by empathetic communication in the patient-practitioner interaction, presents a means of evaluating the therapeutic effect of the other on the sufferer. Thus, it has been known for some time that placebos are effective in treating pain. This literature has not, however, been analyzed in terms of the relation between pain and suffering. A predominant theory explains the placebo response in terms of cognitive expectancy.

Yet, the question of pain versus suffering is best explained phenomenologically in terms of the affective and non-volitional aspects of the placebo response. The affective foundations of the placebo response also indicate the possibility for the alleviation of suffering through eliciting the positive affect of the sufferer in a caring therapeutic relationship. The facticity of suffering establishes the ontological possibility and ethical imperative of its alleviation. This does not mean, however, that they are ultimately medical phenomena. Placebos can be administered and suffering can be alleviated without conceiving either the placebo response or suffering in terms of linear causal relations. As such, this analysis emphasizes the importance of a vocabulary of suffering in the medical context that does not ultimately reduce it to a medical condition requiring treatment, and thereby does not instrumentalize or reify first person experience.

Professional Contact Information

Dr. Hillel BRAUDE
Biomedical Ethics Unit
Faculty of Medicine, McGill University
3647 Peel Street
H3A 1X1, QC, Montreal
Canada
hillel.braude@mail.mcgill.ca

Babies, the unvoiced cases of suffering and the consequent for practitioners.

Abstract

Prof. Denis Mellier

During many years the infants had operation without anesthesia. They should not feel pain. Presently, it is the same case for the psychic suffering of the babies. When a baby shouts, laments, it is well known that he needs help, but what sort of help: a need to be filled, a comfort to be brought or a suffering to be shared, even to be cared?

The tears of the older babies are interpreted as anguish by psychoanalysis (cf. the “anxiety of foreigner” of R. Spitz or the “anguish of separation” of J. Bowlby). But what happens before? Would the baby be too young to suffer?

The pediatrician and the psychoanalyst, D. W. Winnicott has shown the existence of primitive agonies, anxieties without representation, when the baby cannot have the consciousness of the separation of his mother. E. Bick and S. Fraiberg have precise how the baby manages to protect himself from the intensity of these anxieties. Thanks to the more precise knowledge of the psychic development of the baby and to his psychic life, we know now how to interpret behaviors as signs of primitive sufferings (for example, clinging to visual point or repetitive movements).

These cases raise the problem of the recognition of the suffering when its expressions are non-verbal, without representation or intentionality. The experiences with babies indicate that a feeling and thinking person with them can perceive, contain and transform their suffering, if he agrees to develop his own receptivity in their non-verbal presence. This intersubjective dimension of the suffering allowed us to consider our position in the other cases of non-verbal sufferings.

Professional Contact Information

Prof. Denis MELLIER
Department of Psychology
Université de Franche-Comté
UFR SLHS
30 rue Mégevand
25000 BESANCON
FRANCE
denis.mellier@univ-fcomte.fr

Abstract for ESF workshop on Suffering Social Suffering: A new understanding and emergent form of social practice

Abstract

Dr. Iain Wilkinson

In modern times there has been a tradition of defining suffering in contradistinction to pain. Accordingly, while it is generally understood that there is a close association between pain and suffering, it is also argued that 'pain is more objective than suffering' (Finn 1986: 4), and it is by distinguishing between pain as a physiological sensation and suffering as a subjective psychological response to pain that we begin to advance towards a fuller understanding of the distinctive attributes of these phenomena. Pain is understood to have 'a specific bodily place' (Edwards 1984: 515) whereas suffering is held to involve far more than this. In contrast to pain, the domain of suffering is held to encompass body, mind and 'spirit'. Whilst often accompanied by distressing bodily feelings, a greater emphasis tends to be placed on the extent to which the trauma of suffering takes place as a product of cultural sensibility and social experience.

More recently, a number of researchers have argued that this longstanding conceptual distinction should be abandoned. Following the discoveries of Melzack and Wall and the witness of medical anthropology, a new orthodoxy holds that culture and society are always liable to exert a moderating influence over bodily sensations of pain. The physiological experience of pain is understood to be moderated and comprised by the distresses borne through the social frustrations and cultural contradictions of everyday life. In other words, when compared to earlier viewpoints, the experience of suffering is held to be far more intimately involved within the constitution of pain. On many accounts, social experience is so much a part of somatic experience, that it is often the case that effective pain relief can only take place where the social circumstances surrounding a person can be made to change for the better. This encourages the view that many medical interventions need to be supplemented or even replaced by forms of social intervention.

In this session I shall review the contribution of research and writing on 'social suffering' to these developments. I shall present a critical appraisal of 'social suffering' as an analytical category and as a point of reference for social dialogue and political debate over the causes and consequences of human pain and suffering. In this context, I shall attempt to outline the contours of an emergent form of social science that engages the medical, the economic, the political, and the moral together. I shall argue that a focus on problems of 'social suffering' not only requires a new approach to the categorisation of human problems, but also, the creation of new strategies and professions to materialize these in social practice.

Professional Contact Information

Dr. Iain WILKINSON

Director of CPHSJ School of Social Policy, Sociology and Social Research (SSPSSR)
University of Kent
Canterbury
UK, CT2 7NZ
i.m.wilkinson@kent.ac.uk

Political View: on Suffering, Memory and Time

Abstract

Dr. Cindy Halpern

Suffering is not only an individual and physiological phenomenon; it is also collective and political, involving dimensions of the group, tribe or nation in a history that is deeply punctuated or penetrated by memories of suffering. It may even be argued that the history of any group, as the history of an individual, is constituted by, or constructed around and by means of, the suffering that has been borne by that subject, either collective or individual. The fault-lines of a life can be forged by trauma; likewise, the fault-lines of a people's history can be read through the traumas of the past: exile, defeat, and persecution that form the deep unconscious strata of national identity. Memory, and hence, time, is, I will argue, the primary determinant, or the prime measure, of suffering. The suffering, remembered, that endures, sometimes over a lifetime or for centuries, can form the core of the self-understanding of a person or a people. The duration and intensity of the memory of suffering, preserved in text and legend, comes over time to constitute the depths of self, agency and worth of a community, and can deeply influence the formation of its social practices and institutions, its religious faith, and its political policies. Agency, of course, is the polar opposite of suffering – binaries that divide the universe. Suffering is precisely not what you do, but what you did not choose to do but rather endured. Politics in all its dimensions involves the suffering that is endured at the hands of human beings, and the memories of such suffering infuse the global conflicts that surround us.

Professional Contact Information

Prof. Cynthia Halpern
Chair Department of Political Science
Swarthmore College
Swarthmore, PA 19081
USA
chalper1@swarthmore.edu