

The Non-Sense of Pain as a Sense - The Question of a Paradigm



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Short Communication

Our daily experience shows that pain is strongly dependent on a specific situation and setting. There is a linguistic difference between very sensitive and painful assigning the latter something different than 'pure' sensation. Pain includes a social setting: children only mention pain if they need a specific social interaction (e.g. to vent frustration or draw attention). What makes a physiotherapeutic intervention just unpleasant and when is it painful? What if a Yoga position produces pain instead of toasty tension? Textbooks and authorities make us believe that pain has a strong correlation to the nervous system and indeed, the brain is necessary to become aware of it. This tradition started with the strict body-soul-dualism of Rene Descartes [1].

Some scholars assumed that Avicenna already added one type of pain to the touch qualities [2,3]. However, the most cited phrase 'dolores sensibilitas rei contrariae' reads rather like: pain is a completely different type of sensation. It is different to the common senses and this is argued throughout the text [4]. While most medieval writers ranged pain to supervene body sensations and located this experience as a kind of emotion [3]. Descartes promoted the physical description of former soul-related items. Subsequently, the sense-character of pain was favoured and paralleled to touch observations.

Nowadays, a great knowledge is present showing that pain is indeed not a strict body sensation [5] and in this respect completely individual. Pain cannot be objectified using physiological parameters. Nevertheless, pain is viewed to be different from other emotions, and pain-related nerve fibres are part of the established model. The evidence of specific pain-conducting nerve fibres was questioned already in the 1950s in Oxford, dropping the theory of specific nerve fibres and leading to the gate theory summarized in [2]. The term 'pain' was eliminated by that time and replaced by 'nociception' referring to an injured tissue. The unexpressed argument behind: the existence of physiological structures sensing pathological conditions. This is indeed a phantasmic hypothesis that bares

scientific evidence. A strict terminology in this respect would introduce these nerve fibres e.g. as 'chemoreceptors' sensing pH changes.

The model of pain as a specific neuronal circuit is very popular in the clinical context. Unfortunately, the main arguments are not very strong: the difference between nociceptive and neuropathic pain [6] and the effect of local anesthesia do not per se point to specific nerve fibres for pain (which are proven to not exist as such). In contrast to the suggested isolated pathology of congenital loss of pain sensation (NTRK1 defect), numerous sensory qualities are involved in this rare disease including temperature, sweat production, and fine touch [7,8]. Central circuits like the descending pain pathway are models to explain the influence of certain substances on pain sensation ignoring the complex neuronal interaction next to the isolated focus.

Numerous articles use either the 'nociception' model or the 'central nervous circuits' model as an explanation for pain. With the brief arguments above one should reconsider the underlying 'established' models as partially biased due to their historic post Cartesian focus on the body. Accepting the supervening character of pain should lead to eliminate a misleading terminology (e.g. pain fibres, nociceptors, central pain pathways) and focus on the appropriate linguistic level (emotions as expressions of the soul that cannot be described as events of the body).

Within the complex of emotions the three dimensions of pain (sensory-discriminative, affective-motivational, and cognitive-evaluative) match well with the five elements of emotion (bodily symptoms, action tendencies, expression, feelings, cognitive appraisal). However, pain also differs in some respects from the classical emotions and was therefore, along with feelings like hunger, thirst or fatigue, suggested to belong to a subgroup of emotions named homeostatic or primordial [9,10]. These concepts include the somatic body in their description but beware of reducing it to the nervous system on its own.

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