sources in print and manuscript command respect. The final two chapters deal with Galvani's publication of his definitive views on animal electricity in 1791 and their reception. Stimulating here is Williams' view that Galvani thought about electricity in anatomical terms (although his model was the Leyden jar) whereas Volta, coming from a different direction, saw it quite otherwise. There are suggestions here for historical interpretations quite at variance with the tradition from which they stemmed. Billie Williams has made an important contribution to late eighteenth-century physiological studies. Peter Williams is to be thanked for getting it to the light of day.

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John R Hinnells and Roy Porter (eds), Religion, health and suffering, London, Kegan Paul International, 1999, pp. xviii, 495, illus., £65.00, \$110.00 (0-7103-0611-3).

This is an interesting but also a most curious collection. It is interesting because the subject matter is important and most of the contributions are serious reviews. Yet it is as if two different sets of papers were stitched together: one, a group of papers on the place of suffering in the world's different religious traditions; the other, papers on the history of pain in the Western medical tradition. The latter, though smaller in number, are more effective because they anchor their subject in particular historical contexts (e.g., medicine in ancient Greece, suffering as a religious phenomenon in medieval English hospitals, fear of plague in early modern England). The former amounts to eight papers that survey, too often superficially and woodenly, suffering in each of the world's major religions.

In addition there are several papers on health and medicine in non-Western

traditions that fit in awkwardly, which is even more curious because they come closer to the interaction suggested by the title. There are also several papers that fit in not at all. Roland Littlewood's account of psychosis in contemporary British hospital services is neither about suffering nor about pain, nor does it have much to say about religion, which is a shame because it would have been useful to read Littlewood's ideas on how pain and suffering are figured in both medical and religious approaches to mental illness and its treatment. (One wonders if Littlewood, by accident, submitted the wrong paper.)

John Cohen's otherwise interesting piece on general practitioners in the inner city does not engage the central themes either. And yet, for all their diversity, David Parkin does an admirable (indeed almost miraculous) job of commenting on each contribution as if they formed a whole and, while he too does not privilege the main themes to sustained scrutiny, he has useful things to say in passing about language, materiality and moral reasoning.

The absence of an inner colloquy among the religious papers and the ones on medicine is unfortunate because that nexus is where readers are likely to project their questions, and also because each of the very distinguished editors contributes an interesting piece on one of the themes that largely avoids the other—adding to the sense that two rather different purposes have been accommodated under one book jacket.

How are pain and suffering differently configured within religious and medical traditions in the same and among different societies? What are the historical and comparative cross-cultural types of relationships between religion and medicine? What are the grounds for intellectual rapprochement between biomedicine and religious traditions? What, in particular, does the study of religions add to medical history and medical anthropology that

brings added value to the study of pain and suffering?

For teachers like me who are planning to co-teach a course on religion and medicine, in my case to students from Harvard Medical School and from Harvard Divinity School, this collection is a step forward, but it would have been more helpful if it had set up an ongoing dialogue between its two parts, forcing scholars who are comfortable analysing either medical or religious materials to have to confront both together in a critical inquiry on pain and suffering as simultaneously medical and religious phenomena.

Dominik Wujastyk begins to get at this issue in his chapter on demonic vengeance in classical Indian medicine, as do Helen King in her solid review of medicine and religion in the ancient world, Carole Rawcliffe on medicine for the soul in medieval England, and Mike Saks on the religious aspects of alternative medicine. These efforts at interaction, which are limited, only contribute to the sense that, in spite of world-class individual contributors, a larger and to my mind less usual opportunity has been missed.

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William K Livingston, Pain and suffering, ed. Howard L Fields, Seattle, IASP Press, 1998, pp. xvii, 250, \$48.00 (0-931092-24-8).

This excellent book has considerable contemporary as well as historical interest. It has an unusual history. William K Livingston (1892–1966) was educated at Harvard but returned to the West Coast in 1922 to work mainly as a neurosurgeon at Portland, Oregon. In the Second World War he served in the Navy, concentrating particularly on peripheral nerve injuries. In 1943 he published a much neglected book *Pain mechanisms* (New York, Macmillan).

For the rest of his life, he wrote steadily about the problems of pain and, by the time of his death in 1966, the manuscript which is the basis of this book was complete. It languished in the library of the University of Oregon. In 1992 John C Liebeskind began the 'History of pain project' at UCLA and, in 1995, the manuscript was located and is now published by the International Association for the Study of Pain. It is cleverly edited by Howard L Fields, the professor of neurology at UCSF.

The contemporary value of the book is that it records Livingston's intellectual struggle with his dissatisfaction with the specificity theory of pain which was entirely accepted during most of his career. The main source of his ideas came from both careful examination and from listening to patients. He rejected the explanations offered by the specificity theory which assumed that pain was produced only by activity in hard-wired line labelled nerve fibres and tracts. He showed that pain mechanisms had to be plastic and to change from one state to another during the course of disease. He was strongly affected by the neuroscience of the time on the basis of activity in a central core of the brain stem which accompanies appetitive states and generates aversive behaviour. This view was made more precise by Livingston's loyal student, Ronald Melzack, now professor of psychology at McGill in Montreal, who proposed a double mechanism, one for the sensory-discriminative fraction of the sensation of pain and the other responsible for the affective motivational aspect of pain.

These ideas are developed through an excellent examination of clinical examples. These include visceral pain, the pain in blood vessels, peripheral nerve injuries, causalgia, phantom limb pain, and glomus tumours. These chapters are as good as any to be read in modern textbooks of pain in their detailed description of what is observed and the manner of the patient's suffering. He illustrates his struggle to come to a new understanding of these old