about contemporary medical practices and attitudes.

What could have been a somewhat dispersive book is ably held together by the introduction. And as its conclusion is a transcript of an hitherto unpublished list of Hooke's possessions at his death discovered in the Public Record Office. Among his dilapidated chattels a chest was found containing £8000 in new and old money, gold and silver. Richard Waller was moved to "a melancholy Reflexion" of how much good this could have done "for the promoting of Learning" if Hooke had only left a will. Instead the money passed on to an illiterate distant relative. Even so, Hooke emerges from this book as the figure that turned the Royal Society into a serious scientific institution. □

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Tribal tribute

Len Goodwin

Laughing Death. The Untold Story of Kuru. By Vincent Zigas. *Humana*: 1990. Pp. 315. \$24.95, £29.50.

VINCENT Zigas, who died two years ago, was born in Germany. He had served as a medical officer in Hitler's army and in 1950, in search of a new life, took Australian citizenship and was posted as a bush doctor to the highlands of New Guinea. He fell deeply in love with the island — its steep mountains, hot, wet forests and, above all, its stone-age people — this is his second autobiographical book about his "green dwelling". Conditions when he arrived were primitive; disease and death were all around. Zigas struggled to understand the native languages, prejudices, taboos and intricate ways of thought and behaviour so that he could improve health and hygiene.

When he went to work in the Okapa district among the Fore people, a distinctive tribe with its own traditions and cannibalistic rituals, Zigas became intrigued with kuru, a neurological disorder attributed to sorcery. Women were more commonly affected than men; the condition struck suddenly, advanced inexorably, causing tremor, ataxia and inane laughter, and was always fatal in about a year. It was not impossible that the strong local belief in sorcery could have caused hysterical behaviour patterns of this kind. As Zigas says, "the native lives in a world in which there is normally very little difference between reality and unreality . . . belief in magic and the supernatural provides ideal soil for the growth of acute suggestibility". But he was not satisfied; he suspected an infectious cause and pleaded with the Australian authorities

Imitating nature — the fruit of the goosegrass (left) hooked onto a woollen sweater provides the model for Velcro, a tough, manufactured nylon 'hook and loop' fastener. The top right micrograph depicts a goosegrass hook with a single snared wool fibre. Bottom right, the synthetic equivalent, a Velcro hook woven into a fine, flexible nylon base material. Micrographs reproduced from the new edition of *Under the Microscope* by J. Burgess, M. Marten and R. Taylor. Cambridge University Press, £12.95, \$19.95.

to back up his investigations. Because of his special relationship with the people, who liked and trusted him, he was able to collect patients for visiting clinicians to examine and blood, urine and post mortem samples for Macfarlane Burnet's scientists in Melbourne.

Nothing much came of Zigas's studies until a visiting virologist from the United States, Carleton Gajdusek, also became fascinated by kuru, avidly collecting case-histories, data and samples for analysis. According to Zigas, who had a big chip on his shoulder about being a 'naturalized' Australian and bossed by those who had never worked in the field and who despised the natives, Gajdusek's activity was resented by the Australian medical hierarchy. The establishment tried to bar Gajdusek and, in the mistaken belief that kuru was a genetic disease, to isolate the Fore people and prevent their movement to other parts of the country. Fortunately, this plan did not succeed.

The suspicion that kuru might be caused by an infectious agent was reinforced by the discovery that scrapie, a disease with similar neurological effects and pathology affecting sheep, could be transmitted to other animals and was caused by a 'slow' virus. Eventually, Gajdusek succeeded in transmitting kuru from human brains to chimpanzees and was awarded a Nobel prize. Transmission in the field was shown to be associated with cannibalism, the women of the tribe preparing the brains of the dead for the ritual feast probably becoming infected through abrasions of the skin.

With the spread of education and the end of cannibalism, kuru has now almost disappeared. But it was the first of the human encephalopathies shown to be transmissible, and this opened the field for the investigation of a whole series of unconventional, very resistant, non-immunogenic viruses and their relation to spongy degenerative diseases of the central nervous system. The lesson taught by kuru, human immunodeficiency virus and, most recently, bovine spongiform encephalopathy seems to be that we transgress the old rules of behaviour at our peril.

This is not a book for the squeamish — bloody stumps alive with maggots, dying infants, rotting corpses, faeces, pus and every kind of secretion and emission are enthusiastically described. Zigas also tells the story of how, on one occasion, he narrowly missed having a kuru brain cooked and served for his own dinner.

Gajdusek could not have succeeded without him. In an affectionate tribute in the foreword to the book, Gajdusek likens Zigas to a Don Quixote or Danny Kaye in appearance, speech, movements and actions. He disagrees with many of Zigas's 'facts' and judgements, and his "uncertain verdict" on the book is that "he has written the most remarkable work in existence of abstract expressionistic ironical parody, his own style of biography" — and that sounds fair. □

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