flicts with determinations made by other techniques, particularly geophysical techniques; as yet, there is no satisfactory resolution. There are two chapters on geological resources: petroleum by John Behrendt, and minerals by Peter Rowley and others. These are important investigations because they yield a wealth of information about geological processes, but the authors rightly stress that these are scientific studies and are not in any way commercially orientated. Both chapters conclude that exploration, still less exploitation, by extractive industries is almost certainly still decades in the future, a forecast that should comfort environmentalists. Finally, there is a chapter on meteorites by W.A. Cassidy. Strictly speaking, this is not geology, but it contributes to that science, and the peculiar concentrations of meteorites in blue-ice areas of Antarctica have not only turned meteorite collection into a field study but have also yielded new data on ice-sheet behaviour.

Bob Tingey is to be warmly congratulated on his achievement, which is equally as great as his contributors. The book is not perfect; which book is? But, at last, the last continent has a long-awaited single volume describing its geology. It is an essential work for any geologist working in Antarctica; any geologist working in the Southern Hemisphere should have ready access to a copy; and no geological library will be complete without it. In the modern world no book of this kind is cheap, and purchasing a copy will certainly leave a hole in your pocket, but it is extremely good value for money. I would recommend anyone interested in the subject to give up drinking and smoking for a month to buy a copy; you won't be disappointed! (P.D. Clarkson, Scientific Committee on Antarctic Research, Scott Polar Research Institute, Lensfield Road, Cambridge CB2 1ER.)

COASTAL ECONOMIES, CULTURAL ACCOUNTS: HUMAN ECOLOGY AND ICELANDIC DISCOURSE. Gísli Pálsson. 1992. Manchester: Manchester University Press. 202 p, hard cover. ISBN 0-7190-3543-0. £35.00.

This is a book about fishing, productive activity, and human-environmental relations. Rather than focusing on ecological adaptations, technical aspects, or superficial cultural constructions of the environment, however, it challenges theoretical assumptions in ecological and symbolic anthropology and explores how relations and interactions between people and the environment are represented over time by both indigenous and anthropological discourse. By arguing that it is social discourse and social relations that allow us to understand the complexity of human and environmental relations, Gísli Pálsson moves us away from thinking merely in terms of an ecosystem approach or in terms of the symbolic and gets us to think of the significance of human intention and purpose in economic production. People actively create and define their 'folk models,' their cultural constructions, but these are not immutable, they are reconstructed and redefined in changing social circumstances. Pálsson illustrates this with reference to three periods in Iceland's economic development that have different cultural models, each with a distinct discourse.

In the first chapter, Pálsson argues that the theoretical discourse among many anthropologists has been one that regards human action as natural, something that happens outside society, with the producer seen as an autonomous agent with predetermined intentions, sensations, and perceptions. This is opposed to an approach that regards the producer as someone enmeshed in a complexity of social relations and production as something that is consciously motivated, informed, and defined by this fact. The second chapter looks at fishing economies in anthropological discourse. The author argues that anthropology has failed to move beyond a 'natural' model of fishing that reduces the producer to an autonomous being 'engaged in the technical act of catching fish' (page 23). This emphasis on the material and technical has serious, and quite possibly dangerous, implications for how anthropologists and others view and understand fishing and the economies of coastal communities. For Pálsson, one implication of anthropological discussions that focus on the extractive aspects of fishing is to have ignored gender relations and the prominent role played by women in fishing societies. Another is social differences between the culturally diverse array of fishing societies that are ignored or not fully considered because of a desire to discover universality in individual behaviour and collective culture.

Chapter 3 deals with indigenous social discourse and systems of production in fishing societies, the cultural representations of those who live in fishing societies, and the cultural or folk models that are the products of indigenous discourse. Pálsson argues, convincingly, that such discourse is logically valid as an account of social reality because, as authors of folk models or cultural accounts rather than passive receptors of culture, people actively create representations of human-environmental relations during social and economic activity, and such representations are also products of changing historical and cultural circumstances. How representations develop is discussed in the following three chapters, where the author concentrates on an ethnographic account of the three historic phases in the Icelandic fishery: small-scale subsistence peasant fishing, the market economy, and the consolidated capitalism of modern state production.

During Iceland's medieval period, fishing was embedded in the social economy of small-scale peasant production, with no fine separation between social, economic, and domestic life. But it was also a period during which Icelanders began to domesticate nature. The transition from peasant production to a market economy not only saw changes in how Icelanders represented nature, there was a corresponding change in social relations. A value was also given to labour and production, defined as gender specific in a system of production that considered success as individualistic. Moreover, the cultural model that char-

acterised the period of the market economy replaced the previous folk account of fishing as a somewhat ordered collaborative network of exchange between the human and natural worlds, with explanatory models that considered risk, chance, luck, rationality, reasonable behaviour, and decision-making as inherent in fishing activities. With the development of the modern state and consolidated capitalism in the fishing industry, social relations and cultural accounts of fishing changed further. Fishing production is now increasingly subject to scientific discourse, which is itself ultimately a social construction of the environment, and ideas of human responsibility that mute the local discourse of indigenous producers in fishing communities, mainly because scientific discourse is regarded as legitimate and a more accurate representation of reality. Pálsson shows precisely how this is linked to problems in the resource management of fishing as an appropriate regime, and how scientific discourse is, like indigenous discourse, a product of history and as such is no more or less valid as accurate representation than local folk accounts of human-environmental relations.

In the final chapter, Pálsson returns to the theoretical concerns of the first part of the book. Overall he draws upon an impressive range of theoretical and ethnographic material from coastal fishing societies to make his central point and to argue that, in the appropriation of the natural world, the actions of human beings are purposive, are laden with cultural meanings, and are inextricably bound up in a complexity of social relations. While Pálsson's exercise is intellectually stimulating, his argument has farreaching significance beyond mere academic concerns. The conflicts between local interests and national and international policies of resource management legitimatized by political agendas and scientific paradigms are such that worldwide, effective management is rare and mismanagement is, in itself, a threat to the environment and to human cultures. Beyond a narrow parochial approach, the perspective of ecological anthropology that Pálsson asks us to take is one that we need to adopt as we reassess our interactions and relations with the environment and our future place in the world as socially constituted persons, rather than as autonomous individuals involved in impersonal, impulsive productive activities. (Mark Nuttall, Department of Human Sciences, Brunel University, Uxbridge, Middlesex UB8 3PH.)

CAPTAIN SIMON METCALFE: PIONEER FUR TRADER IN THE PACIFIC NORTHWEST, HAWAII AND CHINA. Rhys Richards. 1991. Fairbanks and Kingston, Ontario: The Limestone Press (Alaska History Series 37). 234 p, illustrated, soft cover. ISBN 0-919642-37-3.

Among the numerous ship captains who ranged the northwest coast of North America in the late eighteenth and early nineteenth centuries, not many left records and journals. If they kept accounts, they have generally been lost. Accordingly, the piecing together of the several successive voyages of 'Nor'west men' such as Simon Metcalfe calls for excellent detective work and skilful recreation or filling in. Such is the case with Captain Simon Metcalfe, which is a triumph for author and publisher alike. Many a less-skilled researcher than the painstaking Rhys Richards would have abandoned the task early on. However, to his enormous credit and to the benefit of scholarship generally—and of maritime history and indigenous societies specifically—Richards has pressed on to give us as complete a story of the hazardous and violent passages of this remarkable trading master as can be completed—assuming, of course, that no new journals and accounts come to light in the future.

Simon Metcalfe is significant in the history of the maritime fur trade and other sea-going endeavours for a number of reasons. He was the first American captain to take sea otters on the shores between California and Alaska, and the first to trade them in Canton. He was either the first or second American mariner at Hawaii, and the first to trade sandalwood in China. The initiator of American sealing in the Iles Kerguelen in Antarctic waters, he was also one of the first Americans to trade with the Haida of the Queen Charlotte Islands. His death there at the hands of the local natives ended a career that was heavy-handed, tough-minded, resolute, and profit-oriented. He was not an attractive personality, according to the author, who goes even further in describing his subject as 'a captain who violated his owners' trust by appropriating their property for his own use; he was hard on his crews; and he traded natives with considerable savagery. Clearly, he was one of the toughest captains in a tough era' (page vii). He engaged in clandestine trading and was both evasive and secretive about his voyages and his own affairs. There must have been many like Simon Metcalfe, and one would like to find more of them in the historical record. Much attention, perhaps too much, has been given to the early voyages of the Boston-based ships Columbia and Lady Washington, and so it is particularly gratifying to find in Simon Metcalfe the true pioneer of American designs for a Pacific network of trade, one that was to have political and imperial consequences in Oregon, California, and Hawaii in subsequent years.

There has been a tendency of late to downplay the degree of violence in the northwest trade. But Metcalfe's life was an expression of violence, and he died as he had lived. At Maui, as the author recounts by analysis of numerous contemporary accounts, the resolute men and guns of the brig Eleanora killed some 300 natives in a savage, wanton massacre. Sailing for the Queen Charlottes in the little Ino, Metcalfe entered troubled waters, for here, just previously, was where Captain Kendrick had abused the Haida, who had a village on Houston Stewart Channel. The chief, Koya, took powerful revenge against the Americans, and he and his people stealthily took possession of the vessel and killed all aboard, including Metcalfe and his son Robert. The historical records of the bloody end of this trader are less rich than the Maui massacre. We could wish for more evidence, but on the face of it this reviewer subscribes to the author's summary