weakest areas in behavioral ecology. This is borne out by R. Sibly and P. Calow, who attempt to reduce the complexity of selection generated from habitats to two dimensions: juvenile growth rate and survivorship. This approach ignores the contributions of life history theorists such as Brian Charlesworth, Eric Charnov, William Schaffer, and Steven Stearns, who base their models on relationships in age-specific survival probabilities and fecundities. Since its incorporation into behavioral ecology is surely one of the most important future directions for the field, it is unfortunate that life history theory is not better represented.

The book lacks a balanced international authorship (over 80% of the 55 authors are British), and most of the papers are based on studies of birds or mammals (there are only two papers on insects, both on parasitic wasps; one on a marine invertebrate; one on a crustacean; and one on a fish, studied in the laboratory). The papers it contains are generally well written and of high quality, however. Its ecological approach and emphasis on population dynamics complements the evolutionary approach of the collective volume *Behavioural Ecology* edited by John Krebs and Nicholas Davies (Sinauer; second edition, 1984).

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The Fishing Problem

Exploitation of Marine Communities. R. M. MAY, Ed. Springer-Verlag, New York, 1984. x, 367 pp., illus. $20. Dahlem Workshop Reports; Life Sciences Research Report 32. From a workshop, Berlin, April 1984.

The basic premise of traditional fishery management has been that fish populations can be exploited to produce a maximum sustainable yield in a naturally persistent equilibrium condition. Single-species population models based on mortality, growth, and reproduction (recruitment) and data on size-selective mortality induced by a fishery are combined to prescribe fishing tactics intended to maximize and stabilize the yield over time. This approach developed, in part, from observations of how individual fish populations and catches responded to increases or decreases in fishing effort. However, with its general application, fish populations are typically overexploited and yields decline or even cease. In short, "fisheries are not being managed well."

May and his 47 distinguished co-authors primarily address the idea that the "fishing problem" has been too narrowly defined, that we are exploiting not a single species but communities of interacting species, usually in multispecies fisheries. They also point out that equilibrium fishing may be undermined by genetic changes in populations induced by fishing, by changes in external factors such as climate, and by the inability of our institutions to implement the appropriate management measures because fish are treated as a common-property resource. They make it clear that application of fishery science is always in an arena filled with uncertainty that requires decision-makers to be ready to react and adapt to change or to the unpredicted.

To me the exciting feature of this excellent book is that the authors raise many questions and make many insightful suggestions about how fishery science should proceed now that we realize that the issues to be addressed have to do with the exploitation of communities rather than populations per se. The book does not present a consensus but rather the sometimes contradictory ideas of individual authors or working groups. Yet even with its contradictions the book signals a significant change in perspective: fishery scientists and marine ecologists are attempting to cope with the broader causes of uncertainty and to develop new approaches that incorporate uncertainty into management recommendations. Development of more predictive models that incorporate the complexities discussed is one of the major challenges to fishery science and its application in the decades ahead.

Exploitation of Marine Communities is full of quotable statements for consideration in courses in fisheries or to provoke thought or action. A selection follows:

R. J. H. Beverton et al.: "Clear and unambiguous evidence of interspecific interaction in major marine ecosystems, which could be used directly to achieve a significant improvement in single-species assessments, as yet hardly exists."

G. Sugihara et al.: "Exploited fish populations are embedded within a complex web of interactions involving species from many different taxa existing together in a variable environment." The task at hand is "how to best characterize and simplify complex systems to highlight change and to understand structure in marine communities."

J. H. Steele: "Historical evidence suggests that regional fish stocks can change very markedly and very rapidly between high and very low levels of abundance at intervals of about 50 years." "Principles of fishery management, which assume a single underlying long-term equilibrium, were developed during a period (1920–1970) when there was a relatively stable situation." "We should replace the single equilibrium assumption by the recognition of possible multiple states, each markedly different from the others, with the changes between them occurring rapidly, and with the frequency of change increasing with increased predatory fishing pressure."

J. A. Gulland: "The simple single-species models that have been the basic tools of the fishery scientists for the past twenty years can be used to give advice with only a small number of unpleasant surprises (e.g., the collapse of the Peruvian anchovy), and advice given now, based on these single-species models, is much more useful to the manager than a situation in which he gets no advice until more sophisticated models are developed."

The editor sees the book as "essentially a tentative statement—often by several dissonant voices—about directions in which we may be heading" and represents it as "intended to stimulate, not to codify." I agree and appreciated the stimulation it provides.

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Influences in Psychology

Points of View in the Modern History of Psychology. CLAUDE E. BUXTON, Ed. Academic Press, Orlando, FL, 1985. xiv, 468 pp. $58; paper, $29.95.

Points of View in the Modern History of Psychology offers a significant departure from the usual ways in which psychologists assess their past. Histories of modern psychology typically have been Whiggish: charts of scientific progress illuminated with great men, great discoveries, and great currents of thought. One form these histories have taken is exemplified by E. G. Boring's chronicle of the experimental approach, a work that is nearly as revealing for what it omits as for what it recounts. Another form is what has come to be called the "schools and systems" approach, where competing theories are each analyzed in terms of their premises and historical roots and sometimes traced back to pre-Socratic thought. *Points of View* is an attempt to transcend these tropes of history, offering students a treatment of psychology's past not as a progressive march but as an assemblage of variegated points of view that have been constructed during the modern era. Also, rather than offering only internalist history (dealing solely with intellectual issues within the field) the editor urged externalist accounts that would enable read-