The subject of this book is somewhat narrower than the title implies since it deals almost entirely with experiences in the North Sea only and not on a global scale. The book contains the proceedings, in all 24 individual papers plus discussions and summary remarks, of an international conference on oil in the environment, held at the University of Edinburgh in September 1980. The conference attendees included planners, bankers, engineers, architects and ecologists from the government, petroleum industry, consulting firms and universities, with most of them coming either from the United Kingdom or Norway. The philosophical intention of the conference was to produce friendly confrontation between conservationists, socioeconomists and oil men.

The topic of the conference was, and remains, very relevant, since the effects of offshore petroleum development in the North Sea on both the United Kingdom, is, almost of course, substantial. For example, in Aberdeen, the offshore petroleum "capital" of Europe, employment in petroleum-related jobs rose by 30,000 in the seventies, and 30,000 new houses were built. The cost of housing increased by 450% for a three-bedroom traditional-style house. In Stavanger, oil-related employment rose from 500 to 14,000 during the same period. Economic, social and cultural effects of the oil boom are strongly affecting among other things local employment, crime rate and the entire financial basis of the communities involved. It is not surprising that most of the book deals with these issues rather than environmental-ecological ones.

Environmental impact analysis is not obligatory in either the United Kingdom or Norway. To North American readers of the book it is astonishing that in Scotland during 1970-75 all five major oil and gas terminals, all service bases, four land pipelines, some 15 platform yards and 50 other major developments were approved rapidly and without public inquiry. Individual oil companies, particularly British Petroleum (BP), did conduct their own environmental impact assessments for major projects, however, based in part on their experiences in Alaska. In Norway, such assessments emphasized the economic and social effects of oil-related development and paid relatively little attention to natural, physical and biological environments.

Several of the papers outline in general terms the need for planning and control strategies, ranging from the local government level up to the European Economic Community (EEC). Environmental impact legislation is very different in the various EEC countries and nonexistent in many. Most of the papers deal with specific case studies, however, describing problems and solutions in the North Sea and Shetland islands, Scotland and Norway, at Musmorran, the Forties field, St. Fergus, the Flotta terminal, Stavanger, Aberdeen, Sullom Voe, etc. As already mentioned, much of the impact discussed is of the socioeconomic nature, but amenities (e.g., beaches), resources (e.g., fisheries), bird life and marine ecosystems are also referred to. Esthetics play a large role as shown by the following paragraph on color selection for a tank farm.

"...first a series of perspective drawings were made recording the pattern of light falling on the tanks. From 10 a.m. to 5 p.m. the tanks were either in full light or full shade. But in early morning or early evening there was a sharp contrast between the areas which appeared white. This problem of reflection on a smooth surface, regardless of color, could easily have been added by the editors. In all, I liked the book, however, and recommend it to all those concerned with offshore petroleum development anywhere in the world."

Gunter Weller
Geophysical Institute
University of Alaska
Fairbanks, Alaska 99701
U.S.A.

Social impact assessment is a major growing edge of applied social science. Probably hundreds of social impact assessments (SIAs) are conducted in North America each year as a consequence of a need, now widely perceived (and often required by law), to assess the socioeconomic implications of projects as diverse as northern pipelines, airport extensions and waste-disposal sites. Numerous volumes have been written in the last decade on the theory and method of social impact assessment, and there are now journals and newsletters devoted to the subject. Yet there is almost no literature exploring the premises and functions of SIA in the context of the development of modern industrial society. Torgerson's monograph is a major contribution in this respect. Not only does it fill a gap, it does so extremely well. It is a study in the sociology of the social and policy sciences, relying heavily for illustration on the use of social impact assessment in the Canadian North, with particular reference to the Berger Inquiry.

Industrialization and Assessment is not a casual read. Those interested in producing formula impact statements, based on a prescribed checklist, to meet only the minimum legal or political requirements, will not find it very helpful to them. I can recommend this work very highly, however, to practitioners or citizens who are interested in the deeper issues that social impact assessment raises in contemporary society. The essence of Torgerson's argument may be found in the first chapter. The subsequent sections consist of a more detailed exploration of the ideology of industrialization, and the development of the policy sciences with particular reference to social impact assessment in that context. The book is documented with extensive references and footnotes.

SIA is a process now largely institutionalized by governments. Impact statements are now routinely prepared, and there is a fast-evolving system of guidelines for their preparation, for their assessment, and for public involvement in those processes. They are almost invariably project-specific, and they rely heavily on technical and scientific expertise and method. Yet the public debate about the projects under assessment frequently focuses on issues not amenable to "scientific" measurement, analysis, or even discourse, as we commonly understand those procedures.

There is now a standard catalogue of impact categories: income, employment, business investment, multiplier effects, public infrastructure and finance, demographics, and a few social indicators like health and education. When these are exhausted, we are left with vague notions of social well-being, quality of life, and "lifestyle" preferences, which conventional assessments dismiss in a few paragraphs as important but unmeasurable and hence incapable of objective evaluation. Yet these are the matters that citizens themselves are most likely to raise in response to development initiatives, although often in quite unsystematic fashion. Project proponents are in turn likely to dismiss their opposition as not serious, uninformed or even irresponsible. The pattern repeats itself from assessment to assessment, and from inquiry to inquiry, yet we never seem to come to grips with it. Both proponents and intervenors often go away frustrated.

Torgerson identifies two divergent trends in SIA that manifest this problem. One is a technocratic, positivist approach that relies heavily on expertise, and claims to be value-free. It attempts to achieve technical control over social life by anticipating and then modifying the impact of specified acts. The second
emphasizes ethics and values, normative goals and hence citizen participation. It denies the possibility of a value-free science with respect to human or societal objectives. This second tendency thus casts the problem of SIA in a wider context, emphasizing not simply the local impact of a project, but the impact of the larger process of development of which any particular project is but a part, or society as a whole. SIA, from this perspective, necessarily raises three questions: Where are we? Where are we going? Where should we go?

These observations have been made by many who have participated in impact assessments in the last decade or so, although Torgerson systematizes these divergent trends quite lucidly. Further, however, he elaborates what most of us are less aware of, which is the premises and origins of these positions in modern social thought.

How to resolve the divergence? Torgerson argues that it is indeed necessary to answer the larger questions implicit in social impact assessment, and that the second tendency can do so on what are, in the end, more rational grounds than the first. That is because these questions are in part trans-scientific — neither the scientific method nor the existing body of scientific achievement can alone answer them. Torgerson sees the possibility of arriving at rational answers to these questions through a reflective process of social inquiry that incorporates rather than ignores the normative views of the community. SIA would be a means of rational and conscious, but democratic, control over the course of social development.

It follows, although Torgerson does not add this, that the second mode of SIA has the potential to become a major public forum in which to consider the general pattern of social and economic development, both that which currently obtains, and the alternatives to it. That implies a much more clearly political, rather than scientific, inquiry as we commonly understand those terms. Those who might welcome such a prospect will find Industrialization and Assessment an essential aid in sharpening their analysis. Those who do not, should read it anyway, for enlightenment.

Peter J. Usher
R.R.2
Clayton, Ontario, Canada
KDA 1P0


This excellent monograph may be the most comprehensive treatment yet published on an arctic seabird; it is by far the best on the Thick-billed Murre. Unlike Tuck's (1961) earlier and more popularly written monograph, Gaston and Nettleship have presented their work in a highly quantitative fashion, with almost 90 tables and over 100 graphs and histograms interspersed over 350 pages; a thorough statistical treatment of their data is given throughout. The detailed treatment given most subjects demands a slow and careful assimilation. This book should not be considered light reading.

The book's six chapters provide a review of the relevant background information, a detailed description of the study area in western Lancaster Sound, a review of study techniques, a discussion of attendance and behaviour at the colony, timing and success of reproduction, the development of young, and a discussion of the foods, feeding areas and weights of adults during the breeding season. The final chapter is an integration and synthesis of the information given in preceding chapters and gives a review of the biology of the Thick-billed Murre; I thought this was the best chapter in the book.

Each chapter has been organized so that it is independent of the others, without need for extensive cross-referencing. As the authors state in the Preface, this has "...resulted in some repetition and a somewhat unorthodox order of appearance of some topics". Regardless, most readers will appreciate that each chapter is self-contained, and that the introduction, a discussion of the specific methods used to investigate each subject, a detailed presentation of results and a thorough discussion and summary of the main points. The production quality of this book is excellent. The printing is good (I found only three typographical errors throughout) and reproductions of the excellent colour photographs (mostly by Nettleship) are extremely sharp.

The major objective, as stated by the authors, "was to gather as much information as possible on the reproductive biology and ecological requirements of Thick-billed Murres breeding at a single location in Lancaster Sound, the gateway to the Northwest Passage". They were most concerned with...