AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
http://ageconsearch.umn.edu
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

Research Review

Groping in the Dark

Donella Meadows, John Richardson, and Gerhart Bruckman.
New York: John Wiley & Sons, 1982, 311 pp., $26.95.

Reviewed by Robert B. Rovinsky*

Groping in the Dark is an important, interesting, often insightful, and occasionally frustrating book

In less creative hands this volume would have been one more dry, esoteric conference proceedings, in this case the Sixth Symposium on Global Modeling sponsored by and held at the International Institute for Applied Systems Analysis (IIASA) in Austria That conference brought together all the global modelers of the preceding 10 years, from the original Club of Rome teams (Forrester/Meadows and Mesarovic/Pestel) in the early seventies to the more recent attempts by European, Asian, Latin American, and United Nations groups What Meadows, Richardson, and Bruckman have done is to transform the format and the content to produce a modern Platonic symposium, a freewheeling Chautauqua of a book

Coleridge once wrote that poetry (and the other arts by extension) requires a "suspension of disbelief" A similar suspension is required to fully achieve and appreciate the authors' purpose For many of us, accustomed to reading critically and expecting rigor and specificity in research publications, this book would be all too easy to put down, in both senses of the phrase However, there is much to gain by a careful, but accepting, journey into this strange book

Most books about systems analysis and modeling make at least passing reference to the need for interdisciplinary research, multiple frames of reference, and the connections between form and content Meadows and her coauthors not only wax passionately about these topics, but have designed the book to reflect their beliefs Thus, the book itself is printed in four colors—with yellow pages for their personal thoughts, blue for the conclusions of the conference, white for the proceedings themselves, and gold for tutorial materials on the field of global modeling Because the book is also written for three types of readers—modelers, policymakers, and the general public—the tone also varies considerably, as it tries to keep all of its readers involved almost all of the time And yet it works in much the way that any book about an important new subject works, we read it and forgive or ignore the difficulties because the subject is extremely important and the authors have something to say

The Sixth International Conference was intended to review and assess the seven major global models developed up to that time (1979) These models are (1) the Forrester/Meadows model, developed in 1970-72 at MIT, (2) the Mesarovic/Pestel model, developed in 1972-74 at Case Western Reserve University, (3) the Bariloche model, developed in 1970-74 at Fundacion Bariloche, Rio Negro, Argentina, (4) the MOIRA model, developed in 1972-75 at the Free University in the Netherlands, (5) the SARU model, developed in 1974-76 at the Systems Analysis Research Unit, London, (6) the FUGI model, developed in 1973-76 at Tokyo University, and (7) the United Nations World Model, developed in 1973 76 at New York and Brandeis universities

The models differ widely in terms of their discipline, model paradigm, and underlying purpose and philosophy Most were interdisciplinary, and collectively the seven core teams included 12 engineers, 10 economists, 6 physicists, 8 biological scientists, 3 mathematicians, 2 political scientists, and 1 educator Model paradigms ranged over systems dynamics, input/output, econometric, optimization, and classical economic Some models were technology-driven, others price-driven, still others were population-driven However, as the authors conclude, "global models were mechanistic and simple when it came to political, cultural, and organizational matters yet in most of the models (even those developed by engineers), economic variables have been given overwhelming emphasis"

Before the conference, each modeler was given a questionnaire to complete on the underlying assumptions, methodology, organization of the team, results, publication, purpose, and assessment of the model These completed questionnaires were circulated before the conference to all participants, and the sessions organized around these themes Each session

*The reviewer is deputy director of the Data Services Center, ERS

had a rapporteur, and the major portion of the book (white part) is taken up with these questionnaires and the rapporteur's comments

Why should social scientists read this book? First, because it represents one of the clearest and most accessible statements about what global modelers have to say about the world Second, it contains a clear exposition of the terms, jargon, techniques, and professional and personal history of the efforts in this field over the past 15 years Third, because it contains useful data, summaries, and methodologies which can be directly used in general economic research areas (including, but not limited to, the specific fields of econometrics and simulation) Of special interest to agricultural researchers is the effort of global modelers to grapple with the overwhelming amount of data in some areas of their models and the paucity of data in other areas And, finally, the authors' style allows critical reading by making the field of global modeling and the world models produced thus far relatively accessible to the reader Too often books are so difficult to read that the reader's critical facility is eclipsed by the effort required to comprehend difficult or poorly presented ideas Such is not the case here, the book is a delight to read or skim

What makes this book frustrating, however, is just how little has been achieved, compared with what has been expected or promised Again and again, the authors and conference participants repeat a litany of doubts, failures, unrealized expectations, wrong turns, "where do we go from here" statements, and so forth Nowhere is there an "aha" or a "eureka " What there seems to be is a partial failure of will, which may be understandable given the problems IIASA and its colleagues have in this age of a renewed cold war and reduced funding Yet, I looked for more excitement and hope Yeats wrote in "The Second Coming" that "the best lack all conviction, while the worst are full of passionate intensity " Could our best modelers (and our best social scientists) be drowning in a sea of data, linkages, and wave after wave of connecting ideas, consequences, causes, and effects?

But never mind the quibbles Get and read this book, if only for its insights, its cleverness, and its colored pages

Beef in Japan: Politics, Production, Marketing and Trade

John Longworth. Brisbane, Australia: University of Queensland Press, 1983, 327 pp , $25.

Reviewed by Bill Coyle*

John Longworth's book, *Beef in Japan*, appears at an opportune time Australian and U S negotiators are trying to pry open what has been an extremely restrictive Japanese beef market A U S -Japanese agreement on beef and citrus products (which expired on March 31, 1984) widened the door somewhat, but principally provided a niche for U S grain-fed beef and stabilized Japanese beef imports at a relatively low level of 120,000-130,000 metric tons (mt) per year for 1979-83 Before that, imports had been erratic, they rose to 127,000 mt in 1973 and were curtailed altogether the following year Readers of Longworth's book will gain an appreciation of how complex the Japanese beef market is, why beef is so important to the Japanese, and what political obstacles the U S and Australian negotiators face The book also contains considerable detail on the historical developments that have shaped the current Japanese market and that will influence its future

Japan's unwillingness to open its beef market comes down to politics On grounds of economic efficiency, Japanese beef production is costly to the economy High support prices protected by trade restrictions misallocate land, labor, and capital resources It is perhaps surprising to the casual observer that an efficiency-minded Japan does not pursue a more economically rational course for beef that would, as some studies have shown, boost the country's economic welfare But, an economically rational approach to beef production or to several other agricultural industries has not generally been espoused As Longworth points out in some detail (chapters 3 and 7), it is "political considerations, not economic factors [that] control the Japanese beef market" (p 298)

Japan's restrictive trade policies on beef are part of a broader commitment to the protection of its agriculture Preservation of an agricultural base in Japan, as in many countries, is perceived to be in its national interest That interest is currently articulated by the ruling Liberal Democratic Party (LDP) which derives much of its political strength from rural districts delineated after World War II when Japan had a predominantly rural character The LDP is kept on its toes because other political parties, in competition for the rural vote, offer agricultural policies which are often even more protectionist Over the years rural political power has led to various farm programs which have often restricted imports and have generally improved the welfare of Japan's rural communities

The Japanese beef sector, like so much of Japan's agriculture, is characterized by small scale, high-cost operations The average Japanese beef herd is only seven animals And, although Japanese beef production is generally a sideline activity accounting for relatively little farm income, beef producers have succeeded in obtaining substantial Government protection The political success of its beef producers is attributable to their large numbers and close ties with the dairy industry and to agriculturewide and general public sympathy for agricultural protection

Furthermore, the farm cooperative, Nokyo, with sizable investments in slaughter, processing, and input supply industries, has a large economic stake in protecting local beef production The Livestock Industry Promotion Corporation (a state trading agency that administers beef import quotas) allows some wholesale distributors (including the Dowa, a minority group closely associated with the meat trade) to purchase foreign beef below the wholesale price of equivalent-quality domestic beef These distributors, along with pork and chicken producers, have an interest in high beef prices These interests through various organizations, associations, and Government bureaucracies have created a "web of influence" that goes to the apex of Japanese politics and that is, indeed, formidable

There are some countervailing forces, however They are consumer groups (not very strong and beef prices are a low priority), business groups (Keidanren with close connections to the LDP) who see their overseas markets threatened by possible retaliation

*The reviewer is an agricultural economist with the International Economics Division, ERS

because of Japan's agricultural protection, the labor unions (compromised to some extent by support for the Dowa), and certain Government ministries (Foreign Affairs (MFA) and International Trade and Industry (MITI)) that take a broader view of Japan's welfare

Longworth provides only a faint glimmer of hope that the balance of political power will shift against the beef interests "If, at some time in the future MITI, MFA, and other groups all decide to insist that the Government liberalize beef imports, then MAFF, the farmers, and the traditional meat trade may be hard pressed to defend the status quo" (p 78) U S pressure could catalyze a shift in support toward a more liberal position (for example, replacement of import quotas with a deficiency payment scheme) However, the beef issue is only one facet of a complex trade and political relationship between the United States and Japan U S pressure to liberalize the Japanese beef market could be easily weakened by Japanese concessions in other problem areas such as automobiles or defense

Although political forces "control" the Japanese beef market, other important forces will also affect its future shape—namely, dietary changes (chapter 1) and certain constraints on expanding beef production (chapters 4 and 5)

Beef consumption in Japan grew rapidly after World War II, but remains on the periphery of the Japanese diet (Annual consumption is only 3 5 kilograms per capita) Despite low levels of per capita consumption, the Japanese beef market as a whole is quite large because of Japan's large population It is, therefore, reasonable to disaggregate the beef market, as Longworth has, into three submarkets

At the top (6 percent) is the super-grade beef known as Kobe, Matsusaka, or Omi, which comes from the native Wagyu breed There is a broad middle-grade market for "popular" beef (65-70 percent) as well as a sizable market for processing beef (30 percent) Each of these markets has distinct characteristics and will likely respond differently to future economic conditions For example, Longworth says that the popular grades of beef are no longer considered a luxury by many Japanese, therefore, the income elasticity has probably fallen and the own-price and cross-price elasticities of demand may have increased As a result, the large "popular beef" market will probably not be as responsive to future increases in income as it has been in the past

Changes in tastes and preferences will also be important As long as beef is thinly sliced and boiled or broiled in the dining area (as in shabu shabu or sukiyaki), it will have to be well marbled with fat to prevent it from becoming like shoe-leather Japanese concern about visual and olfactory aspects of food presentation will sometimes limit demand for grass-fed beef, which tends to have yellowish fat and a sulfurous odor when cooked But, Longworth says that the advent of barbecue, stews and curries, and mince preparations has made fat color, marbling, and odor less important This trend coupled with consumers' concern about high dietary levels of saturated fat suggest that demand for a leaner product may grow, a development that would favor Australian beef producers

In production, we find that even if the Government continues to protect the beef industry as in the past, prospects for future expansion appear quite limited The principal constraints on expansion seem to be the inherent inefficiencies in the traditional small scale Wagyu sector and the increasing dependence of the beef industry on calves and culls from the dairy herd (whose inventory is limited by growth in demand for dairy products which is likely to be slower than growth in demand for beef) Another limiting factor is the relatively high cost of feed and limited pasture area which will continue to be a problem unless there is a "sudden and unanticipated breakthrough on the production of feed rice" (p 275)

The author does suggest that there is room for improved efficiency in Japan's beef industry by lowering the death rate of young dairy calves, increasing the conception rate of the Wagyu, and improving weight gain performance of Wagyu calves The constraints on the supply of dairy feeder calves could be partly circumvented if the country's capacity to import and quarantine live animals were increased and if the number of cull dairy cows and heifers used exclusively for breeding and calf rearing were expanded However, the reader is unsure about how these measures might contribute to expanding the country's production potential for beef, again, much has to do with the role the Government will play The adoption of more efficient practices in the Japanese beef industry will depend on how Government

policies affect competition in the market place The main factors currently affecting profitability—prices of feed, feeder calves, and the final product—are influenced, to a greater or lesser extent, by the Government

And so the future of the Japanese beef industry will depend heavily on the Government which, guided by political pressure, can choose among a number of options from maintaining the status quo to adopting a more liberal approach Beef-supplying countries will benefit from policies that lead to an expansion of import quotas—a likely course given Japan's substantial demand potential and the relatively severe constraints on expanded beef supply The final question is not so much whether Japanese beef imports will be expanded, but rather by how much

Longworth's book is an impressive contribution to the unusually limited collection of English language books and studies on Japanese agriculture, a collection which has been growing in the past 5 years thanks to a few Australian and even fewer American scholars The book does have shortcomings At times the reader is overwhelmed with detail, perhaps a forgivable sin as the subject is a complicated one that probably defies simple description Furthermore, it is better to have too much detail than too little on a subject that, to date, has been scantily analyzed

The last chapter, "Looking into the Crystal Ball," is somewhat disappointing The author misses an opportunity to bring together the disparate aspects of his subject What we end up with is a loose summary and a discussion of the plausibility of official Japanese projections of its beef market It would have been better if the author had provided the reader with his own set of projections, giving weight to the possibilities and uncertainties about which he is so well versed

Finally, as a political economic study, some of the political analysis is based on limited evidence Longworth's discussion of trade developments suggests that the rise of the U S share of Japanese beef and beef offal imports has to do partly with political and administrative decisions in addition to price and quality considerations Longworth provides little detail on how these decisions are made and the extent to which they are intended to be discriminatory

Is Your Subscription Running Out?

Check the mailing label on the back cover The number that follows **ISSDUE** tells you how many copies are left on your current subcription If the number is 001, you'll receive only one more issue, so renew right now Use the form below

LSP BROW4567T ISSDUE001
TOM BROWN
P O BOX 4567
KEARNEY NE 68847

Amount $ _____
Make check or money order payable to SUPERINTENDENT OF DOCUMENTS
GPO Deposit Account _____ VISA or MASTERCARD account _____
Expiration date _____

Charge orders may be telephoned to the GPO order desk at (202) 783 3238
from 8 a m to 4 p m ET, Monday Friday, except holidays

RENEWAL Agricultural Economics Research **4 issues $8 50 U.S , $10 65 Foreign**

Mail this form to.
Superintendent of Documents
Government Printing Office
Washington, D C 20402

ATTACH MAILING LABEL HERE