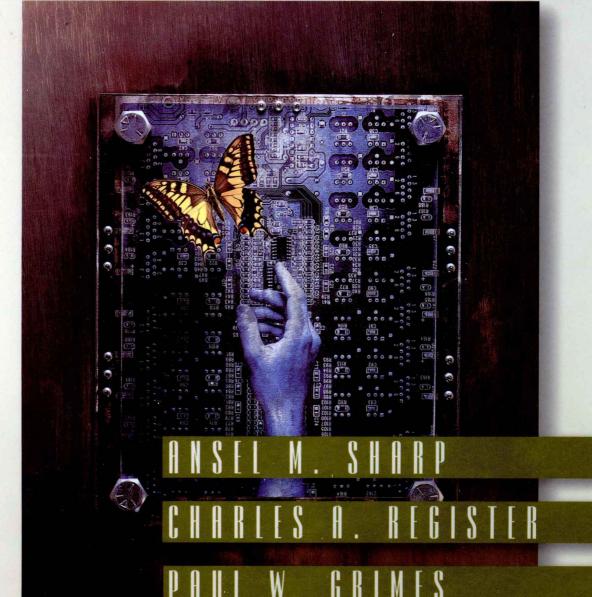
Cocial Ssues



NOILIO ш THRIEENTH

HIRTEENTH EDITION

Ansel M. Sharp

Frank W. Wilson Professor of Political Economy The University of the South

Charles A. Register

Florida Atlantic University

Paul W. Grimes

Mississippi State University



Irwin/McGraw-Hill

A Division of The McGraw Hill Companies

Economics of Social Issues

Copyright © 1998, 1996, 1994, 1992, 1990, 1988, 1986, 1984, 1982, 1980, 1979, 1976, 1974 by The McGraw-Hill Companies, Inc. All rights reserved. Printed in the United States of America. Except as permitted under the United States Copyright Act of 1976, no part of this publication may be reproduced or distributed in any form or by any means, or stored in a data base or retrieval system, without the prior written permission of the publisher.

This book is printed on acid-free paper.

2 3 4 5 6 7 8 9 0 RRDC RRDC 9 0 9 8

ISBN 0-256-17206-4

Publisher: Gary Burke Editor: Paul Shensa

Marketing manager: Nelson Black Project manager: Eva Marie Strock Production supervisor: Michelle Lyon

Designers: Suzanne Montazer and Keith McPherson

Cover designer: Susan Newman Cover photograph: © Dana Sigall, 1992

Compositor: GAC Shepard Poorman Communications Corp.

Typeface: Palatino Printer: R. R. Donnelley

Library of Congress-Cataloging-in-Publication Data

Sharp, Ansel Miree, 1924-

Economics of social issues / Ansel M. Sharp, Charles A. Register,

Paul W. Grimes.—13th ed.

p. cm.

Includes bibliographical references and index.

ISBN 0-256-17206-4

1. Economics. 2. Social problems. I. Register, Charles A.

II. Grimes, Paul W. III. Title.

HB171.5.S5498 1997

330—dc21

97-17798

CIP

Preface

Welcome to the thirteenth edition of *Economics of Social Issues*. Users familiar with the previous twelve editions will discover that more than just the publisher's imprint has been revised. Our choice of topics and our presentation style have evolved and changed over time to match the dynamics of the economics discipline, but our basic teaching objectives have remained unchanged. These objectives are to (1) create student interest in the study of economics and (2) provide a framework of basic analytical tools useful in the understanding of social issues. To reach these objectives, we first introduce and discuss the important aspects of a contemporary social issue. Next, we develop the economic concepts and principles germane to the issue. Finally, we apply these principles to the issue in order to discover if there are ways that can help us resolve the issue. The issues throughout the text are arranged so that basic economic concepts are logically developed and an understanding of these concepts is reinforced through repeated use and application. However, enough flexibility is built in to give instructors the ability to experiment with different sequences of topics and chapters. As always, we carefully choose relevant social issues that not only stimulate classroom discussion but also lend themselves to helping students learn the important basic principles of economics.

New Features

A significant number of changes were incorporated into this edition of *Economics of Social Issues*. Our primary goal throughout the revision process was to enhance the uniqueness of our pedagogical approach to teaching basic economic concepts while continuing to improve the overall quality of our final product. We feel we succeeded in doing this and hope that both our new and long-time users will agree.

The most noticeable difference between this edition and earlier editions is the addition of a new chapter on the economics of growth, Chapter 16. In recent years, economic growth has become a popular topic of

social discourse due to its influence on our personal standard of living. We use economic growth to introduce students to concepts such as productivity and the business cycle. Although Chapter 16 is at the end of the book, some instructors may find it useful to draw material from it substantially earlier. For example, much of Chapter 16 could be used after completion of Chapter 2 in order to include long-run concepts of market functioning in your presentations. To make room for Chapter 16, we eliminated the chapter on airline deregulation found in earlier editions. However, we maintained significant portions of the material on the economics of regulation, integrating them into Chapter 9, on big business. We believe that these changes have resulted in a positive net gain in our coverage of basic economic principles.

In this edition, we approach the issue of achieving maximum social well-being from the marginal social benefits and costs perspective. This convention lets us more formally address the virtues of the market and consider in more depth the impact of social spillovers on well-being. Although this new approach is woven into several chapters, it is most obvious in Chapter 5, where pollution is shown to create a divergence between marginal private and marginal social costs of production.

Chapter 6, on health care, was extensively rewritten to include the latest statistics and topics relative to the on-going debate concerning national health care reform. Two new sections of this chapter explore the British and Canadian experience with nationalized medicine. This chapter remains current by evaluating the failed Clinton health care reform measures of the mid-1990s.

To improve the flow of material, the chapter on discrimination (Chapter 7) now appears immediately before the chapter on poverty (Chapter 8). The 1996 welfare reform measures have been thoroughly incorporated into the discussion of Chapter 8, along with an evaluation of how the new programs differ from the old welfare system. Possible future problems with the new programs are also discussed and evaluated.

Chapter 10, which covers the economics of professional sports, has been enhanced with the addition of material concerning the effect of sports teams on local economic development. The location of professional teams and issues concerning local government support for stadiums and arenas are major controversies in many communities across the country. This new material helps students understand the economic issues involved in these debates.

Chapter 11, concerning international trade, has been greatly expanded to include a detailed description and analysis of various trade restriction practices. Specifically, basic economic tools are applied to illustrate the effects of international tariffs and quotas. Additionally, we added material to Chapter 11 to highlight the growing importance of the World Trade Organization and the advent of customs unions and free trade blocks.

The end of each chapter now includes a list of recommended World Wide Web sites relevant to the particular social issues discussed in that chapter. These cyberspace sites were chosen based on their content and ability to provide students with additional information or alternative points of view. We added an additional, albeit lowtech, feature to the end of each chapter: a short set of discussion questions that stimulate classroom debate and serve as a student study aide.

Many other minor changes and revisions, too numerous to list here, are found throughout the book. Of course, all the economic statistics and data were thoroughly updated and revised with the latest figures available at press time.

The Social Issues Pedagogy

To those instructors who are contemplating the adoption of a social issues approach to teaching economic principles, we would like to call your attention to the following research article: "The Social Issues Pedagogy vs. the Traditional Principles of Economics: An Empirical Examination," The American Economist, vol. 41, no. 2, Fall 1997. This paper was written by Paul along with Professor Paul S. Nelson of Northeast Louisiana University (NLU). It presents the results of a controlled experiment comparing the learning of NLU students enrolled in a social issues-oriented course that used the twelfth edition of this book with students who took traditional principles of economics courses and used a standard encyclopedic text. The results are encouraging in that no significant difference was found between students in the social issues course and students enrolled in the traditional macroeconomics principles course, after controlling for student demographic characteristics, prior experiences, and academic aptitude. Furthermore, the results strongly indicate that students in the social issues course had a higher probability of course completion relative to those in the control group. In this era, in which student retention is becoming more important, we strongly believe that this result suggests an important positive spillover benefit of our pedagogical approach that those who design economics courses and curriculum should consider.

Acknowledgments

First, we would like to thank former author Richard H. Leftwich for his contributions to past editions of this book. Much of the credit for the success of the social issues pedagogy belongs to him. We also wish to thank Devon Yoho, former author of the *Study Guide* that accompanies this text, for his valuable contributions in that effort. The author team also

extends its appreciation to the current author of the *Study Guide*, Margaret A. Ray of Mary Washington College, for her diligent work in revising and updating this important companion to our book. Margaret also gave insightful comments and suggestions throughout the textbook revision process.

Many of the features included in this edition are based on suggestions made to us in conversation or in writing by the following users or previous reviewers of our book:

Ugur Aker, Hiram College; John Altazen, University of New Orleans; Michael W. Babcock, Kansas State University; Walter Baumgartner, SUNY-Oneonta State College; David Blanchard, University of Wisconsin-Oshkosh; Edward Cearny, Coastal Carolina University; Heather Campbell, Arizona State University; Basil Cooil, Tompkins Cortland Community College; Harry L. Cook, Southern Oregon State College; Edward J. Deak, Fairfield University; James H. Dukes, University of West Florida; Allen Early, West Texas State College; James Gapinski, Florida State University; David E. R. Gay, University of Arkansas; Steven A. Greenlaw, Mary Washington College; George H. Hand, Southern Illinois University; Sydney Hicks, Interfirst Bank of Dallas; Doug Hodo, University of Texas-San Antonio; William W. Howard, Phoenix College; John Jambura, Eastern Oregon State College; Barry Krissoff, Western Michigan University; Howard D. Leftwich, Oklahoma Christian College; E. Victor Maafo, North Carolina Central University; Thomas McCann, Northeastern Louisiana University; James McClain, University of New Orleans; Douglas McNeil, McNeese State University; Jim Mangum, Louisiana Tech University; James Marsden, University of Kentucky; Charles Meyerding, Inver Hills Community College; Thomas M. Mitchell, Southern Illinois University at Carbondale; Jeff Moore, University of Houston; Clair E. Morris, United States Naval Academy; Roland Mullins, Arkansas State University; Dave Nagao, Sacramento City College; Ken Nair, West Virginia Wesleyan University; John Neal, Lake-Sumter Community College; Paul S. Nelson, John L. Scott, and Robert C. Eisenstadt, Northeast Louisiana University; Thomas Parsons, Massachusetts Bay Community College; Wayne Plumly, Valdosa State University; Rose Rubin, University of Memphis; Michael Sattinger, SUNY at Albany; Harold M. Seeberger, Heidelbert College; Robert Smith, Louisiana State University; John Somers, Portland Community College; Gary L. Stone, Winthrop College; Philip F. Warnken, University of Missouri; and Shiu-fang Yu, Texas State University.

In addition, our work significantly benefited from the comments and suggestions supplied to us by the following reviewers during the writing of the thirteenth edition:

Basil Cooil, Tompkins Cortland Community College; Ed Ford, University of South Florida; Dan Fuller, Weber State University; Dan Gallagher, St. Cloud State University; Robert B. Harris, IUPUI; William Kern, Western Michigan University; Thomas Mitchell, Southern Illinois University at Carbondale; Terry

P. Sutton, Southeast Missouri State University; and Millicent Taylor, Carson-Newman College.

Furthermore, a special appreciation is extended to Marybeth F. Charters, Reference Librarian at Mississippi State University, for her expert help in identifying and compiling our lists of World Wide Web sites for each chapter. Thanks are also extended for her help in locating various economic data sources and updating our lists of recommended readings and citations.

We also wish to thank the current and former employees of Irwin/McGraw-Hill for their expert help in preparing this edition: Wendi Sweetland, Eve Strock, Marilea Fried, and of course, Gary Nelson. Finally, thanks are extended to Patty Moran and Malinda Sutherland for editorial advice and assistance. We, however, are responsible for all errors of fact and theory.

Ansel M. Sharp Charles A. Register Paul W. Grimes

Contents

Human Misery: The Most Important Issue of Them All 1

.	Economics of Higher Educations
World Poverty and Economics 3	Economics of Higher Education: Who Benefits and Who Pays
Our Insatiable Wants 4 Our Limited Means 4	the Bills? 60 what arent our con
The Capacity of the Economy to Produce 5 Assessing Well-Being Using GDP 11	Problems in Higher Education 61 What Kinds of Services? 62
Causes of Poverty and the Requisites of Economic Growth 19	How Much Service? 62 What Institutional Structure? 62 Who Should Pay? 63
Can Governments Help? 21 Governments of LDCs 21	The Economic Basis of the Problems 63
Governments of DCs 23	The "Product" of Higher Education 63
Summary 23	Investment in Human Capital 64 Direct Consumption 64 Social Spillovers 65 The Incidence of the Benefits 66
Economic Systems, Resource Allocation, and Social Well-Being: Lessons from the Fall of the Soviet Union 28	Economic Concept of Costs 67 The Opportunity Cost Principle Revisited 67 Explicit and Implicit Costs 69
Economic Systems 30 Pure Market Economy 30 Pure Command Economy 31 Mixed Systems 31	The Costs of Higher Educational Services 70 The Explicit Costs 70 The Implicit Costs 71 Sources of Support 71 The Incidence of the Costs 72
Resource Allocation in a Market 32 Market Structure 32 Market Forces 34 Competitive Market Equilibrium and Social Well-Being 43	Economic Evaluation of the Problems 74 What Kinds of Services? 74 How Much Service? 80 Who Should Pay? 82 An Alternative Institutional Structure 85
Resource Allocation in a Command Economy 47 The Soviet Model 47	Summary 87
Social Well-Being: Market Versus Command 49 Market Economy Reaction to Changing Demand 49 Command Economy Reaction to Changing Demand 51	Economics of Crime and Its Prevention: How Much Is Too Much? 92 What Is Crime? 94

The Problems and Promise of Transition

55

Summary

54

Immorality? 94 Illegality? 94 Classification of Criminal Acts 95

The Costs of Crime 95

Individually and Collectively Consumed Goods 98

Individually Consumed Goods 98
Collectively Consumed Goods 98
Semicollectively Consumed Goods 99
The "Free Rider" Problem 99
Government Production of
Collectively Consumed Items 100

The Economics of Crime Prevention Activities 100

The "Optimal" Level 100
Allocation of the Crime Prevention Budget 104
Changing the Legal Status of
Goods and Services 105
Causes of Criminal Activity 108

Summary 111

Pollution Problems: Must We Foul Our Own Nests? 116

What is Pollution? 118

The Environment and Its Services 118
Recycling of Wastes and the
Concept of Pollution 118
Common Forms of Pollution 119

Markets, Resource Allocation, and Social Well-Being: A Recap and Extension 122

Demand, Marginal Private Benefit, and Marginal
Social Benefit 123
Supply, Marginal Profit Cost, and Marginal
Social Cost 124
The Market and Social Well-Being 125

Economics of Pollution 126 Why Polluters Pollute 126 Pollution and Resource Allocation 127

The Appropriate Level of Pollution Control 131

What Can Be Done about Pollution? 134 Direct Controls 134

Indirect Controls 135

Creation of Pollution Rights Markets 138

Summary 139

Economics of Health Care: Is It Worth What It Costs? 14:

Growth and National Health Expenditures 143

National Health Care Dollars—Where They Came From and Where They Went 146

Factors Explaining the Growth in Expenditures for Hospital Care and Physician Services 147

How Competitive Are Medical Markets? 148

Asymmetric Information 149
Third-Party Payments 149
Adverse Selection and the Moral Hazard of
Health Insurance 151
Malpractice Insurance 152
Cross-Subsidization 152
Absence of Price Competition 153
Barriers to Entry 153
Conclusions 154

The U.S. Health Care System 154

The Growth and Direction of Managed Care Organizations 155

Major Government Health Care Programs 157

Medicare 158
Medicaid 159
Health Insurance Gap 160
Health Insurance Portability and
Accountability Act 161

Fundamental Health Care Reform Alternatives 161

Great Britain's Health Care System 161
The Canadian Single-Payer System 163
Revisiting the Clinton Health Care
Reform Plan 164

Summary 165

Discrimination: The High Cost of Prejudice 168

What Is Discrimination? 170 The Public View 170 A Working Definition 170 **Economic Analysis of Discrimination** 170 Sources of Market Discrimination Labor Market Discrimination Product Market Discrimination 182 Economic Costs of Discrimination

Nonmarket Discrimination Social Discrimination 186 **Educational Discrimination** 186

What Can Be Done About Discrimination? 187 Reduce Tastes for Discrimination? **Reduce Market Imperfections** Reduce Discrimination in Development of Human Capital 189 Reduce Occupational Segregation 189

Continuing Controversies Affirmative Action Programs Comparable Worth

Summary 193

Poverty Problems: Is Poverty Necessary?

Poverty in Terms of Absolute Income Levels What is Poverty? 200 Who Are the Poor? The Upward Struggle of the Poor

Poverty in Terms of Income Distribution 204 **Income Equality** Income Inequality

The Economic Causes of Poverty Determinants of Resource Prices and Employment 206 Determination of Individual or Family Income 208 Determinants of Income Distribution Causes of Differences in Labor Resource Ownership 208 Causes of Differences in Capital Resource Ownership 209 Summary of the Causes of Poverty

Government Attempts to Alleviate Poverty 210 The Old Welfare System Problems with the Old Welfare System Welfare Reform and the New System

Price Floors and Ceilings 219

Minimum Wages Rent Controls

Negative Income Tax Proposals 228

The Negative Income Tax Evaluation of the Negative Income Tax Scheme 229

Summary 230

The Economics of Big Business: Who Does What to Whom?

The Public View of Big Businesses 235

The Economics of Monopoly Power 236 What Is Monopoly Power? Outputs and Prices Entry Restrictions

Nonprice Competition

Should We Fear Bigness? Bigness and Monopoly Power Outputs and Prices 252 Entry Restrictions and Resource Allocation Nonprice Competition 254

250

The Peculiar Case of Natural Monopoly 254 When Should Government Regulate Business? 257

Summary 260

200

The Economics of Professional Sports: What Is the Real

The Professional Sports Business 265 Organizational Structure Teams and Players 267 Economic Analysis and Professional Sports

268

The Product Market Cooperation Among Teams 268 Cartels 269 Coordinated Behavior 271 Pricing and Output for Broadcast Rights The Number and Location of Teams

Analysis of the Unemployment Problem

321

The Federal Reserve System 359

The Resource Market 277 The Employment of Players 277 Monopsony 278 Wages and Employment in a Monopsony 279 Free Agency 282 Labor Disputes 284 Do Professional Athletes Earn Their Pay? 285 Summary 285	Types of Unemployment 321 Further Dimensions of the Unemployment Problem 323 What Causes People to Lose Their Jobs? 325 Circular Flow of Economic Activity 325 Aggregate Demand 327 Aggregate Supply 331 Aggregate Demand and Supply 331 Reasons for Deficient Aggregate Demand 332 Reasons for Weak Aggregate Supply 335
Protectionism versus Free Trade: Can We Restrict Ourselves into Prosperity? 289 The Controversy over International Trade 291 The Protectionist Viewpoint 291 The Free Trade Viewpoint 292	Aggregate Demand Policies 336 Aggregate Supply Policies and the Economy in the 1980s 337 The Decade of the 90s: Recession, Recovery, and Expansion 339
The Economics of Free Trade 292 How Trade Takes Place 293 Production and Consumption Possibilities 293 The Principle of Comparative Advantage 297 How International Trade Is Financed 298 International Trade Restrictions 302	Summary 340 Inflation: How to Gain and Lose at the Same Time 344
Analysis of the Controversy 306 Protection from Cheap Foreign Goods 306 Payments Problems 308 Protection of Key and Infant Industries 310	Meaning and Measurement of Inflation 346 Inflation Defined 346 Further Aspects of Inflation 346 Measurement of Inflation 346
Today's International Trade Environment 310 The World Trade Organization 310 Common Markets 311 Summary 313	Measurement of Inflation 346 Rate of Inflation 348 Economic Effects of Inflation 349 Equity Effects 350 Efficiency Effects 351 Output Effects 351
Unemployment Issues: Why Do We Waste Our Labor	What Is Money? 352 Functions of Money 352
Resources? 317 Costs of Unemployment 318 Economic Costs 318 Noneconomic Costs 319	The Money Supply (M1 and M2) 353 The Process of Creating Money 355 Commercial Banks 355 Other Depository Institutions 355
What is Unemployment? 319 The Labor Force 320 Unemployment in a Market Economy 321	Balance Sheet of a Bank 355 The Fractional Reserve Banking System 357 Demand Deposit Creation 357 The Issue of Control 359

Federal Reserve Targets 361

Inflationary Causes and Cures 362

Quantity Theory of Money 362

Demand-Pull Inflation 364

Cures for Demand-Pull Inflation 366

Demand-Pull and then Cost-Push

360

Inflation 367
Is There a Cure for Cost-Push
Inflation? 368

Federal Reserve Controls

Summary 369

Government Expenditure and Tax Issues: Who Wins and Who Loses? 373

What Are People Afraid Of? 374

Size of Government 374 Tax Inequities 375

The Problem of Size 376
Government Expenditures 376
Government Receipts 378

Economic Analysis of the Problem of Size 378

An Efficient Level of Government Expenditures 379 Pure Public Goods 379 External Benefits and Costs 380 Income Distribution 382 Summary 383

Tax Principles and Analysis 383

Tax Equity 383
Tax Efficiency 384
Principles of Shifting Incidence 385

The American Tax System 386 Federal Tax System 388

Recent Federal Tax Changes 389 The 1986 Tax Reform Act 390

Tax Increases in 1991 391
The 1993 Federal Budget Reduction Act 392

The 1998 Fiscal Year Budget Plan 394 Expenditure Plans 394

Tax Changes Proposed 394

Summary 395

The Big National Debt: Is It Bad? 400

The Course of the National Debt 401

The Growth in the Federal Debt Held by the Public 402

The Absolute Growth in the Federal Debt Held by the Public 402 Public-Held Federal Debt as a Percent of the GDP 403

Federal Debt Held by the Public as a Percent of Total Credit Market Debt 404

What Is the National Debt? 406
Types of Federal Securities 406
Who Owns the National Debt? 407

Problems with a Large National Debt 407

The Views of the Public 407
The Concern of Economists 408
Summary in Regard to National Debt
Problems 410

Economic Analysis of National Debt

Financing 410
Methods of Finance 411
Economic Effects of Government Debt
Financing 413
Differing Effects of Tax and
Debt Financing 414

Managing a Large National Debt 414
Debt Management Policy 415

Debt Management Principles 415

When Should the Government Borrow? 417

Public Investments 417
Economic Instability 417
Is Government Debt Accumulation Necessary
During Wartime? 418
A Budget Proposal 418

A Final Comment on the Budget Deficit Issue 419

Summary 420

Economic Growth: Why Is It So Important? 424

The Concept of Economic Growth 426
What Is Economic Growth 426
The Rate of Growth 428

Short-Run Fluctuations in
Economic Growth 431
What Are Business Cycles? 431
Theories of the Business Cycle 433

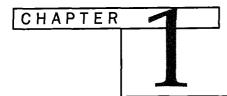
The Determinants of Economic Growth 436 Availability of Economic Resources 437 Productivity Factors 440 **The Recent Slowdown in Growth** 442 Contributing Factors 442 Whare Do We Go from Here? 445

Summary 448

Glossary 452

Index 467





Human Misery

The Most Important Issue of Them All

Chapter Outline

World Poverty and Economics

Our Insatiable Wants
Our Limited Means
The Capacity of the Economy to Produce
Assessing Well-Being Using GDP

Causes of Poverty and Requisites of Economic Growth

Can Governments Help?

Governments of LDCs Governments of DCs

Summary

Checklist of Economic Concepts

Labor resources
Capital resources
Technology
Production possibilities curve
Opportunity costs
Opportunity cost principle
Increasing opportunity costs

Gross domestic product, current dollar Gross domestic product, real Gross domestic product, real per capita Gross domestic product, per capita Price index numbers

Marginal social cost Marginal social benefit Cost-benefit analysis Efficiency Lesser developed countries Developed countries Social overhead capital "I can't stand up," mutters Yussef Sheik Hussein, ignoring the swirl of flies attracted to a half-dozen dying Somalis nearby. "Do you have some medicine?" Hussein's emaciated body seems disconnected from his chiseled, intelligent face. But his eyes and memories are clear: His 75-acre farm was overrun by marauding gunmen a year ago; six sons and one daughter are all dead now. "Some were killed in fighting, and the smallest died of hunger." Without the needed medicine, his own fate is painfully clear. Beyond his hospital window, one of the morning's many dead is loaded on a donkey cart and led away.

Outsiders peer into such tortured lives feeling like ghoulish voyeurs. The initial impulse is to turn away. What, after all, can be done for people living in hell? Skeletal figures wander the thorny landscape in search of food, sometimes taking shelter in abandoned government buildings stripped bare by looters. Starvation has already claimed 100,000 lives and more than a million others could follow.¹

¹Jeffrey Bartholet, "The Road to Hell," *Newsweek*, September 21, 1992, pp. 53–57. © 1992, Newsweek, Inc. All rights reserved. Reprinted by permission.

World Poverty and Economics

Some two-thirds of the world's population go to sleep hungry at night. The World Bank estimates that perhaps as much as one-quarter of the world survives on no more than \$1 per day. Outright famine regularly occurs in various parts of the world-recent examples being the mass starvation of an estimated 1 million people in Ethiopia during the drought of 1984–1985 and the tragedy of Somalia in the early 1990s. Most of the hungry have no protection from the summer's heat or the winter's cold. They receive little or no medical care and live in unsanitary surroundings. Infant mortality is high and life expectancy is low. Whereas in the United States 9 infants out of each 1,000 live births die before reaching their first birthday, the rate explodes to well over 1 in 10 in places such as Ethiopia, Pakistan, and Tanzania. At the opposite end of life, the typical Ethiopian can expect to die about 30 years earlier than his or her contemporary in the United States. Recognition that the misery of poverty is the lot of the largest part of the world's population leads us to ask the questions: Why is it so? What are the causes? How can it be alleviated? This in turn leads us directly into the province of economics. An assessment and an analysis of poverty problems require an explicit understanding of the