THE ROLE OF ENVIRONMENTAL SCIENCE IN SOCIETY

We live in a time of great change and challenge. A quick read of the headlines of any newspaper provides images of disease, hunger, poverty, natural disasters, and pollution. Challenges, however, are also opportunities. Opportunities exist because of the changes the global society must make. Simply put, we cannot continue with business as usual. Such a path is not sustainable. What does that mean? In short, we must do things differently. For example, different farming practices will allow crops to be raised with fewer chemicals and less water. Buildings can be constructed with new, more sustainable methods. Transportation can be provided while using less energy. In other words, we must think differently. Environmental science is a discipline that fosters new ways of thinking. Environmental science is an applied science designed to help address and solve the challenges the world faces. It is also by its very nature a global science. This text, for example, has been translated and published in China and Korea. Therefore, students in Shanghai, Seoul, or Seattle are learning the “how’s and why’s” involved in thinking and acting sustainably. At the end of the day we all share the same air, water, and one not-so-big planet. It’s important for all of us to make it last.

WHAT MAKES THIS TEXT UNIQUE?

We present a balanced view of issues, diligently avoiding personal biases and fashionable philosophies.

It is not the purpose of this textbook to tell readers what to think. Rather, our goal is to provide access to information and the conceptual framework needed to understand complex issues so that readers can comprehend the nature of environmental problems and formulate their own views. Two features of the text encourage readers to think about issues and formulate their own thoughts.

• The Issues & Analysis box near the end of each chapter presents real-world examples of environmental problems and prompts students to think about the issues involved and respond to a series of questions.

• The new What’s Your Take? feature found at the end of each chapter asks students to take a stand on a particular issue and develop arguments to support their position.

We recognize that environmental problems are global in nature. Three features of the text support this concern:

• Global Perspectives provide specific examples that ask students to consider how problems might be viewed differently in other countries, to compare approaches to environmental problems, or to provide examples of environmental problems not typical of North America.

• Real-world Case Studies provide examples of specific situations that allow students to see how the concepts discussed in the chapter can be applied to everyday situations.

• The presence of easily accessible Foldout World Maps at the back of the text allows students to quickly locate a country or region geographically.

Two guest authors bring their special expertise to this edition of the text.

Christopher J. Preston’s rewriting of Chapter 2, Environmental Ethics, has broadened the coverage and given the chapter greater force and clarity.

Christopher J. Preston is Visiting Assistant Professor in the department of philosophy at the University of Montana, Missoula. He has over a dozen publications in the areas of environmental

WHY “A STUDY OF INTERRELATIONSHIPS”?

Environmental science is an interdisciplinary field. Because environmental problems occur as a result of the interaction between humans and the natural world, we must include both scientific and social aspects when we seek solutions to environmental problems. Therefore, the central theme of this book is interrelatedness. It is important to have a historical perspective, to appreciate economic and political realities, to recognize the role of different social experiences and ethical backgrounds, and to integrate these with the science that describes the natural world and how we affect it. Environmental Science: A Study of Interrelationships incorporates all of these sources of information when discussing any environmental issue.
philosophy, ethics, and the philosophy of mind. He teaches classes in ethics, environmental ethics, ecofeminism, ecological citizenship, and contemporary moral issues.

Jacob W. Van Houten’s knowledge of environmental regulations and the handling of hazardous materials has greatly enhanced Chapter 3. Environmental Risk: Economics, Assessment, and Management, and Chapter 18, Environmental Regulations: Hazardous Substances and Wastes.

Jacob W. Van Houten is an Associate Professor of biology at Delta College. As the Environmental Technology Program Coordinator, he is responsible for the development and implementation of the Environmental Technology curriculum, which prepares students for careers as environmental health and safety professionals in industry and government. He also teaches Integrated Biology, General Biology, and several field biology courses that involve students in hands-on experiences in nature. In addition, he is an environmental trainer for business and industry, most recently being involved in training people who worked in the cleanup of New Orleans following Hurricane Katrina.

NEW TO THIS EDITION

The eleventh edition of Environmental Science: A Study of Interrelationships is the result of extensive analysis of the text and the evaluation of input from environmental science instructors who conscientiously reviewed chapters during the revision. We have used the constructive comments provided by these professionals in our continuing efforts to enhance the strengths of the text. The following is a list of global changes we have made, along with a description of significantly revised chapters. To see a more detailed list of chapter-by-chapter changes, please contact your McGraw-Hill sales representative.

New Student Learning Tools

Two new features that promote active learning have been added at the end of each chapter.

- The Experience This feature asks students to extend their learning by undertaking simple activities that relate to the content of the chapter.
- The What’s Your Take? feature asks students to reflect on the content of the chapter by taking a position on an issue and to prepare arguments to support their position.

Also in this edition, new and revised Case Studies provide students with expanded treatment of specific examples that help to show how the broad concepts presented in the chapter apply to specific environmental issues.

Revised Art Program

Nearly 300 new photos have been added throughout the text to depict real-life situations. Several illustrations, graphs, and charts are new or revised to present detailed information in a form that is easier to comprehend than if that same material were presented in text form.

Several Significantly Revised Chapters

- Chapter 2, Environmental Ethics has been completely revised and reorganized by guest author Christopher J. Preston. New information has been added to reflect the history, development, and maturation of thinking about environmental ethics.
- Chapter 3. Revised by guest author Jacob W. Van Houten, this retitled chapter, Environmental Risk: Economics, Assessment, and Management, has new sections on Risk Assessment and Risk Management, and Risk Tolerance. Important implications of Risk-Based Corrective Action (RBCA), energy savings cost/benefit analysis, and the Great Lakes Resource Management are topics addressed in this chapter through detailed discussion and case studies. Also included are the most current environmental liability protection issues and grants through the new Environmental Protection Agency (EPA) Small Business Liability Relief and Brownfield Revitalization Act (SBLRBRA or “Brownfield Law”) as it relates to economics, assessment, and management.
- Chapter 7, Populations: Characteristics and Issues is the result of the combination of two separate chapters from previous editions (chapters 7 and 8). In response to reviewer requests, several sections such as those on carrying capacity, limiting factors, and r- and K-strategists have been rewritten.
- Chapter 10, Nuclear Energy has been completely reorganized. New material has been added on the biological effects of ionizing radiation, measuring radiation, radiation protection, radioactive decay series, and dirty bombs.
- Chapter 18. Written by guest author Jacob W. Van Houten, this retitled chapter, Environmental Regulations: Hazardous Substances and Wastes has been thoroughly updated with two new sections and information about recent changes in legislation. Environmental site assessments, vital in determining current environmental conditions/liabilities associated with property, are discussed. Specifically, topics such as the latest ASTM Phase I Environmental Site Assessment Standard; the benefits of implementing an Environmental Management System (ISO 14000); and difficulties with determining cleanup criteria for hazardous waste sites are also included. New case studies covering specific issues affecting our environment and the regulated community include pollution prevention in micro-scale chemistry and dioxin contamination in a river/floodplain system.

ACKNOWLEDGMENTS

The creation of a textbook requires a dedicated team of professionals who provide guidance, criticism, and encouragement. It is also important to have open communication and dialogue to deal with the many issues that arise during the development and production of a text. Therefore, we would like to thank Publisher Marge Kemp; Developmental Editors Joan Weber and Brian Loehr; Marketing Manager Tami Petsche; Project Manager Lora Kalb; Production Supervisor Sandy Ludovissy; Photo Research Coordinator Lori Hancock; Designer John Joran, Media Project

xvi  Preface
Manager Judi David; and Media Producer Dan Wallace for their suggestions and kindnesses. Finally, we’d like to thank our many colleagues who have reviewed all, or part, of *Environmental Science: A Study of Interrelationships*. Their valuable input has continued to shape this text and help it meet the needs of instructors around the world.

**Eleventh Edition Reviewers**

Joseph A. Angelo, Rollins College  
Donna H. Bivans, Pitt Community College  
Iver W. Duedall, Florida Institute of Technology  
Sara Garrington, Parks College  
Terry Hilleman, University of Northern Iowa and William Penn University College for Working Adults  
Barbara A. Hollar, University of Detroit—Mercy  
Megan E. Hughes, Bowling Green State University  
Walter A. Illman, University of Iowa  
Lureta J. Kahler, William Penn University College for Working Adults  
Robert G. Kremer, The Metropolitan State College of Denver  
Ernesto Lasso de la Vega, Edison College  
Anthony J. M. Marcattilio, St. Cloud State University  
Allan L. Markezich, Black Hawk College  
Lauren J. Preske, University of Southern Indiana  
Greg Pryor, Francis Marion University  
John Rybczyk, Western Washington University  
Arthur N. Samel, Bowling Green State University  
Jana H. Svec, Moraine Valley Community College  
Jamey Thompson, Hudson Valley Community College

Anne Todd Bockarie, Philadelphia University  
Jonah Triebwasser, Marist College  
Richard Waldren, University of Nebraska  
Jeff White, Lake Land College  
Nicole Wilson, Pennsylvania College of Technology  
J. Michael Wright, Truckee Meadows Community College  
Joni Young-Torres, Pitt Community College

**Tenth Edition Reviewers**

Saleem H. Ali, University of Vermont  
Frank Bartell, Community College of Philadelphia  
Donna Bivans, Pitt Community College  
Daniel Capuano, Hudson Valley Community College  
Richard Clements, Chattanooga State Technical Community College  
John C. Cronn, St. Cloud State University  
Kristen Jensen Sullivan, De Anza College  
Peter Konovnitzine, Chaffey College  
Julie Phillips, De Anza College  
Lauren Preske, University of Southern Indiana  
Jennifer Rhode, Georgia College and State University  
Daniel Sivek, University of Wisconsin—Stevens Point  
Sara Topf, Parks College  
Mike Toscano, San Joaquin Delta College  
Arlene Westhoven, Ferris State University  
Jeff White, Lake Land College

Eldon D. Enger  
Bradley F. Smith
for the loss of biodiversity is greatest in tropical, developing countries. Many biologists estimate that there may be as many species in the tropical rainforests of the world as in the rest of the world combined. Unfortunately, life of biodiversity is not a high priority for the general public in developing countries, even though their national governments have stated the biodiversity issue. This difference in level of concern is understandable since the developed world has improved environmental conditions, while the developing world is struggling with basic survival issues. Unfortunately, life of biodiversity is not high priority for the general public in developing countries, even though their national governments have stated the biodiversity issue. This difference in level of concern is understandable since the developed world has improved environmental conditions, while the developing world is struggling with basic survival issues.

**Case Study 19.1**

**The Environmental Effects of Hurricane Katrina**

Hurricane Katrina, which hit the Gulf of Mexico coast of the United States in the autumn of 2005, is one of the most catastrophic natural disasters in modern history. The hurricane resulted in massive destruction and loss of lives in a few coastal cities, killing more than 1,800 people and leaving millions homeless. The damage to the infrastructure and environment was severe, with billions of dollars in property damage and local ecosystems disrupted. The hurricane also severely affected the economy of the region, leading to long-term recovery efforts.

**Case Study 11.2**

**Millennium Ecosystem Assessment Report and the Millennium Declaration**

In 2005, a major study called the Millennium Ecosystem Assessment (MA) was published, offering a comprehensive look at the state of global environmental issues. The MA synthesized over 1300 of the world's leading experts and met in four years and involved experts from 95 countries. The MA is recognized as a milestone in the history of biodiversity conservation and has influenced policy decisions in order to tackle environmental challenges.

**Global Perspectives**

Ever wonder how environmental problems might be handled in other countries? **Global Perspectives** compare different approaches to environmental problems and provide examples of environmental issues not typically found in North America.
CRITICAL THINKING—AN IMPORTANT LEARNING GOAL!

Critical thinking skills will be improved by taking part in the in-text activities and end-of-chapter questions and readings.

**CRITICAL THINKING QUESTIONS**

Questions can be found in every chapter of *Environmental Science.* By answering these questions, students will become better at evaluating information, opinions, and arguments so they can learn to recognize bias, characterize the assumptions behind arguments, and avoid jumping to conclusions.

**What's Your Take?**

By having students take stands on issues and develop arguments to support their positions, this tool will allow students to develop and enhance their critical thinking skills.

**Issues & Analysis Readings**

Issues & Analysis boxed readings present real-world examples of environmental problems and prompt students to think about the issues involved and respond to a series of questions.

**Phosphates Mining in Nauru**

Phosphates mining on Nauru is causing the island to suffer from ecological desolation and environmental degradation. The mining of phosphate deposits is a major economic activity on Nauru, and it has had profound environmental impacts. The mining of phosphate deposits has resulted in the destruction of vegetation, soil erosion, and water pollution. The mining of phosphate deposits has also led to the discharge of acid rain and other pollutants into the surrounding environment. The mining of phosphate deposits has also caused the destruction of coral reefs and other marine habitats. The mining of phosphate deposits has also caused the destruction of cultural heritage sites and other historical monuments. The mining of phosphate deposits has also caused the destruction of wildlife populations and other animal species. The mining of phosphate deposits has also caused the destruction of human health and well-being. The mining of phosphate deposits has also caused the destruction of the island's natural beauty and other cultural values. The mining of phosphate deposits has also caused the destruction of the island's economic prospects and other social values. The mining of phosphate deposits has also caused the destruction of the island's political stability and other institutional values. The mining of phosphate deposits has also caused the destruction of the island's cultural heritage and other historical values. The mining of phosphate deposits has also caused the destruction of the island's social fabric and other communal values. The mining of phosphate deposits has also caused the destruction of the island's economic viability and other institutional values.
INSTRUCTIONAL ART—PAINTING CONCEPTUAL PICTURES FOR STUDENTS!
Enger/Smith’s revised and improved art program offers students another way to study the many concepts of environmental science.

COMBINATION PHOTOS
Five is better than one! Challenging concepts are illustrated with collages of photos to strengthen students’ understanding.

NEW! MORE REALISTIC ART
New multidimensional images offer students a more-detailed level of instruction.
TEACHING AND LEARNING SUPPLEMENTS

McGraw-Hill offers various tools and technology products to support Environmental Science. Students can order supplemental study materials by contacting their local bookstore or by calling 800-262-4729. Instructors can obtain teaching aids by calling the Customer Service Department at 800-338-3987, visiting the McGraw-Hill website at www.mhhe.com, or by contacting their local McGraw-Hill sales representative.

Teaching Supplements for Instructors

McGraw-Hill’s ARIS—Assessment, Review, and Instruction System (http://www.mhhe.com/enger1e) for Environmental Science is a complete, online tutorial, electronic homework, and course management system, designed for greater ease of use than any other system available. Instructors can create and share course materials and assignments with colleagues with a few clicks of the mouse. All PowerPoint lectures, assignments, quizzes, tutorials, and interactives are directly tied to text-specific materials in Environmental Science, but instructors can also edit questions, import their own content, and create announcements and due dates for assignments. ARIS has automatic grading and reporting of easy-to-assign homework, quizzing, and testing. All student activity within McGraw-Hill’s ARIS website is automatically recorded and available to the instructor through a fully integrated grade-book that can be downloaded to Excel.

ARIS Presentation Center (found at www.mhhe.com/enger1e)

Build instructional materials where-ever, when-ever, and how-ever you want! Aris Presentation Center is an online digital library containing assets such as photos, artwork, animations, PowerPoint, and other media types that can be used to create customized lectures, visually enhanced tests and quizzes, compelling course websites, or attractive printed support materials.

Access to your book, access to all books!
The Presentation Center library includes thousands of assets from many McGraw-Hill titles. This ever-growing resource gives instructors the power to utilize assets specific to an adopted textbook as well as content from all other books in the library.

Nothing could be easier!
Accessed from the instructor side of your textbook’s ARIS website, Presentation Center’s dynamic search engine allows you to explore by discipline, course, textbook chapter, asset type, or keyword. Simply browse, select, and download the files you need to build engaging course materials. All assets are copyright McGraw-Hill Higher Education but can be used by instructors for classroom purposes.

Instructors will find the following digital assets for Environmental Science at ARIS PrepCenter:

• Color Art Full-color digital files of ALL illustrations in the text can be readily incorporated into lecture presentations, exams, or custom-made classroom materials. These include all of the 3-D realistic art found in this edition, representing some of the most important concepts in environmental science.

• Photos Digital files of ALL photographs from the text can be reproduced for multiple classroom uses.

• Additional Photos 317 full-color bonus photographs are available in a separate file. These photos are searchable by content and will add interest and contextual support to your lectures.

• Tables Every table that appears in the text is provided in electronic format.

• Videos This special collection of 84 underwater video clips displays interesting habitats and behaviors for many animals in the ocean.

• Animations 99 full-color animations that illustrate many different concepts covered in the study of environmental science are available for use in creating classroom lectures, testing materials, or online course communication. The visual impact of motion will enhance classroom presentations and increase comprehension.

• Global Base Maps 88 base maps for all world regions and major subregions are offered in four versions: black-and-white and full-color, both with labels and without labels. These choices allow instructors the flexibility to plan class activities, quizzing opportunities, study tools, and PowerPoint enhancements.

• PowerPoint Lecture Outlines Ready-made presentations that combine art and photos and lecture notes are provided for each of the 19 chapters of the text. These outlines can be used as they are or tailored to reflect your preferred lecture topics and sequences.

• PowerPoint Slides For instructors who prefer to create their lectures from scratch, all illustrations, photos, and tables are preinserted by chapter into blank PowerPoint slides for convenience.

Earth and Environmental Science DVD by Discovery Channel Education (ISBN: 978-0-07-352541-9; MHID: 0-07-352541-3)

Begin your class with a quick peek at science in action. The exciting new DVD by Discovery Channel Education offers 50 short (three- to five-minute) videos on topics ranging from conservation to volcanoes. Search by topic and download into your PowerPoint lecture.


Licensed from some of the highest quality life-science video producers in the world, these brief video clips on DVD range in length from 15 seconds to two minutes and cover all areas of general biology, from cells to ecosystems. Engaging and informative, McGraw-Hill’s digitized biology videos will help capture students’ interest while illustrating key biological concepts, applications, and processes.

Instructor’s Testing Resource CD-ROM

This CD-ROM contains a wealth of cross-platform (Windows and Macintosh) resources for the instructor. Supplements featured on this CD-ROM include a computerized test bank, which utilizes EZ-Test software for quickly creating customized exams. This flexible and user-friendly program allows instructors to search for questions by topic, format, or difficulty level and edit existing questions or add new ones. Multiple versions of the test can be created, and any test can be exported for use with course management systems such as WebCT, Blackboard, or PageOut. Word files of the test bank are included for those instructors who prefer to work outside of the test-generator software. Other assets on the Instructor’s Testing and Resource CD-ROM are grouped within easy-to-use folders.
A set of 100 overhead transparencies includes key illustrations and tables from the text. The images are printed for great visibility and contrast, and labels are large and bold for clear projection.

elInstruction
This classroom performance system (CPS) utilizes wireless technology to bring interactivity into the classroom or lecture hall. Instructors and students receive immediate feedback through easy-to-use wireless response pads that engage students. elInstruction can assist instructors by:
• Taking attendance
• Administering quizzes and tests
• Creating a lecture with intermittent questions
• Using the CPS gradebook to manage lectures and student comprehension
• Integrating interactivity into PowerPoint presentations
Contact your local McGraw-Hill sales representative for more information.

Course Delivery Systems
With help from WebCT, Blackboard, and other course management systems, professors can take complete control of their course content. Course cartridges containing website content, online testing, and powerful student tracking features are readily available for use within these platforms.

Learning Supplements for Students
ARIS (http://www.mhhe.com/enger 11e)
McGraw-Hill’s ARIS—Assessment, Review and Instruction System—for Environmental Science offers access to a vast array of premium online content to fortify the learning experience.
• Text-Specific Study Tools—The ARIS site features quizzes, study tools, and other features tailored to coincide with each chapter of the text.
• Course Assignments and Announcements—Students of instructors choosing to utilize McGraw-Hill’s ARIS tools for course administration will receive a course code to log into their specific course for assignments.

The major objectives of this manual are to provide students with hands-on experiences that are relevant, easy to understand, applicable to the student’s life, and presented in an interesting, informative format. Ranging from field and lab experiments to conducting social and personal assessments of the environmental impact of human activities, the manual presents something for everyone, regardless of the budget or facilities of each class. These labs are grouped by categories that can be used in conjunction with any introductory environmental textbook.

This two-CD set for students explores controversial issues in water rights (Columbia River); migration (Mexico); urban spread (Chicago); population (China); and sustainability (South Africa).

This short book provides exercises for students and instructors who are new to GIS but are familiar with the Windows operating system. The exercises focus on improving analytical skills, understanding spatial relationships, and understanding the nature and structure of environmental data. Because the software used is distributed free of charge, this text is appropriate for courses and schools that are not yet ready to commit to the expense and time involved in acquiring other GIS packages.

This twenty-fifth edition is a compilation of current articles from the best of the public press. The selections explore the global environment, the world’s population, energy, the biosphere, natural resources, and pollutions.

This book represents the arguments of leading environmentalists, scientists, and policy makers. The issues reflect a variety of viewpoints and are staged as “pro” and “con” debates. Issues are organized around four core areas: general philosophical and political issues, the environment and technology, disposing of wastes, and the environment and the future.

This book features a compilation of up-to-date data and accurate information on some of the important facts about the world we live in. While it is close to impossible to stay current on every nation’s capital, type of government, currency, major languages, population, religions, political structure, climate, economics, and more, this book is intended to help students to understand these essential facts in order to make useful applications.

This volume brings together primary source selections of enduring intellectual value—classic articles, book excerpts, and research studies—that have shaped environmental studies and our contemporary understanding of it. The book includes carefully edited selections from the works of the most distinguished environmental observers, past and present. Selections are organized topically around the following major areas of study: energy, environmental degradation, population issues and the environment, human health and the environment, and environment and society.


This atlas is an invaluable pedagogical tool for exploring the human impact on the air, waters, biosphere, and land in every major world region. This informative resource provides a unique combination of maps and data that help students understand the dimensions of the world’s environmental problems and the geographical basis of these problems.
We live in an age of information. Computers, e-mail, the Internet, CD-ROMs, instant news, and fax machines bring us information more quickly than ever before. A simple search of the Internet will provide huge amounts of information. Some of the information has been subjected to scrutiny and is quite valid, some is well-informed opinion, some is naive misinformation, and some is even designed to mislead. How do we critically evaluate the information we get?

Critical thinking involves a set of skills that helps us to evaluate information, arguments, and opinions in a systematic and thoughtful way. Critical thinking also can help us better understand our own opinions as well as the points of view of others. It can help us evaluate the quality of evidence, recognize bias, characterize the assumptions behind arguments, identify the implications of decisions, and avoid jumping to conclusions.

CHARACTERISTICS OF CRITICAL THINKING

Critical thinking involves skills that allow us to sort information in a meaningful way and discard invalid or useless information while recognizing that which is valuable. Some key components of critical thinking are:

RECOGNIZE THE IMPORTANCE OF CONTEXT

All information is based on certain assumptions. It is important to recognize what those assumptions are. Critical thinking involves looking closely at an argument or opinion by identifying the historical, social, political, economic, and scientific context in which the argument is being made. It is also important to understand the kinds of bias contained in the argument and the level of knowledge the presenter has.

CONSIDER ALTERNATIVE VIEWS

A critical thinker must be able to understand and evaluate different points of view. Often these points of view may be quite varied. It is important to keep an open mind and to look at all the information objectively and try to see the value in alternative points of view. Often people miss obvious solutions to problems because they focus on a certain avenue of thinking and unconsciously dismiss valid alternative solutions.

EXPECT AND ACCEPT MISTAKES

Good critical thinking is exploratory and speculative, tempered by honesty and a recognition that we may be wrong. It takes courage to develop an argument, engage in debate with others, and admit that your thinking contains errors or illogical components. By the same token, be willing to point out what you perceive to be shortcomings in the arguments of others. It is always best to do this with good grace and good humor.

HAVE CLEAR GOALS

When analyzing an argument or information, keep your goals clearly in mind. It is often easy to get sidetracked. A clear goal will allow you to quickly sort information into that which is pertinent and that which may be interesting but not germane to the particular issue you are exploring.

EVALUATE THE VALIDITY OF EVIDENCE

Information comes in many forms and has differing degrees of validity. When evaluating information, it is important to understand that not all the information from a source may be of equal quality. Often content about a topic is a mix of solid information interspersed with less certain speculations or assumptions. Apply a strong critical attitude to each separate piece of information. Often what appears to be a minor, insignificant error or misunderstanding can cause an entire argument to unravel.

CRITICAL THINKING REQUIRES PRACTICE

As with most skills, you become better if you practice. At the end of each chapter in the text, there is a series of questions that allow you to practice critical thinking skills. Some of these questions are straightforward and simply ask you to recall information from the chapter. Others ask you to apply the information from the chapter to other similar contexts. Still others ask you to develop arguments that require you to superimpose the knowledge you have gained from the chapter on quite different social, economic, or political contexts from your own.

Practice, practice, practice.