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YES: Sharon Bloyd-Peshkin, from “Built to Trash: Is ‘Heirloom Design’ the Cure for Consumption?” *In These Times* (November 2009) 6

NO: Sharon Begley, from “Green and Clueless,” *Newsweek* (August 2010) 12

Sharon Bloyd-Peshkin, an associate professor of journalism and a freelance writer, believes that sustainability is a realistic objective for society but is achievable only through sweeping changes in our economic system. Enticing producers to market products that have a longer life-cycle and are repairable would address much of our overconsumption and help move toward a sustainable society. Sharon Begley, a journalist for *The Wall Street Journal* and *Newsweek*, believes that people have little idea about how to achieve energy efficiency and lead an eco-friendly lifestyle, and fail to understand how a move to sustainability requires major societal steps.

Issue 2. Is Sustainability More About Politics Than Science? 17

YES: Bill McKibben, from “Hot Mess: Why Are Conservatives So Radical About the Climate?,” *The New Republic* (October 2010) 21

NO: Huub Spiertz, from “Food Production, Crops, and Sustainability: Restoring Confidence in Science and Technology,” *Current Opinion in Environmental Sustainability* (December 2010) 26

Noted environmental writer Bill McKibben discusses how money and vested political interests undermine efforts toward sustainability and how this is reflected in politics. Huub Spiertz, a professor of crop ecology and past president of the International Crop Science Congress, elaborates on how applicable agrotechnologies and biotechnologies can address global food and population issues and offer an example of how science provides a more sustainable world.

Issue 3. Are Western Values, Ethics, and Dominant Paradigms Compatible with Sustainability? 36

YES: Jo Kwong, from “Globalization’s Effects on the Environment—Boon or Bane?,” *Lindenwood Economic Policy Lecture Series* (July 2004) 40

NO: Erik Assadourian, from “The Rise and Fall of Consumer Cultures,” *2010 State of the World—Transforming Cultures from Consumerism to Sustainability* (The Worldwatch Institute, 2010) 53

Jo Kwong, vice president of institute relations at the Atlas Economic Research Foundation in Fairfax, believes that globalization is a basic part of the solution of the global problems that plague the developing world. Greater movement of goods, services, people, and ideas can lead to economic prosperity, improved environmental protection, and a host of other social benefits. Erik Assadourian, a senior researcher at the Worldwatch Institute and the project director of *2010 State of the World*, believes that Western culture is the origin of consumer culture and the consumption trend and, therefore, leads to a global culture of excess and is emerging as the biggest threat to the planet. Higher levels of consumption can affect the environment and, in the long run, limit economic activity. As a matter of fact, higher levels of consumption require larger inputs of energy and material to produce and therefore generates a high volume of waste products. It also increases the extraction and exploitation of natural resources.

Issue 4. Does Sustainability Mean a Lower Standard of Living? 64

YES: Will Wilkinson, from “In Pursuit of Happiness Research: Is It Reliable? What Does It Imply for Policy?” *Policy Analysis* (April 11, 2007) 68

NO: Saamah Abdallah, Sam Thompson, Juliet Michaelson, Nic Marks, and Nicola Steuer, from “Unhappy Planet Index 2.0: Why Good Lives Don’t Have to Cost the Earth,” <http://happyplanetindex.org> (2009) 82

Will Wilkinson, a policy analyst at the Cato Institute, staunchly supports the economist’s perspective that happiness and standard of living are related to economic growth. British psychologists Saamah Abdallah and Sam Thompson, writing for the New Economics Foundation who developed the Happy Planet Index, argue that we need to get away from focusing on GDP and instead measure a successful society by supporting life satisfaction that doesn’t cost the earth.

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Issue 5. Is Sustainability Practical for Emerging Economies? 100

YES: M. Asif and T. Muneer, from “Energy Supply, Its Demand and Security Issues for Developed and Emerging Economies,” *Renewable and Sustainable Energy Reviews* (September 2007) 104

NO: Yun Zhou, from “Why Is China Going Nuclear?” *Energy Policy* (July 2010) 119

Professors M. Asif and T. Muneer of the School of Engineering, Napier University, Edinburgh, United Kingdom, indicate that emerging economies like China and India are moving toward renewable energies and will need to continue to do so if they want to stem the environmental degradation due to global warming and climate change. Yun Zhou, a Nuclear Security Fellow at the Belfer Center’s Project on Managing the Atom and

International Security Program at John F. Kennedy School of Government, Harvard University, sees a continuation of the use of coal in China with its environmental consequences due to its increased demand for cheap energy. He sees nuclear fuel as the only alternative to coal.

Issue 6. Is Global Environmental Degradation an Issue of Poverty Rather Than Environmental Policy? 134

YES: J.B. (Hans) Opschoor, from "Environment and Poverty: Perspectives, Propositions, Policies," in Institute of Social Studies, Working Paper 437, Netherlands, 2007 138

NO: John Ambler, from "Attacking Poverty While Improving the Environment: Towards Win-Win Policy Options," *Poverty & Environment Initiative*, (United Nations Development Program, 2004) 145

Professor Hans Opschoor of the Dutch Institute of Social Studies, views the relationship between environmental quality and poverty within the wider context of the environmental-development system. He sees poverty as both an agent of environmental degradation and as a cause of deepened poverty. Researcher John Ambler, director of East Asia Program Development, Social Science Research Council, dispels various myths on poverty and environmental degradation and points to how specific policies can produce a "win-win" situation.

Issue 7. Is Limiting Consumption Rather Than Limiting Population the Key to Sustainability? 162

YES: Robert W. Kates, from "Population and Consumption: What We Know, What We Need to Know," *Environment* (April 2000) 166

NO: J. Anthony Cassils, from "Overpopulation, Sustainable Development, and Security: Developing an Integrated Strategy," *Population and Environment* (January 2004) 177

Robert W. Kates is an American geographer and independent scholar in Trenton, Maine, and university professor (emeritus) at Brown University. He believes that consumption is more challenging to sustainability than population but more difficult to study because of its varied meanings. J. Anthony Cassils, a writer and an activist on population issues for the Population Institute of Canada, states that "nothing threatens the future of our species as much as overpopulation," and advocates a comprehensive strategy to address overpopulation.

Issue 8. Is Technological Innovation the Main Driver for Achieving Sustainability? 189

YES: Joanna I. Lewis, from "Technology Acquisition and Innovation in the Developing World: Wind Turbine Development in China and India," *Studies in Comparative International Development* (November/December 2007) 193

NO: Alan Colin Brent and David E. Rogers, from "Renewable Rural Electrification: Sustainability Assessment of Mini-hybrid Off-grid Technological Systems in the African Context," *Renewable Energy* (2010) 201

Joanna Lewis, a professor of science, technology, and international affairs at Georgetown University's Edmund A. Walsh School of Foreign Service, discusses how technological "leapfrogging" in emerging economies can "address concerns about rising greenhouse gases." She explores the role that technology transfer holds in accelerating wind power in India and China. Alan Brent and David Rogers, engineers from South Africa's University of Pretoria, and leaders in sustainable energy futures, conclude that alternative energy technology cannot always be easily implemented and that policy must consider social and cultural factors and involve multiple stakeholders.

UNIT 3 POLICY 223

Issue 9. Is Monetizing Ecosystem Services Essential for Sustainability? 224

YES: Stephen Polasky, from "What's Nature Done for You Lately: Measuring the Value of Ecosystem Services," *Choices* (2nd Quarter, 2008) 228

NO: Clive L. Spash, from "How Much Is That Ecosystem in the Window? The One with the Bio-Diverse Trail," *Environmental Values* (May 2008) 235

Writer Stephen Polasky presents the argument why putting a monetary value on ecosystem services will improve decision making by clearly illustrating the consequences of alternative choices. European professor and economist Clive L. Spash questions the model of human motivation and behavior underlying orthodox economics and its use in ecosystem valuation and states that ecologists and conservation biologists who use it fail in their awareness of the political and ideological system within which it is embedded.

Issue 10. Does the Market Work Better Than Government at Achieving Sustainability? 242

YES: Paul Krugman, from "Green Economics: How We Can Afford to Tackle Climate Change," *The New York Times Magazine* (April 11, 2010) 246

NO: Leigh K. Fletcher, from "Green Construction Costs and Benefits: Is National Regulation Warranted?" *Natural Resources & Environment* (Summer, 2009) 261

Noted national economist Paul Krugman provides a history of both market-based and command-and-control (regulatory) approaches in environmental economics and recommends cap and trade, carbon taxes, and a carbon tariff as the best market-based approaches to reduce carbon. Leigh Fletcher, who is LEED certified and a lawyer in Tampa, Florida, believes that building codes as a regulatory policy can reduce electricity, which would significantly limit carbon since buildings are the largest contributor to electricity consumption.

Issue 11. Does Sustainable Urban Development Require More Policy Innovation and Planning? 276

YES: Bruce Katz, *Smart Growth: The Future of the American Metropolis*, (Center for Analysis of Social Exclusion and Brookings Institution, 2002) 280

NO: David B. Resnik, from "Urban Sprawl, Smart Growth, and Deliberative Democracy," *American Journal of Public Health* (October 2010) 285

Bruce Katz, of the ESRC Research Center for Analysis of Social Exclusion within the Suntory and Toyota International Centers for Economics and Related Disciplines at the London School of Economics and Political Science, describes how current public policies facilitate the "excessive decentralization" of people and jobs and how smart growth reforms are being enacted, particularly at the state level, to shape new, more urban-friendly growth patterns. David B. Resnik, a bioethicist and vice-chair of the Institutional Review Board for Human Subjects Research at the National Institute of Environmental Health Sciences, National Institutes of Health, explains why urban sprawl, a model of unsustainable development around the periphery of a city, has a negative effect on human health and the environment. He believes that smart growth is an alternative to the problem of urban sprawl; nevertheless, he argues that smart growth has many disadvantages including a decrease in property values, decrease in the availability of affordable housing, restriction of property owners' use of their land, disruption of existing communities, and a likely increase in sprawl.

Issue 12. Should Water Be Privatized? 294

YES: Fredrik Segerfeldt, from "Water for Sale: How Business and the Market Can Resolve the World's Water Crisis," *Presentation at the Amigo Society, Brussels* (May 30, 2006) 298

NO: David Hall and Emanuele Lobina, from *The Private Sector in Water in 2009*, (Public Services International Research Unit, Business School, University of Greenwich, March 2009) 307

Writer Fredrik Segerfeldt, on the Advisory Council of the European Enterprise Institute, sees that "an increased role for private enterprise and market reforms, if carried out properly and wisely, can save millions of lives and give water connections to hundreds of millions of people who today are deprived of it." David Hall is the director of Public Service International Research Unit (PSIRU) at the Business School of the University of Greenwich, London, and Emanuele Lobina specializes in water research at PSIRU. Both writers boldly state that the "experiment with water privatization has failed."

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Issue 13. Can Our Marine Resources Be Sustainably Managed? 322

YES: Benjamin S. Halpern, from "The Impact of Marine Reserves: Do Reserves Work and Does Reserve Size Matter?," *Ecological Applications* (February 2003) 326

NO: Andrew A. Rosenberg, Jill H. Swasey, and Margaret Bowman, from "Rebuilding U.S. Fisheries: Progress and Problems," *Frontiers in Ecology and the Environment* (August 2006) 335

Benjamin S. Halpern, marine biologist and project coordinator of Ecosystem-Based Management of Coastal Marine Systems for the National Center for Ecological Analysis and Synthesis (NCEAS) demonstrates how marine protected areas (MPAs) and marine reserves, tools for sustainably managing

marine resources, are producing positive results based on four biological measures: density, biomass, size of organisms, and diversity. Andrew A. Rosenberg, biologist and oceanographer and presently dean of the College of Life Sciences at the University of New Hampshire, states that the Magnuson–Stevens Fishery Conservation and Management Act has not significantly altered overfishing and the rebuilding of fish stocks in the United States due mainly to pressures from the commercial and recreational fishing communities.

Issue 14. Can the Conflict Between Humans and Wildlife Be Sustainably Managed? 345

YES: Thomas M. Gehring, Kurt C. VerCautereen, and Jean-Marc Landry, from “Livestock Protection Dogs in the 21st Century: Is an Ancient Tool Relevant to Modern Conservation Challenges?” *Bioscience* (April 2010) 349

NO: Craig Hilton-Taylor, Caroline M. Pollock, Janice S. Chanson, Stuart H.M. Butchart, Thomasina E.E. Oldfield, and Vineet Katariya, from “State of the World’s Species” in *Wildlife in a Changing World—An Analysis of the 2008 IUNC Red List of Threatened Species* (IUCN, Gland, Switzerland, 2009) 357

Biologist Thomas M. Gehring, wildlife disease specialist Kurt C. VerCautereen, and dog protection expert Jean-Marc Landry discuss how human–wildlife conflict at the junction of livestock protection and wildlife conservation can be sustainably managed in a nonlethal way through the use of livestock protection dogs (LPDs), an ancient tool of human–wildlife management. Craig Hilton-Taylor, wildlife researcher manager of the International Union for Conservation of Nature “Red List of Threatened Species,” leads a team that shows the rapid decline in biodiversity as a result of unsustainable human–wildlife confrontation.

Issue 15. Should Sustainability in Energy Resources Be Based on Conservation? 389

YES: Eric A. Woodroof, Wayne C. Turner, and Steven D. Heinz, from “The ‘Secret Benefits’ from Energy Conservation,” *Strategic Planning for Energy and the Environment* (April 2008) 393

NO: Hermann Scheer, from “The Cost of Renewable Energy: Time to Disprove the Myths,” in J. Nethersole, ed., *Climate Action* (pp. 128–131, Sustainable Development International, 2009) 403

Eric Woodroof, Wayne Turner, and Steven Heinz, certified energy managers (CEM), show that energy conservation not only benefits the consumer in the monetary reduction of their utility bill but also has extra benefits in economic and energy savings as well as the positive benefits in lowering the impact of greenhouse gases in the environment. Hermann Scheer, founder of the nonprofit European Renewable Energy Association and World Council for Renewable Energy, refutes the argument that renewable energy is too expensive and hence not a viable energy policy by discussing its long-term economic benefits to society.

UNIT 5 ENERGY, BUSINESS, AND SOCIETY 413

Issue 16. Can Nuclear Energy Be a Sustainable Resource? 414

YES: **A. Adamantiades and I. Kessides**, from “Nuclear Power for Sustainable Development: Current Status and Future Prospects,” *Energy Policy* (December 2009) 418

NO: **Milton H. Saier and Jack T. Trevors**, from “Is Nuclear Energy the Solution?” *Water, Air, & Soil Pollution* (May 2010) 436

Engineer and energy consultant Achilles Adamantiades and economist and writer I. Kessides discuss how burgeoning population, growing demands for energy, dependence on foreign fossil fuels, and rising concern about global climate are major reasons for the growing interest in nuclear power. Biologist Milton H. Saier and environmental scientist Jack T. Trevors argue that nuclear power is not cost-competitive compared with other green energy sources such as solar and wind, which can be installed much faster. They also discuss its inability to deal with the issue of energy security since oil is mostly used for transportation and nuclear energy is not used for this key activity.

Issue 17. Is Corporate Sustainability More Public Relations Than Real? 442

YES: **Richard Dahl**, from “Greenwashing: Do You Know What You’re Buying?,” *Environmental Health Perspectives* (June 2010) 446

NO: **Cristiano Busco, Mark L. Frigo, Emilia L. Leone, and Angelo Riccaboni**, from “Cleaning Up,” *Strategic Finance* (July 2010) 455

Boston freelance environmental health issues writer Richard Dahl argues that there is increasing competition between companies to portray themselves as “green” and warns that if false green claims are not controlled, then people’s skepticism will grow and an important tool for sustainability will be lost. Busco et al. describe how General Electric and Procter & Gamble have operationalized corporate sustainability initiatives using management control and management accounting systems.

Issue 18. Are Social Concerns Taken Seriously in the “Triple Bottom Line” of Sustainability? 469

YES: **Michael Laff**, from “Triple Bottom Line: Creating Corporate Social Responsibility That Makes Sense,” *T + D* (February 2004) 473

NO: **Frank Vanclay**, from “Impact Assessment and the Triple Bottom Line: Competing Pathways to Sustainability?” *Sustainability and Social Science: Round Table Proceedings* (July 2004) 479

Internet training and development blogger Michael Laff details how corporations are utilizing triple bottom line (TBL) to develop innovative approaches to improve their relationship with the local community and reduce their impact on the environment. Frank Vanclay, a professor of cultural geography at the University of Groningen in the Netherlands, discusses the inability of triple bottom line (TBL) to provide an adequate framework for organizations to assess their progress toward social equity or justice in their management functions.

Issue 19. Are Cities Sustainable? 493

YES: Stephen M. Wheeler, from “Planning for Sustainability,” in *Local Planning: Contemporary Principles and Practice*, by Gary Hack et al., eds., (International City-County Management Association, 2009) 497

NO: Giok Ling Ooi, “Challenges of Sustainability for Asian Urbanisation,” *Current Opinion in Environmental Sustainability* (December 2009) 505

Community planner Stephen M. Wheeler delineates how cities can move to sustainability by emphasizing compact urban designs, preservation of open space, adopting transport alternatives, and implementing building codes that emphasize energy conservation and efficiency. Urban geographer Giok Ling Ooi of Nanyang Technological University shows how the challenges of rapid urbanization in emerging Asian economies are making it difficult for these cities to meet the basics of sanitation, water supply, housing, and so on not to mention the most lofty goals of sustainability.

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