

Editorial

# Sustainability through the Lens of Environmental Sociology: An Introduction

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**Abstract:** Our planet is undergoing radical environmental and social changes. Sustainability has now been put into question by, for example, our consumption patterns, loss of biodiversity, depletion of resources, and exploitative power relations. With apparent ecological and social limits to globalization and development, current levels of consumption are known to be unsustainable, inequitable, and inaccessible to the majority of humans. Understanding and achieving sustainability is a crucial matter at a time when our planet is in peril—environmentally, economically, socially, and politically. Since its official inception in the 1970s, environmental sociology has provided a powerful lens to understanding the challenges, possibilities, and modes of sustainability. This editorial, accompanying the Special Issue on “sustainability through the Lens of Environmental Sociology”, first highlights the evolution of environmental sociology as a distinct field of inquiry, focusing on how it addresses the environmental challenges of our time. It then adumbrates the rich theoretical traditions of environmental sociology, and finally examines sustainability through the lens of environmental sociology, referring to various case studies and empirical analyses.

**Keywords:** environmentalism; environmental sociology; ecological modernization; treadmill of production; the earth day; green movement; environmental certification; global agro-food system

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## 1. Introduction: Environmental Sociology as a Field of Inquiry

Environmental sociology is the study of how social and ecological systems interact with one another. Both social and ecological systems are very complex and vast on their own, and together the complexity grows. The interaction between social and ecological systems might seem clear when we think about the way our society is built. However, due to the complexity of the interaction, the development of separate disciplines, such as ‘sociology’ focusing on social relationships alone and ‘ecology’ based on environmental relationships without relating to society, bifurcation in intuitions and disciplinary bias, the profound relationships between society and the environment were hardly mentioned for a long period of time. Over time, as Gould and Lewis stated, “The increasing urgency of the negative impacts of social systems on ecosystems created both the social space and social need for the emergence of environmental sociology” [1] (p. 3). Environmental sociology is a subfield in sociology despite the fact that it also has roots in ecology. The roots are not equally split between sociology and ecology and environmental sociologists are not required to know the natural sciences in ecology. Gould and Lewis describe the core of environmental sociology: its “special focus is on how social systems are organized and change in response to the natural world, just as the changes they produce in the natural world force them to further respond and change” [1] (p. 3). This editorial, accompanying the Special Issue “sustainability through the Lens of Environmental Sociology”, will first provide a brief sketch on the social and institutional trajectories in which environmental sociology emerged as a distinct field of inquiry.

Environmental sociology became an officially recognized subfield in sociology as late as 1976 [1]. In the late 1800s, environmental sociology was not a part of sociology at all, but in the early 1900s there were two sociologists who started to talk about the relationship between humans and nature, Henry Thomas Buckle and Ellsworth Huntington. According to Buckle, human society is a product of natural forces and his theory of social change made quite an impact on the intellectual circles in the 19th century [2]. Huntington, on the other hand, tried to establish a connection between climate and health, energy, and metal processes such as intelligence, genius and willpower. He used his theories to try to explain the rise and fall of ancient societies such as Rome, connecting the fall of the kingdom to changes in the climate. This has been questioned by, for example, Sorokin, who says that the correlations are fictive and that he overestimated the role of the geographical environment. However, he agrees that the geography has an impact on every social constellation. During this time, many sociologists applied Darwinism and the concept of “evolution” and “natural selection” to the human context, and the most prominent social Darwinist was an English social philosopher, Herbert Spencer. He opposed any suggestion that society could be transformed through education or social reform. Instead he believed that it is better to leave it alone and we will change as time goes on. Spencer also had a disciple, Sumner, who thought that we do not only fight with other species in nature, but also in society; however, these theories were largely rejected later on [1,2].

Between the years of 1955 and 1975, it was more evident that the sociological literature became more and more modern, and there are sociologists in particular that stand out during these two decades, David H. Smith, Alex Inkeles and Daniel Lerner. According to Smith and Inkeles, many individual members of certain communities were physiologically trapped in the past and they had problems doing what modern citizens could do, such as keeping to a fixed schedule, observing abstract rules, adopting multiple roles, and empathizing with others; this resulted in many developing nations failing to be a part of the modern world in the 1960s. Humans are not born knowing all these qualities, but through life experience and education we can obtain them. In his book *The Passing of Traditional Society*, Lerner discussed that the key to modernity is the media; they have the power to establish a physiological openness among the population [3]. One reason why the environmental aspect of sociology did not take off was an apprehension that it would take the focus away from the debate that many sociologists thought was more important—class. Even when no one could close their eyes from the environmental issues they were facing, they still said that it was class-related problems that were the cause of the issues, instead of using environmental reasons [2].

There are three important founders of classical sociological theories: Émile Durkheim, Max Weber and Karl Marx. Émile Durkheim is least likely to be recognized as an environmental sociologist. Émile Durkheim stated that social facts are more important than physical and environmental facts. He put very little effort in the environmental part of sociology and insisted that social facts “are consequently the proper field of sociology” [2] (p. 6). Max Weber, on the other hand, took environmental sociology into account. He connected economy, science, government and industries with geographical attributes. The third one, Karl Marx, was the one who has provoked the most widespread response from present-day environmental commentators. Marx has affected modern-day environmental sociology the most. He only touched the subject in his work, but many of his ideas later became the starting point for modern theories of the environment. Marx and his colleague, Friedrich Engels, believed that the class conflict did not profit any side of the conflict; instead it alienates people from their work and from nature. This was obvious in the industrial revolution when it was more profitable to use the land for industries rather than agriculture, which forced rural workers to give up their lands and move to cities that were polluted and crowded. Marx and Engels were convinced that capitalism was to blame for these events that eventually led to a bad state for the whole society. They wanted to make the gap between nature and people smaller and reinstate the bond between them, but did not know how to establish it. Marx talked about the “humanization of nature” which he said will give humans a better understanding of nature and how we can co-exist in a way that benefits both the environment and us. He even pointed out specific environmental issues and saw

the importance of ecological sustainability. Both Marx and Engels were pro-organic agriculture since they saw the danger in taking away all the nutrients in the soil and using chemicals to get more crops. They suggested that to stop pollution from fertilizers, farmers could use recycled human waste from the city instead [2].

None of these three founders—Durkheim, Weber and Marx—spoke directly about environmental sociology, but they were all talking about it indirectly, as they were talking about humans and nature. It was not a single discovery that made environmental sociology a field of inquiry; it was more like a movement driven by political reasons for social reform. Various publications of books and reports during the 1970s drew more intellectual and public attention towards environmental issues and problems. When sociologists first started discussing environmental issues and problems in the 1970s, they applied social theories to the environmental issues; soon a distinct field of study began to emerge. They made a distinction between two parts, one of which studied the interaction between the society and the environment, and the other which dealt more with environmental issues. This separation today is not very clear as both parts often go under the umbrella of environmental sociology [2].

The term “environmental sociology” was first used in 1971 by Samuel Klausner in his book *On Man in His Environment* [4]. Riley Dunlap came across Klausner’s book and the term several years later and he is considered one of the founders of this field. He focused mostly on the relationship between modern industrial societies and the physical environments they inhabit. According to many, Earth Day in 1970 was the debut of the modern environmental movement. It all started as a small proposal for national awareness on the environment, but soon, it had grown into a much larger event, with many participants around the world. “Earth Day 1970” symbolizes “Day 1” of the new environmentalism and it is widely used in the American mass media [2]. It was during this time that environmental sociology became an officially recognized subfield in sociology and the environmental issues started getting more attention on a political level. Sociologists started to incorporate formal niches for environmental sociology, as the Rural Sociological Society’s Natural Resource Research Group was formed in 1960s, the Society for the Social Problem started a group in 1973 and the American Sociological Association’s Environment and Technology group was formed in 1976. Also, among the population, it became a bigger and bigger topic and due to several environmental crises, such as the energy crises in the early 1970s and the Love Canal incident in 1978, and people became more aware of environmental issues and problems. Political actions were also made, both on national and international levels; notable among them was the United Nations Conference on the Human Environment held in Stockholm in 1972 [1]. Later on, the Global Environmental Change Programme was established in the UK and the Kyoto protocol was signed in 1997. Further, in the 1990s, environmental sociology was being taught all over the world [2].

Today’s world is facing a lot of different problems related to economic growth and environmental protection, and environmental sociology provides key tools to understand them. The “21 issues for the 21st century” is a list made by the United Nations Environmental program (UNEP) that proposes a sustainable earth through keeping the global environment under review and bringing emerging issues to the attention of governments and the international community for action. The problems are divided into five different main issues: cross-cutting issues, land issues, water issues, climate-change issues and development issues. All of the issues are ranked by the UNEP Foresight panel which includes 22 distinguished members of the scientific community from 16 developing and industrialized countries. The issue ranked number one is the cross-cutting issue: Aligning Governance to the Challenges of Global Sustainability. Many governments do not have the capacity to support environmental actions on a global level, but without governments’ support it is going to be hard for the world to solve the environmental issues that lie ahead. Some other issues posing sustainability challenges on the list include: new challenges for ensuring food safety and food security for nine billion people, new challenges for climate change mitigation and adaptation, managing the unintended consequences and changing the face of waste, solving the impending scarcity of strategic minerals and avoiding

electronic waste. All of the issues listed have one thing in common: they have become issues because of the way humans use the natural environment [5].

One challenge we find in today's society is the correlation between social and environmental vulnerability. This gives different countries different capabilities to cope with environmental disasters depending on economic and political factors. In history, it is mostly the developed countries that contributed to the anthropogenic environmental problems and issues since they were the first to build large-scale factories and their inhabitants had more money to purchase cars, indulge in mass consumption, and lead lifestyles that harmed the environment. The environmental problems caused by these anthropogenic factors are not only affecting these developed countries but rather the contrary: developing countries are often more exposed to disasters derived largely from human impacts. Developing countries are often more environmentally vulnerable. They are not only afflicted and affected by disasters from human activity, but also by natural disasters such as earthquakes, typhoons, tsunamis and extreme dry periods. Their lack of infrastructure, poor governmental establishment and tight economy make it harder for them to cope with these problems; rather, these factors damage these countries even more, making it even harder to recover from future disasters, and they end up in a vicious circle. The consumption patterns in the world lead to an increasing and unending demand. Developed countries, where the demand often comes from, put pressure on the developing countries to drain their natural resources. This can ruin their environment and lead to a massive loss of biodiversity, but not all developing countries will prioritize environmental protection over economic growth. The resources move from the developing countries to more affluent ones, leading to a core-periphery dynamics where the assets move from countries in the periphery into the core, while political pressure moves in the reverse direction [6]. The developed countries take advantage of more environmentally vulnerable countries. It not only forces the poor countries to drain their natural resources but also leads to higher emissions of greenhouse gases, thus speeding up global warming. For this to stop, demand needs to decrease. However, to decrease demand is hard since it is often correlated with economic development, something all countries strive for. Countries need to find a way to achieve development without necessarily having to increase demand.

There are many problems regarding the human impact on the environment such as the dilemma and tension between the economy and the environment, increasing demand and environmental vulnerability. Environmental sociology is a tool we can use to understand the complexity of the problems and find solutions, thus making sustainable development a reality and not just a dream. This is necessary if we are going to continue living on this earth and live together with other species in a harmonious manner.

## 2. Theoretical Traditions in Environmental Sociology

Environmental sociology is largely oriented towards the reciprocal relationship between the environment and the larger society. This relationship is problematized and conceptualized, and hence needs a reestablishment of social theories in order to better understand these issues. As a sub-field of sociology, environmental sociology employs various theoretical traditions in order to analyze and fathom the concerns raised in this discipline. Some of these traditions originate from the Marxist perspective, which are discussed and reintroduced as neo-Marxist theories. Similarly, neoliberalism theories in environmental sociology attempt to understand problems without contesting the economic and political structure. Symbolic interactionism theories discuss how meanings received from social interactions can influence and interpret the relationships between human society and the environment. There are several theories under each tradition that are discussed in further detail below.

## 2.1. Neo-Marxist Theories

### 2.1.1. Metabolic Rift

Metabolic rift is an important neo-Marxist theory as explained by John B. Foster and Karl Marx. It describes how society and ecology should not be classified as two different entities. Instead, they should be seen as one metabolism as one cannot function without the other. The theory explains that man started to view society and ecology as two separate entities with the rise of the capitalist system, creating a “rift” between humans and earth [7]. Marx discusses how capitalism has disrupted the “metabolic interaction between man and the earth, i.e., it prevents the return to the soil of its constituent elements consumed by man in the form of food and clothing” (p. 379). Through our growing patterns of consumption, man starts to only care about the product and forgets that nature is the root to all the resources going into making the products that we consume. The capitalist system places much emphasis on the process of production, rather than the source of factors of production. Man begins to lose touch with nature, and sees no problem in further exploiting the ecological system for natural resources in order to produce what society demands for.

Marx, as cited in Foster [7] (p. 380), also discusses how the “long-distance trade in food and clothing made the problem of the alienation of the constituent elements of the soil that much more of an ‘irreparable rift’”. In today’s globalized economy, a large proportion of food and clothing are being produced in peripheral countries such as Brazil and China, before being shipped to core countries such as the USA for consumption. This distancing between the location of production and consumption further alienates humans’ relationship with the goods (p. 380). Human beings do not take into consideration the factors of production, such as the process of it, as well as the extraction of natural resources during their consumption of goods. This further enables humans to lose “touch” and their relationship with nature, resulting in the “irreparable rift” between society and the ecological system.

### 2.1.2. Treadmill of Production

The treadmill of production theory, propounded by Allan Schnaiberg in his book *The Environment: From Surplus to Scarcity* [8], suggests a never-ending cycle of production is the central characteristic of the capitalistic mode of production [9]. Human societies are dependent on flows of energy from nature, and hence Schnaiberg argues that this energy can only be transformed, and that each transformation is in itself a degradation [10]. The treadmill of production depicts the two dialectic processes of societal–environmental interaction: withdrawals and additions. Withdrawals from the environment are raw materials that are extracted from nature in order to transform them into economic goods, while additions are pollutive or toxic waste that is returned to the natural world. Capitalism generates profit through consumerism, with advertisements and marketing constantly driving human consumption to a grotesque level to generate profit [1,10]. Basic supply and demand predict that with increased demand, supply will increase to match that level, which results in the rising rate of the production process. That production process results in the exponential rate of both withdrawals and additions which rapidly depletes raw materials from nature and dumps toxic waste back into it. Hence, treadmill theory predicts environmental destruction with the current trend of human activities. This treadmill is unsustainable as the carrying capacity and resources on this planet are finite, while humans’ wants are infinite [6].

On top of ecological destruction, there is also the innate contradiction of capitalism as highlighted by Marx: exploitations of labor. However, social institutions are rooted and embedded in capitalism [1,6,10], and hence they seek only to strengthen and reinforce the capitalist ideology. For example, labor unions are in favor of the treadmill as it creates jobs for the workers, and governments prioritize economic growth over environmental protection [6]. Hence, without a radical change to the economic and political structure of the world system, the treadmill of production will not cease. Critics of this theory are convinced that capitalism will be able to adapt to consider environmental problems without radical changes, and that this theory is based too heavily on a materialist approach [1].

Others critics argued that treadmill of production is too pessimistic and it will discourage individuals from environmental efforts.

### 2.1.3. World Systems Theory

Immanuel Wallerstein's world systems theory was built on Marxist foundations, and emerged as a reaction and counter to modernization theory, by arguing that colonialism is one of the main causes of underdevelopment in the third world. Like Karl Marx, Wallerstein believed that capitalism is based on a system of exploitation, to achieve maximization of profit. However, it is seen as neo-Marxist as the world systems theory rejects the notion that capitalism only occurs in nation-states, and argues instead that it encompasses the entire world into an economy. Wallerstein presents three positions inside this world system: the core, the periphery and the semi-periphery. Labor and surplus are commoditized and extracted from the periphery to the core, which creates an unequal exchange of resources. The semi-periphery stands in the middle, being an exploiter as well as an exploited country [11]. This ultimately creates a global stratified system that works based on rationalization and commoditization as the driving forces behind this exploitative relationship. The environment can be subject to commoditization, with land being one example. A further theory of unequal ecological exchange builds on Wallerstein's world systems theory, as it contends that more developed countries and their high consumption-based environmental costs are redistributed to less developed countries, which results in environmental degradation and disasters [12].

Through extensive agricultural practices that benefit the cores, environmental damage can occur in the periphery. One example is the Hamburger Connection, where deforestation happens in order to give rise to cattle ranching. Much of the Amazon rainforest in Brazil has been cleared for pastures, and this has been a practice for decades. Brazil was seen as the world's top exporter of beef in 2003, and it was exported to developed countries for their consumption in fast food restaurants [13]. The land is hence seen as a commodity for exchange value, in order to raise cattle for the growing consumption of beef in developed countries. This creates an unequal ecological exchange because the core reaps the benefits of the beef product, while Brazil as a semi-periphery is exploited for the land that they own. Extensive environmental damage is the cost suffered by the periphery for the interest of the core countries, and this exemplifies how it occurs in the modern capitalist world system as proposed by Wallerstein.

## 2.2. Neoliberalism Theories

### 2.2.1. Risk Society

According to Beck, as cited in Adam, Beck and Van Loon [14] (p. 5), a risk society can be understood as "a particular mode of organization as a response to new challenges enforced upon the world by technologies and practices". Present society is said to be fraught with risks as a result of modernization where there has been a rapid increase in the advancement and employment of new technologies. While such technologies have brought about increased convenience, productivity and benefits, they are not without risks. Risks are defined as "a systematic way of dealing with hazards and insecurities induced in and introduced by modernization itself" [15] (p. 21). Beck, as cited in Matten [16], argues that while potential threats have always existed in society, such as natural disasters, the difference between threats and risks is that risks are a result of human decisions. Giddens has coined such risks as "manufactured risks" and believes that people today tend to focus their concerns on manufactured risks as a result of their actions over external risks. In particular, there have been rising anxieties and debate on the kind of environmental issues and problems brought about by the risk society due to new technologies in the field of nuclear, chemical and genetic industries, which have generated environmental hazards that creates risks in modern society [17,18].

An example of a manufactured risk in society is the use of nuclear energy. Nuclear energy is a welcomed alternative source of energy as it is deemed to be the most environmentally friendly in terms of its lower greenhouse gas emissions as compared to other forms, such as coal or electricity. However, there are environmental risks that accompany it. Environmental impacts and nuclear accidents such as radioactive waste produced from nuclear energy have impactful consequences on the environment and the health of individuals [19]. The Chernobyl nuclear accident in 1986 shows how manufactured risks translated into actual environmental hazards and damage. It is evident that nuclear energy is a risk because no one is able to fully understand the kind of far-reaching consequences it can have in the event of an accident. Based on the Chernobyl nuclear accident alone, over 300,000 people had to be evacuated and resettled after the accident as the area surrounding the nuclear power plant was deemed to be unsuitable for living. A study has shown that the increase in reported cases of thyroid cancer was linked to the high levels of radioiodine exposure during the Chernobyl accident [20]. In terms of environmental damage, over 200,000 square kilometers of Europe was contaminated from the release of radionuclides [21]. The danger here is that as Beck has claimed, there is no form of insurance against the kind of risks that emerge out of risk societies, yet societies continue to take deliberate risks in the name of modernization. Another clear example would be the Fukushima nuclear disaster in Japan. Although past experiences such as the nuclear accident in Chernobyl have shown the far-reaching consequences of nuclear accidents, society continues to create human-induced risks by investing in nuclear technology. Modern societies continue to take risks in the name of modernization and profit-making, despite the fact that that political institutions lack the competence to manage risks that accompany new technologies [16].

### 2.2.2. Ecological Modernization

Mol and Spaargaren's ecological modernization aims to resolve environmental issues without forsaking modernization, through the use of new technologies from more modernization instead of drastically reforming society [2]. Hence, this theory attempts to take a middle stance between pessimistic environmentalists pushing for de-industrialization and capitalists who would rather ignore the issue of the environmental crisis altogether. Ecological modernization assumes that capitalism is flexible enough to self-regulate, craft solutions and evolve towards "sustainable capitalism" [1,6]. Huber posits that the development of an industrial society occurs in three stages: the industrial breakthrough, the construction of the industrial society and superindustrialization. Superindustrialization refers to the final stage where an "ecological switchover of the industrial system" happens, where environmentally friendly technologies are developed [22].

Another key point of ecological modernization theory is reflexive modernization, whereby a capitalist society re-examines its circumstances and develops a heightened awareness of environmental problems. Thus, consumers will push institutions such as governments and corporations for change towards a green society [6]. However, critics claim that any improvements made from pressure are not real, and are attained through misreporting [2]. In addition, ecological modernization theorists are criticized for being over-optimistic about the potential of technology, forgetting that 'clean' technologies such as nuclear power were once lauded until their more undesirable features and risks were discovered. Ecological modernization theory also disregards the political-economic dimension characterizing environmental processes, assuming that social and political forces will align for the sake of environmental conservation [1,2,6].

### 2.3. Symbolic Interactionism Theories

#### Naturework

The idea of naturework was first explored in Gary Alan Fine's book *More! Tales: The Culture of Mushrooming* [23]. In this book, Fine studies how Americans assign meaning to the natural world that they live in. "Nature" always has been in unquestionable existence, but Fine argues that the meanings

we give to the natural environment are culturally grounded. This implies that there can be no nature if we detach it from culture and he terms the cultural construction and interpretation “naturework”. Fine illustrates his point by dabbling in the field of mushrooming. Fine examined present-day concerns of nature, environment and culture and how we give meaning to the first two. Mushroomers practice naturework by giving names to their fungi, assigning different values to different types of mushrooms and giving a gender identification to the mushrooms. In his opinion, the mushroomers adopt the “humanist” view of nature by making use of nature to meet the needs of humans. The other two views are the “protectionist” view that nature should be left untouched and the “organic” view that humans have no need to control themselves in exploiting nature compared to any other living thing as humans are also a part of nature.

The concept of “naturework” talks about how human beings adjust their behaviors and attitudes around socially constructed symbols [6,23]. Humans structure and revolve their actions and relationship with nature based on meanings that they assign to nature themselves. For example, human beings have constructed a social meaning for farm animals (e.g., pigs and cows) as animals raised for food. Thus, society does not see a problem with raising animals for food and the use of inhumane methods on animals in order to produce sufficient livestock for human consumption. In comparison, when human beings claim that they need a break from work and escape the city for a holiday by joining farm stays, they claim that they are being “in nature” and would never treat the farm animals in an exploitative manner. Through this example, it shows how human beings renegotiate the meanings of nature, and perceive nature as a source of relaxation instead of a natural resource for human consumption. This showcases the concept of naturework and how human beings entail the capacity to shape their behaviors and relationships with nature around social meanings [6]. In addition, by “enframing” nature as a separate entity to society (human beings), it creates the perception of distance and separation between society and nature. Thus, society does not develop a sense of accountability towards nature, allowing society to develop a power relation over nature to result in the exploitation of nature through technology [24].

### 3. Sustainability through the Lens of Environmental Sociology

The powerful lens provided by environmental sociology is important not only to understand the current environmental problems and challenges, but also to devise solutions for a sustainable earth. This Special Issue of *Sustainability* provides an environmental sociology approach to understanding and achieving the widely used notion of “sustainability”, focusing on, among other topics, the inherent discursive formations of environmental sociology, conceptual tools and paradoxes, competing theories and practices, and their complex implications on our society at large.

Some papers in this Special Issue have solid conceptual and theoretical contributions to the study of sustainability. Longo and his colleagues, for example, problematized the prevailing notion of sustainability and sustainable development as mired in a “pre-analytic vision” that naturalizes capitalist social relations and closes off important questions regarding economic growth. To overcome this problem with the sustainability discourse, the authors highlight how several environmental sociology perspectives—such as human ecology, the treadmill of production, and metabolic analysis—can serve as the basis for a more integrative “socio-ecological conception” and can help advance the field of sustainability science [25]. To better understand and theorize sustainability in a post-natural age, Arias-Maldonado, on the other hand, suggested that environmental sociology should incorporate and reconsider the “anthropocenic turn” in its fold for a realistic understanding of sustainability. The anthropocene, as he explains, is a scientific notion, grounded in geology and Earth-system science, which plausibly suggests that human beings have colonized nature to a degree that has irreversibly altered the functioning of planetary systems, and, consequently, social and natural systems have become “coupled”. Elucidating the consequences of the “anthropocenic turn” for sustainability studies, his paper explores the related notions of hybridity and relational agency as key aspects of a renewed view of nature [26].

Other papers applied various tools of environmental sociology in addressing various environmental issues and problems affecting societies and communities around the world. Islam and his colleagues, for example, applied the treadmill of production theory and environmental governance to understand the causes and consequences of trans-boundary haze pollution in Southeast Asia and proposed sustainability through a plural coexistence framework [27]; Hui-Ting Tang and Yuh-Ming Ling, assembling disparate information across time, space and discipline in their paper, aim to build a clear and concise synthesis of sustainable urban development not only to serve as an essential reference for decision- and policy-makers, but also to encourage more strategically organized sustainability efforts [28]. Sustainability with “academic ecohealth” literature, focusing on existing engagements and future prospects [29]; certified organic farming, posing a “metabolic rift” similar to conventional agriculture [30]; hybrid arrangements and governance as a form of “ecological modernization” in understanding the complexity of climate governance and energy efficiency in US cities [31]; and the extent to which forms of certification in global agro-food value chains guarantee sustainability [32] are among the key case studies in this Special Issue that advance our understanding of sustainability through the lens of environmental sociology.

Two papers clearly signal towards methodological innovations within environmental sociology in understanding and addressing today’s sustainability challenges. Mark Brown made a large-scale textual and discourse analysis to show how multinational corporations manage and naturalize “nature-business” through developing a vocabulary and a “grammar” which enables them to manage natural spaces in the same way that they are able to manage their own far-flung business operations [33]. Sing Chew and Daniel Sarabia, on the other hand, suggest a robust historical analysis of nature-culture relations, focusing on early globalization dating back 5000 years, climate change and system crisis. They believe a long-term tracing of the socioeconomic and political processes of the making of the modern world will allow us to have a more incisive understanding of the current trajectory of world development and transformations [34].

Papers published in this issue thus focus on how sustainable development has been understood through different theoretical lenses in environmental sociology, such as ecological modernization, policy/reformist sustainable development, and critical structural approaches (such as the treadmill of production, ecological Marxism, metabolic rift theory, etc.). Also, review papers and original manuscripts draw on how sustainable development has been practiced in, or by, various stakeholders, such as states, corporations, and local communities, for various ends, through the use of specific case studies, showing, for example, the discursive shifts, dynamic formations, and diverse contours of sustainable development. The lens of environmental sociology on sustainability in this Special Issue has therefore been expressed through conceptual and theoretical contributions, methodological innovations, and critical analyses of various cases around the world.

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## References

1. Gould, K.A.; Lewis, T.L. (Eds.) *Twenty Lessons in Environmental Sociology*; Oxford University Press: New York, NY, USA; Oxford, UK, 2009.
2. Hannigan, J. *Environmental Sociology: A Social Constructivist Perspective*, 2nd ed.; Routledge: New York, NY, USA, 2006.
3. Lerner, D. *The Passing of Traditional Society*, 1st ed.; Free Press: New York, NY, USA, 1964.
4. Klausner, S. *On Man in His Environment*, 1st ed.; Jossey-Bass: San Francisco, CA, USA, 1971.
5. United Nations Environmental Program (UNEP). *21 Issues for the 21st Century*; United Nations Environmental Program: Nairobi, Kenya, 2012.

6. Islam, M.S. *Development, Power and the Environment: Neoliberal Paradox in the Age of Vulnerability*; Routledge: New York, NY, USA; London, UK, 2013.
7. Foster, J.B. Marx's Theory of Metabolic Rift: Classical Foundations for Environmental Sociology. *Am. J. Sociol.* **1999**, *105*, 366–405. [CrossRef]
8. Allan, S. *The Environment: From Surplus to Scarcity*; Oxford University Press: Oxford, UK, 1980.
9. Islam, M.S.; Hossain, M.I. *Social Justice in the Globalization of Production Labor, Gender, and the Environment Nexus*; Palgrave Macmillan: London, UK, 2015.
10. Barbosa, L.C. Theories of Environmental Sociology. In *Twenty Lessons in Environmental Sociology*; Kenneth, A.G., Tammy, L.L., Eds.; Oxford University Press: Oxford, UK, 2009.
11. Wallerstein, I. *The modern World System I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century*; Academic Press: New York, NY, USA, 1974.
12. Jorgenson, A.K. Unequal Ecological Exchange and Environmental Degradation: A Theoretical Proposition and Cross-National Study of Deforestation, 1990–2000. *Rural Sociol.* **2006**, *71*, 685–712. [CrossRef]
13. Kaimowitz, D.; Benoit, M.; Sven, W.; Pablo, P. *Hamburger Connection Fuels Amazon Destruction*; Center for International Forest Research: Bangor, Indonesia, 2004.
14. Adam, B.; Ulrich, B.; Van Loon, J. (Eds.) *The Risk Society and Beyond: Critical Issues for Social Theory*; Sage Publications: London, UK, 2000.
15. Beck, U. *Risk Society: Towards a New Modernity*; Sage Publications: London, UK, 1992.
16. Matten, D. The impact of the risk society thesis on environmental politics and management in a globalizing economy—Principles, proficiency, perspectives. *J. Risk Res.* **2004**, *7*, 377–398. [CrossRef]
17. McGrail, S. Anthony Giddens on the Rise of Futures Thinking and Risk Management. Desperately Seeking Sustainability. Available online: <http://www.facilitatingustainability.net/?p=2620> (accessed on 4 October 2016).
18. Dunlap, R.E. *Sociological Theory and the Environment: Classical Foundations, Contemporary Insights*; Rowman & Littlefield Publishers: Lanham, MD, USA, 2002.
19. Pros and Cons of Nuclear Energy. Available online: <http://www.conserve-energy-future.com/pros-and-cons-of-nuclear-energy.php> (accessed on 4 October 2016).
20. Nuclear Energy Institute. Fact Sheets. Chernobyl Accident and Its Consequences. 2015. Available online: <https://www.nei.org/master-document-folder/backgrounders/fact-sheets/chernobyl-accident-and-its-consequences> (accessed on 4 October 2016).
21. World Health Organization. Chernobyl: The True Scale of the Accident. Available online: <http://www.who.int/mediacentre/news/releases/2005/pr38/en/index1.html> (accessed on 4 October 2016).
22. Huber, J. *Die Verlorene Unschuld der Ökologie. Neue Technologien und Superindustrielle Entwicklung*; Fisher: Frankfurt/Main, Germany, 1982.
23. Fine, G.A. *Morel Tales: The Culture of Mushrooming*; Harvard University Press: Cambridge, MA, USA, 1998.
24. Heidegger, M. *The Question Concerning Technology, and Other Essays*; Harper Torchbooks: New York, NY, USA, 1977.
25. Longo, S.B.; Clark, B.; Shriver, T.E.; Clausen, R. Sustainability and Environmental Sociology: Putting the Economy in its Place and Moving Toward an Integrative Socio-Ecology. *Sustainability* **2016**, *8*, 437. [CrossRef]
26. Arias-Maldonado, M. The Anthropocenic Turn: Theorizing Sustainability in a Postnatural Age. *Sustainability* **2016**, *8*, 10. [CrossRef]
27. Islam, M.S.; Yap, H.P.; Shrutika, M. Trans-Boundary Haze Pollution in Southeast Asia: Sustainability through Plural Environmental Governance. *Sustainability* **2016**, *8*, 499. [CrossRef]
28. Tang, H.-T.; Lee, Y.-M. The Making of Sustainable Urban Development: A Synthesis Framework. *Sustainability* **2016**, *8*, 492. [CrossRef]
29. Aryn, L.; Gregor, W. Sustainability within the Academic EcoHealth Literature: Existing Engagement and Future Prospects. *Sustainability* **2016**, *8*, 202. [CrossRef]
30. McGee, J.A.; Camila, A. Sustaining without Changing: The Metabolic Rift of Certified Organic Farming. *Sustainability* **2016**, *8*, 115. [CrossRef]

31. Galli, A.M.; Dana, R.F. Hybrid Arrangements as a Form of Ecological Modernization: The Case of the US Energy Efficiency Conservation Block Grants. *Sustainability* **2016**, *8*, 88. [[CrossRef](#)]
32. Mol, A.P.J.; Peter, O. Certification of Markets, Markets of Certificates: Tracing Sustainability in Global Agro-Food Value Chains. *Sustainability* **2015**, *7*, 12258–12278. [[CrossRef](#)]
33. Brown, M. Managing Nature–Business as Usual: Resource Extraction Companies and Their Representations of Natural Landscapes. *Sustainability* **2015**, *7*, 15900–15922. [[CrossRef](#)]
34. Chew, S.C.; Daniel, S. Nature–Culture Relations: Early Globalization, Climate Changes, and System Crisis. *Sustainability* **2016**, *8*, 78. [[CrossRef](#)]



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