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World society and the natural environment

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Abstract

We review the world society approach to explaining macrohistorical change generally and as it relates to the natural environment specifically. Our review includes work describing the rise of the environmental world society as well as empirical evidence of the consequences of national ties to world society for policy adoption, practices, and individual attitudes at the national level. Additionally, we suggest the application of world society theory to state and substate structures. Throughout the review, we situate the world society literature in relationship to work in the fields of cross-national comparative and environmental sociology from a variety of other perspectives. We take a forward-looking approach to our review of theoretical and empirical work in the field and consider the implications for normative change and resistance to prevailing world cultural norms. We conclude with a discussion of the resurgence of nationalism especially as it relates to antienvironmentalism.

1 | INTRODUCTION

World society theory, developed by John Meyer and colleagues at Stanford University, is founded on the observation that there exists a striking amount of similarity across nations despite incredible variety in resources and culture. In their seminal piece, Meyer, Boli, Thomas, and Ramirez (1997) observe that states adopt nearly identical organizational structures. A hypothetical newly discovered island nation, for example, would almost certainly form a government with multiple ministries and agencies; develop criteria for citizenship; and develop educational, medical, and legal institutions among others. With this pattern of imitation, we can imagine "the nation as Babbitt," the fictional character who conforms to his peers' expectations regardless of their relevance or practicality (Meyer, 2004). This explains, for example, the intensification of worldwide expansion of mass education following World War II despite heterogeneity in national economic circumstances (Meyer, Ramirez, & Soysal, 1992).

This top-down theory of social change stands in contrast to predominant early theories of modernization that placed states along a continuum of economic development depending on their national culture. Alternatively, neo-Marxist scholars considered states in relation to one other via the development and maintenance of unequal power relationships inherent in a global capitalist economy, thus giving primacy to material interests (Frank, 1969; Wallerstein, 1974). The world society perspective also challenges actor-centric, bottom-up theories that suggest social change comes as a result of pressure from social movements interacting with political opportunity structures

(McAdam, 1982; Meyer & Minkoff, 2004). Rather, the world society perspective shifts attention away from interestseeking rational actors and toward the social context in which those actors are embedded (Hironaka, 2014; Schofer, Hironaka, Frank, & Longhofer, 2012; see also DiMaggio & Powell, 1983; Hall & Lamont, 2013; Meyer & Rowan, 1977). Rather than actors, per se, a world society perspective conceptualizes states, organizations, and individuals as enactors of cultural scripts propagated at the global level (see also Bromley & Meyer, 2015). Similarly, national-level

policies are often better understood as enactments of conventionalized scripts rather than "on the ground" solutions.

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For more than two decades, scholars in the world society tradition have documented the emergence and content of a world culture that comprises elements of modernity, rationality, and individualism, as well as its diffusion and decoupling across nation-states through empirical observations of national ministries, policies, and education systems (for reviews, see Boli & Thomas, 1999; Meyer, 2010; Schofer et al., 2012). Perhaps one of the most pervasive of these institutionalized scripts is the state responsibility to protect the natural environment. For two decades, sociologists in the world society tradition have documented the emergence and elaboration since World War II of a global environmental regime comprised of pervasive cultural norms and myriad international organizations. Diffuse pressures from global institutions devoted to environmental protection, ranging from the United Nations and World Bank to hundreds of epistemic communities and thousands of environmental nongovernmental organizations, explain the many striking similarities we observe between nation-states in terms of environmental policies and outcomes. And while there is a great deal of slippage and decoupling in the environmental world society, recent research suggests that diffuse global norms may actually be translating into improved environmental outcomes.

This review summarizes the sociological literature on the environmental world society and attempts to seek out new directions for research. We begin by examining how the primacy of an environmental world society cannot easily be explained by other sociological theories (Section 2). We then turn to a key theme in this line of research: the observed cross-national diffusion of a variety of environmental norms over the past few decades (Section 3). The next section focuses on how world society translates into improved environmental outcomes in some instances and decoupling in others (Section 4). And, finally, we call attention to the role of states in the environmental world society, particularly as it continues to expand and become more elaborate (Section 5). We conclude, as per usual, with some suggestions for future research, as well as a discussion of recent reactions to and retrenchments from world society, including the rise of anti-intellectualism and antienvironmentalism (Section 6).

2 | EMERGENCE OF AN ENVIRONMENTAL WORLD SOCIETY

The 2015 Paris Accord, which requires ratifying countries to report and curb greenhouse gas emissions to prevent a rise in global temperatures of more than 2 °C by 2100, presents an interesting puzzle for world society theory. Can the Paris Agreement exist in anything but a world society? On one hand, the broad strokes of the agreement suggest a near universal consensus, with 195 total signatories as of July 2017, including the world's largest emitters of harmful greenhouse gases, such as the United States, China, and India. According to the nongovernmental organization CDP (formerly known as the Carbon Disclosure Project), more than 600 multinational corporations have also begun incorporating the Paris Agreement into their business strategies (Levick, 2016). In short, it requires nation-states and nonstate actors with vastly different immediate economic and political interests to coalesce around a shared set of societal goals. It is for these reasons that such agreements seem rare. As recently as 2009, climate change negotiations in Copenhagen broke down as developed and developing countries fought over long-term emissions targets and protections for economic growth.

Yet, on the other hand, the Paris Agreement is not without its own detractors. Nicaragua, for example, has refused to sign and ratify the agreement, arguing that its emissions targets are not enough to prevent the dangerous consequences of climate change. More recently, President Donald Trump of the United States pledged to pull out of the agreement, citing U.S. economic interests as a primary reason for doing so. Moreover, it is not clear whether the Paris Agreement will be enough to curb harmful carbon emissions, as it is primarily voluntary and lacks significant enforcement mechanisms.

For world society theory, the Paris Accord represents a culmination of the emergence of a global environmental regime. A key insight from the world society perspective is that the rise and spread of environmentalism is neither inevitable (as ecological modernization theory, which posits that economic growth produces more sustainable behaviors and technologies, might suggest) nor a disguised outcome of underlying material interests (as invoked in the treadmill of production perspective, which contends economic growth intensifies environmental harms; Gould, Pellow, & Schnaiberg, 2015; Hironaka, 2014; Mol, 1997). Nor is it a functional response to environmental problems. Rather, the enactment of environmentalism requires a global institutional structure where environmental problems are defined as legitimate social problems. These institutions create space to address environmental issues and enable "actors" to work toward solutions (Hironaka, 2014). This view is a substantial departure from conventional understandings of environmental norms (Brenton, 1994). Neoinstitutionalists refer to this institutional structure as the "global environmental regime" comprised of international conferences, international organizations both governmental and nongovernmental, and multilateral agreements all focused on the natural environmental environmental norms, embedded in these global institutions, do not have immediate and direct effects on environmental outcomes. Rather, they collectively contribute to long-term, macrosocial change (Hironaka, 2014).

An early yet persistent criticism of world society theory is the failure to account for the origins of world cultural norms in general and the global environmental regime in particular (Buttel, 2000). Frank (2002) attributes the origins of global environmentalism to broader shifts in world society. More specifically, as world culture expanded and elaborated upon ideas of rationalized social progress and universalism, versions of environmentalism shifted from humanitarian models to more scientific ones. Hironaka (2014) also takes on the origins question directly with a historical analysis of the formation of the United Nations Environment Programme in 1972, which provided a global institutional structure and introduced an ecosystemic framework around which countries, scientists, and international organizations mobilized to protect the environment (also Frank, Hironaka, & Schofer, 2000; Meyer, Frank, Hironaka, Schofer, & Tuma, 1997).

3 | WORLDWIDE DIFFUSION OF ENVIRONMENTALISM

The world society perspective is marked by a rich and robust empirical tradition. Much of this work has adopted what Schneiberg and Clemens (2006) call the "global-linkage" strategy of examining ties between nation-states and world society via citizen memberships in international nongovernmental organizations (INGOs), state membership in intergovernmental organizations (IGOs), state participation in international treaties, or some combination of the three (Frank et al., 2000; Schofer & Hironaka, 2005; Shorette, 2012). These linkages then propel the cross-national diffusion of environmental policies, laws, departments, and ministries and further treaty participation (Frank, 1997; Frank et al., 2000; Hironaka, 2002).

A common misconception of this work is the supposed uniform and equal adoption of environmental structures and protections at the national level. To the contrary, this work highlights the importance of (a) the strength of national ties to the global environmental regime, which vary considerably cross-nationally, and (b) the influence of state-level conditions, also varying considerably, in moderating policy diffusion. Nation-states do not blindly adopt norms of world society as if they were mandates for running a government. Instead, countries find ways to make these structures nationally relevant through various forms of innovation (Boyle, McMorris, & Gomez, 2002; Hironaka, 2014).

Previous work examines state environmental activities with this top-down theoretical framework of diffusion. Frank (1997) analyzes signatories to international environmental treaties, finding world society integration is a better predictor of a country's environmental treaty participation than political opportunity structures, degradation of the natural environment, affluence, or a nation's scientific capacity. Likewise, Hironaka (2002) concludes that nations adopt environmental impact assessment legislation when they have more ties to international organizations and international donors like the World Bank or aid-giving nations of the OECD. Importantly, she points out that environmental

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impact assessments are adopted despite the lack of a formal requirement to do so by any donor parties. Analyzing policies across three domains, Longhofer, Schofer, Miric, and Frank (2016) find evidence for the relative importance of the top-down influence of the global environmental regime compared to the bottom-up, actor-centric model of environmental policy reform.

In an expansion of this work, several studies examine the diffusion of globally legitimated models of discourse and association. Focusing on the worldwide spread of environmental discourse in particular, Bromley, Meyer, and Ramirez (2011) find that increased attention to the environment in secondary school social studies textbooks cross-nationally parallels both world environmental crises and the rise of the global environmental regime. Moreover, their analysis suggests that the increasing prevalence of environmental topics in textbooks is influenced more by global environmental norms and scripts than by national conditions (Bromley et al., 2011). Likewise, Longhofer and Schofer (2010) find that while domestic factors largely explain environmental organizing in the developed world, global forces tend to be the most powerful catalyst for environmental organizing in the developing world.

However, world society scholars have devoted less attention to the diffusion of environmental attitudes, which comprised much of the earlier research in environmental sociology (Catton & Dunlap, 1978; Dunlap & Van Liere, 1978, 1984) and long remained the purview of modernization and neo-Marxist scholars. The bulk of this work analyzes the relationship between ecological problems in the United States and traditional values and attitudes about abundance and progress (i.e., the "Human Exceptionalism Paradigm") compared to the more environmentally friendly view of conservation and protection (i.e., the "New Environmental Paradigm") (Buttel & Taylor, 1992; Dietz, Burns, & Buttel, 1990; Dunlap, Gallup, & Gallup, 1993; Dunlap, Van Liere, Mertig, & Jones, 2000). In contrast, classic studies in ecological modernization argued higher levels of development would produce more reflexive environmental attitudes as individuals began to weigh the costs and benefits of ecological disruption (Boserup, 1981; Grossman & Krueger, 1995; Ingelhart, 1997; Mol, 1997; Mol & Spaargaren, 2002; Mol, Spaargaren & Sonnenfeld, 2014).

4 | COUPLING NORMS AND PRACTICES: FROM LOOSE TO TIGHT

A key tenet of neoinstitutional theory contends that the formalization of policy is often decoupled from the daily practice of organizations (Bromley & Powell, 2012; Meyer & Rowan, 1977), perhaps because the task of implementing an adopted policy is too difficult or adopting the policy is a way to buffer an organization from external pressure. When extended to the level of nation-states, early critiques of world society theory questioned whether the diffusion of similar organizational structures and policies would actually lead to changes in environmental practice (Buttel, 2000). Are policy changes all myth and ceremony without consequences? Or do institutional structures affect concrete outcomes? These questions sparked the next stage of empirical work in the world society tradition. Subsequently, an important advancement in world society theory has been establishing the relationship between norms institutionalized in the global environmental regime and actual environmental outcomes.

Previous studies show that integration into the environmental world society is associated with a wide range of environmental improvements: Carbon dioxide emissions, deforestation, organic water pollution, and synthetic fertilizer and pesticide use have all been reduced or mitigated as a result of world society integration (Jorgenson, 2007; Jorgenson, Dick, & Shandra, 2011; Longhofer & Jorgenson, 2017; Shandra, 2007; Shorette, 2012). Global environmental change is, however, far from certain. Scholars have only begun to explain the causal mechanisms of environmental change stemming from global environmental culture, and often policies result in little or no environmental improvements.

World society norms affect the natural environment through numerous diffuse and indirect mechanisms (Hironaka, 2014; Schofer & Hironaka, 2005). It is the totality of structures in world society that contribute to environmental change rather than any specific individual, organization, or movement. Put simply, institutional structures created in world society have the potential to dramatically shape social change: They create workspaces to address environmental issues, produce a host of formal organizations devoted to various protection efforts (social movements,

nongovernmental organizations, political parties, scientists, and consultants), and facilitate shared cultural meaning surrounding the environment (Hironaka, 2014).

In a pioneering piece, Schofer and Hironaka (2005) find that structure, penetration, and persistence of the global environmental regime contribute to environmental improvements. They show that growth in INGOs, IGOs, and international environmental treaties reduces global emissions of harmful substances such as carbon dioxide and chloro-fluorocarbons (ozone-depleting compounds more commonly known as CFCs). Further studies find that countries that experience more world society penetration tend to see improved environmental outcomes (Jorgenson, 2009; Shandra, 2007).

Much like the research on diffusion, empirical work on the consequences of the environmental world society for environmental change "on the ground" have examined the effects of INGO linkages. While it is clear in this work that INGOs matter in a general sense, we know little about how they do so. One possibility is that INGO memberships operate at the individual level through environmental attitudes. In their study of attitudes toward female genital cutting in five African nations, Boyle et al. (2002) find evidence for the effect of global institutions—carrying modern values promoting female employment and education—on reducing the support for the practice. As mentioned above, world society scholars have tended to overlook attitudes, but recently, environmental sociologists have started to integrate world society perspectives into studies of environmental concern. Using data from the International Social Survey Programme, Hadler and Haller (2011) find that the effect of world society on individual environmental behavior is contingent on the national institutionalization of environmentalism (also Hadler, 2016). Similarly, Givens and Jorgenson (2013) find a positive relationship between the presence of environmental ministries and, to a greater extent, ties to environmental INGOs on individual environmental concern.

Another way world society can enact change is to offset drivers of global environmental harms produced by global capitalism. World systems theorists have shown that integration into the global capitalist economy disproportionately harms developing nations by increasing deforestation, biodiversity loss, and industrial emissions while subsequently reducing human health and well-being (Austin, 2012; Bunker, 1985; Chase-Dunn, 1989; Frey, 2003; Jorgenson & Rice, 2005; Rice, 2007; Shandra, Leckband, McKinney, & London, 2009; Smith & White, 1992; Wallerstein, 1974). However, empirical evidence has shown that countries more penetrated by world society experience less deforestation and emit less carbon dioxide relative to other countries in the same world system zone (Jorgenson et al., 2011; Shandra, 2007). Longhofer and Jorgenson (2017) further find that the relationship between economic growth and harmful greenhouse gas emissions weakens over time for countries more embedded in world society.

In addition to exploring how world society norms cause change, scholars have addressed when and under what conditions change can occur. The observable gap between policy and outcomes, or decoupling, has been observed in the realms of human rights (Cole & Ramirez, 2013; Hafner-Burton & Tsutsui, 2005), sex law reform (Frank, Hardinge, & Wosick-Correa, 2009), and environmental policy (Hironaka & Schofer, 2002; Shorette, 2012). Shorette (2012) considers the relationship between the benefits of improved legitimacy in the world system by adopting proenvironmental policies and the capacity of states to implement such measures. World system position is a strong mediator of decoupling in this case. Semiperipheral states have the most to gain from policy adoption but only moderate capacity to comply, whereas core states have the reverse relationship. As a result, environmental norms affect practices in these zones, but not in the periphery where the benefits of legitimacy and state capacity are both lacking.

The relationship between the global economy and global environmentalist culture should be further explored to explain tight and loose coupling. For example, what effect does export production have on environmentalist culture in the developing world? It is reasonable to hypothesize that pressure to produce goods for export dampens the effectiveness of proenvironmental norms in peripheral zones of the world system. Palm oil production in Indonesia or forest product exports in Brazil, for example, are likely to offset some of the gains made by environmental policy changes because of internal pressure to grow the economy, and international financial institutions may seek to frame global environmentalism as antithetical to national economic growth. Another unexplored source of decoupling may be economic development norms within world society. Economic development organizations such as the UNDP and OECD

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frequently stress the importance of commercial energy development for economic growth. Resultant policies could increase carbon-based energy use and lead to higher CO_2 emissions, contributing to global warming.

5 | STATE INSTITUTIONS IN AN ENVIRONMENTAL WORLD SOCIETY

The world society approach to explaining social change focuses on global institutions and their influence on states. However, researchers in the world society tradition have accorded very little analytical attention to the role of state institutions. In a notable exception, Cole's (2015) study of states' implementation of human rights standards suggests the importance of state institutions in mediating the top-down forces of world cultural norms. To date, the role of state capacity in contributing to environmental policy and practical and attitudinal change has been empirically neglected. In this section, we present an argument for the inclusion of state capacity in future environmental world society research. We suggest a theoretical and empirical expansion to explicitly examine the role of state institutions in mediating the effects of integration into the environmental world society, as well as the effects of integration on substate entities such as firms. In short, we consider the potential for the application of world society theory to meso-level social change.

Researchers have long taken a Weberian perspective of the state in global political-economy literatures (see Evans & Rauch, 1999; Evans, Rueschemeyer, & Skocpol, 1985; Hendrix, 2010; Shen & Williamson, 2001; Wade, 1990). This approach focuses on state institutions and their strength and capability, or "state capacity" (Dawson, 2010; Hendrix, 2010). Proponents of state capacity aimed to reassert the relative importance of the state to its internal functioning and global interactions (Evans et al., 1985; Tilly, 1985). The call to "bring the state back in" rests on the potential for states to mediate external factors and internal decisions, such as the export or redistribution of resources (Shen & Williamson, 2001).

Notably, previous work in the state capacity tradition situates itself exclusively in contrast to political economic forces external to the state. Researchers within this perspective aim to understand how state capacity impacts various outcomes including the natural environment (Crenshaw & Jenkins, 1996; Dawson, 2010; Jorgenson & Burns, 2007; Kitschelt, 1985; Marquart-Pyatt, 2004; Shandra et al., 2009; Vogel, 1986). Research in this field suggests that a state's ability to mobilize economic resources for governmental purposes helps them fend off global and internal political and economic pressures that cause and perpetuate environmental degradation, such as forest loss and carbon dioxide emissions (Ehrhardt-Martinez, Crenshaw, & Jenkins, 2002). However, empirical findings for the importance of state institutions vis-à-vis global political economic forces remain inconsistent (Jorgenson & Burns, 2007; Shandra, 2007; Shandra et al., 2009).

For future work, we suggest the consideration of the strength of state institutions vis-à-vis global institutions and the diffusion of environmentalism as a promising area of inquiry. From a world society perspective, structures of the state are an essential subject of inquiry where environmental protection is among the basic responsibilities of the modern state (Frank et al., 2000; Marquart-Pyatt, 2004). However, the extant literature does not reflect this priority.

In particular, varying levels of state capacity may explain differential decoupling in the implementation of environmental norms (Crenshaw & Jenkins, 1996; Evans, 1989; Kitschelt, 1985; Vogel, 1986). A state's capacity to mobilize resources, incorporate a civil society agenda, and promote development is key for alignment with the global environmental regime. Strong states should therefore be more adept at institutionalizing environmental norms and policies to create more ecologically efficient forms of production, consumption, and maintenance to reduce environmental degradation (Fisher & Freudenburg, 2004; Jorgenson & Burns, 2007).

Finally, we call for the application of world society theory to substate entities, such as firms. Early evidence suggests that ties to the global environmental regime are consequential for nonstate actors in the production of environmental harms. For example, Marquis, Toffel, and Zhou (2016) find that firms embedded in countries with more ties to the global environmental movement are less likely to selectively disclose, or "greenwash," their environmental impacts. Similarly, Grant, Jorgenson, and Longhofer (2016) examine the effect of world society on the efficiency of power plants, which remain the single largest contributor to harmful greenhouse gas emissions in most countries. By examining how national integration into world society interacts with the organizational characteristics of fossil fuel burning facilities, this research sheds light on the sites at which environmental improvements or decoupling is most likely to happen.

6 | MOVING FORWARD: CONFLICT AND CONTRADICTIONS

The Paris Agreement provides a useful lens through which to understand the environmental world society. Upon its arrival, European Commission President Jean-Claude Juncker invoked its universality, remarking that the "world is united in the fight against climate change." Yet there is already evidence of decoupling, as well. According to the Climate Action Tracker, an independent online assessment of countries' emissions commitments, many countries have adopted emissions inadequate to prevent a potentially catastrophic temperature increase.

The Paris Agreement also raises a new question largely left unexplored in the 20 years of research since Meyer, Frank, Hironaka, Schofer, and Tuma (1997): When (and why) do nations resist or pull away from world society? Little work has examined cycles of environmental retrenchment in world society, reinforcing the optimistic outlook seen in many world society studies (Hironaka, 2014). Yet the earlier case of Nicaragua's refusal to ratify the Paris Agreement is but one example of an emerging resistance to the global regime. Most notably, President Donald Trump has publicly stated his intent to pull out of the Paris Agreement and has proposed significant cuts to the budget of the U.S. Environmental Protection Agency. Despite the global primacy of environmental protection as a taken-for-granted institution, the institution itself is not necessarily stable. Even the most successful of global agreements, such as the Montreal Protocol to protect the ozone layer, are imbued with powerful state interests that circumvent the more stringent regulatory policies promoted by environmental INGOs (Gareau, 2013).

Future research should consider how ideas of modern actorhood that are constructed in world society can sometimes translate into forms of empowered agency that seem to run counter to those ideas. The work of Beck (2011, 2015) on revolutionary waves in world society provides some insights. These studies suggest revolutions occur in world society as tensions grow between universal principles and local circumstances. In particular, the expansion and intensification of world society can empower local opposition as well as fracture elites. Future research is thus needed to assess whether recent surges in nationalist and anti-environmentalist rhetoric are indicative of an ineffective or fragile world society, or whether they actually have their origins in it.

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REFERENCES

- Austin, K. (2012). Coffee exports as ecological, social, and physical unequal exchange: Cross-national investigation of the java trade. International Journal of Comparative Sociology, 53(3), 155–180.
- Beck, C. (2015). Radicals, revolutionaries, and terrorists. Cambridge, UK: Polity Press.
- Beck, C. J. (2011). The world-cultural origins of revolutionary waves: Five centuries of European contention. Social Science History, 35(2), 167–207.
- Boli, J., & Thomas, G. M. (Eds) (1999). Constructing world culture: International nongovernmental organizations since 1875. Stanford, CA: Stanford University Press.
- Boserup, E. (1981). Population and technological change: A study of long-term trends. Chicago, II.: University Of Chicago Press.
- Boyle, E. H., McMorris, B. J., & Gomez, M. (2002). Local conformity to international norms: The case of female genital cutting. International Sociology, 17(1), 5–33.
- Brenton, T. (1994). The greening of Machiavelli: The evolution of international environmental politics. London: Earthscan Publications Ltd.

Bromley, P., & Meyer, J. W. (2015). Hyper organization: Global organizational expansion. Oxford, UK: Oxford University Press.

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- Bromley, P., Meyer, J. W., & Ramirez, F. O. (2011). The worldwide spread of environmental discourse in social studies, history, and civics textbooks, 1970–2008. Comparative Education Review, 55(4), 517–545.
- Bromley, P., & Powell, W. W. (2012). From smoke and mirrors to walking the talk: Decoupling in the contemporary world. Academy of Management Annals, 6(1), 483–530.
- Bunker, S. G. (1985). Underdeveloping the Amazon: Extraction, unequal exchange, and the failure of the modern state. Chicago, IL: University of Chicago Press.
- Buttel, F. H. (2000). World society, the nation-state, and environmental protection: Comment on Frank, Hironaka, and Schofer. American Sociological Review, 65(1), 117–121.
- Buttel, F. H., & Taylor, P. J. (1992). Environmental sociology and global environmental change: A critical assessment. Society & Natural Resources, 5(3), 211–230.
- Catton, W. R. Jr., & Dunlap, R. E. (1978). Environmental sociology: A new paradigm. The American Sociologist, 41-49.
- Chase-Dunn, C. (1989). Global formation: Structures of the world economy. Cambridge, MA: Blackwell.
- Cole, W. M. (2015). Mind the gap: State capacity and the implementation of human rights treaties. *International Organization*, 69(2), 415–441.
- Cole, W. M., & Ramirez, F. O. (2013). Conditional decoupling assessing the impact of national human rights institutions, 1981 to 2004. American Sociological Review, 78(4), 702–725.
- Crenshaw, E. M., & Jenkins, J. C. (1996). Social structure and global climate change: Sociological propositions concerning the greenhouse effect. *Sociological Focus*, 29(4), 341–358.
- Dawson, A. (2010). State capacity and the political economy of child mortality in developing countries revisited: From fiscal sociology towards the rule of law. *International Journal of Comparative Sociology*, 51(6), 403–422.
- Dietz, T., Burns, T. R., & Buttel, F. H. (1990). Evolutionary theory in sociology: An examination of current thinking. Sociological Forum, 5(2), 155–171.
- DiMaggio, P., & Powell, W. W. (1983). The iron cage revisited: Collective rationality and institutional isomorphism in organizational fields. *American Sociological Review*, 48(2), 147–160.
- Dunlap, R. E., Gallup, G. H. Jr., & Gallup, A. M. (1993). Of global concern: Results of the health of the planet survey. Environment: Science and Policy for Sustainable Development, 35(9), 7–39.
- Dunlap, R. E., & Van Liere, K. D. (1978). The "new environmental paradigm". The Journal of Environmental Education, 9(4), 10–19.
- Dunlap, R. E., & Van Liere, K. D. (1984). Commitment to the dominant social paradigm and concern for environmental quality. Social Science Quarterly, 65(4), 1013.
- Dunlap, R. E., Van Liere, K. D., Mertig, A. G., & Jones, R. E. (2000). New trends in measuring environmental attitudes: Measuring endorsement of the new ecological paradigm: A revised NEP scale. *Journal of Social Issues*, 56(3), 425–442.
- Ehrhardt-Martinez, K., Crenshaw, E. M., & Jenkins, J. C. (2002). Deforestation and the environmental Kuznets curve: A crossnational investigation of intervening mechanisms. Social Science Quarterly, 83(1), 226–243.
- Evans, P., & Rauch, J. E. (1999). Bureaucracy and growth: A cross-national analysis of the effects of "Weberian" state structures on economic growth. American Sociological Review, 748–765.
- Evans, P. B. (1989). Predatory, developmental, and other apparatuses: A comparative political economy perspective on the third world state. *Sociological Forum*, 4(4), 561–587.
- Evans, P. B., Rueschemeyer, D., & Skocpol, T. (Eds) (1985). Bringing the state back in. Cambridge, UK: Cambridge University Press.
- Fisher, D., & Freudenburg, W. R. (2004). Postindustrialization and environmental quality: An empirical analysis of the environmental state. Social Forces, 83(1), 157–188.
- Frank, A. G. (1969). Capitalism and underdevelopment in Latin America: Historical studies of Chile and Brazil. New York: Monthly Review Press.
- Frank, D. (2002). The origins question: Building global institutions to protect nature. In A. J. Hoffman, & M. Ventresca (Eds.), Organizations, policy and the natural environment: Institutional and strategic perspectives. Stanford, CA: Stanford University Press.
- Frank, D. J. (1997). Science, nature, and the globalization of the environment, 1870–1990. Social Forces, 76, 409.
- Frank, D. J., Hardinge, T., & Wosick-Correa, K. (2009). The global dimensions of rape-law reform: A cross-national study of policy outcomes. American Sociological Review, 74(2), 272–290.
- Frank, D. J., Hironaka, A., & Schofer, E. (2000). The nation-state and the natural environment over the twentieth century. American Sociological Review, 96–116.

- Frey, R. S. (2003). The transfer of core-based hazardous production processes to the export processing zones of the periphery: The maquiladora centers of northern Mexico. *Journal of World-Systems Research*, 9(2), 317–354.
- Gareau, B. J. (2013). From precaution to profit: contemporary challenges to environmental protection in the Montreal Protocol. New Haven, CT: Yale University Press.
- Givens, J. E., & Jorgenson, A. K. (2013). Individual environmental concern in the world polity: A multilevel analysis. Social Science Research, 42(2), 418–431.
- Gould, K. A., Pellow, D. N., & Schnaiberg, A. (2015). Treadmill of production: Injustice and unsustainability in the global economy. New York: Routledge.
- Grant, D., Jorgenson, A. K., & Longhofer, W. (2016). How organizational and global factors condition the effects of energy efficiency on CO₂ emission rebounds among the world's power plants. *Energy Policy*, *94*, 89–93.
- Grossman, G. M., & Krueger, A. B. (1995). Economic growth and the environment. *The Quarterly Journal of Economics*, 110(2), 353–377.
- Hadler, M. (2016). Individual action, world society, and environmental change: 1993–2010. European Journal of Political and Cultural Sociology, 3(2-3), 341–374.
- Hadler, M., & Haller, M. (2011). Global activism and nationally driven recycling: The influence of world society and national contexts on public and private environmental behavior. *International Sociology*, *26*(3), 315–345.
- Hafner-Burton, E. M., & Tsutsui, K. (2005). Human rights in a globalizing world: The paradox of empty promises. American Journal of Sociology, 110(5), 1373–1411.
- Hall, P. A., & Lamont, M. (2013). Why social relations matter for politics and successful societies. Annual Review of Political Science, 16, 49–71.
- Hendrix, C. S. (2010). Measuring state capacity: Theoretical and empirical implications for the study of civil conflict. Journal of Peace Research, 47(3), 273–285.
- Hironaka, A. (2002). The globalization of environmental protection: The case of environmental impact assessment. International Journal of Comparative Sociology, 43(1), 65–78.
- Hironaka, A. (2014). Greening the globe: World society and environmental change. Cambridge, UK: Cambridge University Press.
- Hironaka, A., & Schofer, E. (2002). Decoupling in the environmental arena: The case of environmental impact assessments. In A. J. Hoffman, & M. J. Ventresca (Eds.), Organizations, policy and the natural environment: institutional and strategic perspectives. Stanford, CA: Stanford University Press.
- Ingelhart, R. F. (1997). Modernization and postmodernization: Cultural, economic and political change in 43 societies. Princeton, NJ: Princeton University Press.
- Jorgenson, A. K. (2007). Foreign direct investment and pesticide use intensity in less-developed countries: A quantitative investigation. Society and Natural Resources, 20(1), 73–83.
- Jorgenson, A. K. (2009). Foreign direct investment and the environment, the mitigating influence of institutional and civil society factors, and relationships between industrial pollution and human health: A panel study of less-developed countries. *Organization & Environment*, 22(2), 135–157.
- Jorgenson, A. K., & Burns, T. J. (2007). Effects of rural and urban population dynamics and national development on deforestation in less-developed countries, 1990–2000. Sociological Inquiry, 77(3), 460–482.
- Jorgenson, A. K., Dick, C., & Shandra, J. M. (2011). World economy, world society, and environmental harms in less-developed countries. Sociological Inquiry, 81(1), 53–87.
- Jorgenson, A. K., & Rice, J. (2005). Structural dynamics of international trade and material consumption: A crossnational study of the ecological footprints of less-developed countries. *Journal of World-Systems Research*, 11 (1), 57–77.
- Kitschelt, H. (1985). New social movements in West Germany and the United States. Political Power and Social Theory, 5, 273–324.
- Levick, K. (2016). From Paris to New York: Acceleration of climate action. CDP. Retrieved from https://www.cdp.net/en/articles/governments/from-paris-to-new-york-acceleration-of-climate-action
- Longhofer, W., & Jorgenson, A. (2017). Decoupling reconsidered: Does world society integration influence the relationship between the environment and economic development? *Social Science Research*, *65*, 17–29.
- Longhofer, W., & Schofer, E. (2010). National and global origins of environmental association. *American Sociological Review*, 75 (4), 505–533.
- Longhofer, W., Schofer, E., Miric, N., & Frank, D. J. (2016). NGOs, INGOs, and environmental policy reform, 1970–2010. Social Forces, 94(4), 1743–1768.

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- Marquart-Pyatt, S. (2004). A cross-national investigation of deforestation, debt, state fiscal capacity, and the environmental Kuznets curve. *International Journal of Sociology*, 34(1), 33–51.
- Marquis, C., Toffel, M., & Zhou, Y. (2016). Scrutiny, norms, and selective disclosure: A global study of greenwashing. Organization Science, 27(2), 483–504.
- McAdam, D. (1982). Political process and the development of black insurgency, 1930–1970. Chicago, IL: University of Chicago Press.
- Meyer, D. S., & Minkoff, D. C. (2004). Conceptualizing political opportunity. Social Forces, 82(4), 1457-1492.
- Meyer, J. W. (2004). The nation as Babbitt: How countries conform. Contexts, 3(3), 42-47.
- Meyer, J. W. (2010). World society, institutional theories, and the actor. Annual Review of Sociology, 36, 1-20.
- Meyer, J. W., Boli, J., Thomas, G. M., & Ramirez, F. O. (1997). World society and the nation-state. American Journal of sociology, 103(1), 144–181.
- Meyer, J. W., Frank, D. J., Hironaka, A., Schofer, E., & Tuma, N. B. (1997). The structuring of a world environmental regime, 1870–1990. International Organization, 51(04), 623–651.
- Meyer, J. W., Ramirez, F. O., & Soysal, Y. N. (1992). World expansion of mass education, 1870–1980. Sociology of Education, 128–149.
- Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. American Journal of Sociology, 83(2), 340–363.
- Mol, A. P. (1997). Ecological modernization: Industrial transformations and environmental reform. In M. Redclift, & G. Woodgate (Eds.), *The international handbook of environmental sociology* (pp. 138–149). Northhampton, MA: Edward Elgar.
- Mol, A. P., & Spaargaren, G. (2002). Ecological modernization and the environmental state. In A. P. J. Mol, & F. H. Buttel (Eds.), *The environmental state under pressure* (pp. 33–52). West Yorkshire, UK: Emerald Group Publishing Limited.
- Mol, A. P., Spaargaren, G., & Sonnenfeld, D. A. (2014). Ecological modernization theory: Taking stock, moving forward. In S. Lockie, D. A. Sonnenfeld, & D. Fisher (Eds.), Routledge handbook of social and environmental change (pp. 15–30). New York, NY: Taylor & Francis.
- Rice, J. (2007). Ecological unequal exchange: International trade and uneven utilization of environmental space in the world system. Social Forces, 85(3), 1369–1392.
- Schneiberg, M., & Clemens, E. S. (2006). The typical tools for the job: Research strategies in institutional analysis. Sociological Theory, 24(3), 195–227.
- Schofer, E., & Hironaka, A. (2005). The effects of world society on environmental protection outcomes. Social Forces, 84(1), 25–47.
- Schofer, E., Hironaka, A., Frank, D. J., & Longhofer, W. (2012). Sociological institutionalism and world society. In E. Amenta, K. Nash, & A. Scott (Eds.), The Wiley-Blackwell companion to political sociology (pp. 57–68). Oxford, UK: Wiley-Blackwell.
- Shandra, J. M. (2007). The world polity and deforestation a quantitative, cross-national analysis. International Journal of Comparative Sociology, 48(1), 5–27.
- Shandra, J. M., Leckband, C., McKinney, L. A., & London, B. (2009). Ecologically unequal exchange, world polity, and biodiversity loss: A cross-national analysis of threatened mammals. *International Journal of Comparative Sociology*, 50(3-4), 285–310.
- Shen, C., & Williamson, J. B. (2001). Accounting for cross-national differences in infant mortality decline (1965–1991) among less developed countries: Effects of women's status, economic dependency, and state strength. Social Indicators Research, 53(3), 257–288.
- Shorette, K. (2012). Outcomes of global environmentalism: Longitudinal and cross-national trends in chemical fertilizer and pesticide use. Social Forces, 91(1), 299–325.
- Smith, D. A., & White, D. R. (1992). Structure and dynamics of the global economy: Network analysis of international trade 1965–1980. Social Forces, 857–893.
- Spaargaren, G., & Mol, A. P. (1992). Sociology, environment, and modernity: Ecological modernization as a theory of social change. Society & Natural Resources, 5(4), 323–344.
- Tilly, C. (1985). War making and state making as organized crime. In C. Besteman (Ed.), *Violence: A reader* (pp. 35–60). New York: New York University Press.
- Vogel, D. (1986). National styles of regulation: Environmental policy in Great Britain and the United States (Vol. 242). Ithaca, NY: Cornell University Press.

- Wade, R. (1990). Governing the market: Economic theory and the role of government in East Asian industrialization. Princeton, NJ: Princeton University Press.
- Wallerstein, I. (1974). The modern world-system I: Capitalist agriculture and the origins of the European world-economy in the sixteenth century (Vol. 1). New York: Academic Press.

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