



Environment & Society Portal



The White Horse Press

Full citation: Simmons, I.G. "The World Scale." *Environment and History* 10, no. 4, 10th Anniversary Issue (November 2004): 531–36.
<http://www.environmentandsociety.org/node/3219>.

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The World Scale

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ABSTRACT

A brief review of some of the major publications in environmental history at the worldwide and global scales suggests that authors are engaging in more studies that eschew a single approach. They are undertaking the necessary but risky tasks of trying to understand and integrate the knowledges pointed up by many disciplines and by experience. The prospects for progress look bright.

KEYWORDS

Global, worldwide, holocene, epistemology, historiography

Entering 'Global Environmental Change' into a well-known internet search engine yields about two million hits. Yet many of them will not be about the global at all in the sense of an interconnected net that transfers energy and matter over any and all parts of the planet. Many will be worldwide in the sense of occurring in many parts of the Earth but will not necessarily be connected. (Gaseous emissions would be an example of the first category and soil erosion the second.) It is a worthwhile distinction to look for when assessing the work at this the broadest of scales. Another separation to make is between written histories and those in other media, though here the former must dominate. Words and words-as-graphics excel in histories, however, since they can be made into a linear narrative in a way that a painting usually cannot.

GENERAL ENVIRONMENTAL HISTORIES

Few writers of world histories of any kind would these days dare to omit 'the environment' even if the mention is cursory and, usually, confined to examples

of degradation, anxieties of some variety or the waving of the flag of 'sustainability'. Occasionally, environmental determinism pops up in a disguised form but mostly it is 'the human impact upon nature' that is mentioned. A few examples of environmental history for a general readership have appeared that are not confined to a specific region or habitat type but deal with the environmental content in *Civilizations*.¹ Other examples have come from political scientists and natural scientists and have a basic theme, such as the key role of certain technologies (*Guns ... and Steel*²) or an overall trend towards social and environmental instability (... *collapse of great civilisations*³). Though the basic stages of the ecology of human evolution are chronicled (e.g., agriculture, industrialism, electronics⁴) selectivity is exercised by arraying material to a theme or by selecting 'turning points' of particular significance. A discussion of whether the present time is such an era is also possible, as it was in the first major example of writing about *The Turning Point*,⁵ though that was a history of ideas, around which a *structure of human history*⁶ in the long-term can be constructed with environmental relevance rather than focussing on biophysical change. So the overall outcome of these types of work seems to be a choice between a selection of empirical evidence with a concentration on the role of technology as driving environmental metamorphoses or an outline account of ideologies with the implication that they are the essential drivers of most forms of biospheric conversion.⁷

TARGETED ENVIRONMENTAL HISTORIES

The rise of a student market has spawned a number of regional and national texts but also a few which aim at the world scale, with an assumption of the assimilation of separate ecologies into a global system united by biotic transfer and gaseous diffusion. One approach is to deal with the whole of the Holocene but to select case examples well known to the author and another is to select a period which is acknowledged to be critical in the evolution of human environments. In the case of the first, a thread running through all the periods is the *community of life*,⁸ which directs attention towards an ecological ideology; in the second, the twentieth century produces *Something New Under the Sun*,⁹ tying it in with the notion of turning points, albeit in this case empirical rather than largely based on ideas. This book was the first synoptic treatment that excluded neither place nor topic.

One other target audience is perhaps an academic community which is interested in the possibilities of environmental history either as an emerging discipline or beyond that to a field with policy relevance. The main vehicles for this undertaking have been the multi-author book or collection of essays. This might suggest that the field is in an early stage of development, looking for ideas and themes as nuclei for intellectual crystallisation. *The Face of the*

Earth,¹⁰ its *Ends*,¹¹ its *Course*¹² and its *System History*,¹³ all act as bivouac titles for a wide variety of material moving towards the world scale but acknowledging the more local along the way. The idea of system history directs the Global Environmental Change worker to an interface with the well-established ideas and controversies about the development of a *World System*:¹⁴ its historical depth and the reasons for its growth. Environmentally, this is the story of the incorporation of local economies and ecologies into progressively larger systems with correspondingly greater manipulation of nature,¹⁵ whether this be industrialised regions with urban development and many emissions, or a shifting frontier of intensive resource exploitation such as logging of old-growth forests. Thus in any language, the ecological footprint (*Mennesketts fotavtrykk*¹⁶ for example) of humanity is transformed from the patter of tiny feet to a crushing boot of Pythonesque proportions. 'World system' is however sometimes taken to mean 'over long distances' without being truly global or indeed world-wide. The influence of models of centre-periphery relationships is still very strong and sometimes assumed; more post-modern questions of polyfocality have yet to find an avatar in this area of historiography. Just how far these histories fulfil the Worster criterion of dealing with 'bedrock historical issues shared by virtually every nation today'¹⁷ is a subject for a far longer paper; an attempt to structure a world history textbook around *worlds together, worlds apart*¹⁸ never quite integrates environmental material into the social and economic narrative.

ARE THEY LEADING ANYWHERE?

There seems little doubt that many studies lead towards a future or futures. The immensely important work of the IGBP's PAGES (Past Global Changes) programme for example is designed to provide a science-based time-perspective to the intergovernmental work on climatic change in terms of the *Future*¹⁹ and its *Challenges*.²⁰ Freed from the caution of the natural sciences, many historians with an environmentalist outlook are willing to predict that *Degradation*²¹ is the likely outcome of 8000 years of human tenure of the Earth, helped along by such world-system processes as the kind of disease transfer which can be seen as retribution for the *biological expansion*²² of imperialist powers. Here is a hint that environmental determinism is not entirely dead: if yellow fever could have steered the course (via sugar plantations as a breeding ground for *Anopheles aegyptii*) of political history in the Caribbean, then climatic change can take centre stage without difficulty, especially when strong *El Niño*²³ years seem to produce parallel phenomena in widely separated regions or when in the past climatic change appears to have coincided with the collapse of civilisations around the globe. Historians can perhaps be seduced by the scientific evidence into assuming causal relationships and may need to expand their insistence

on local evidence of mechanisms, since socio-cultural factors may be more important in the collapse of *complex societies*²⁴ in particular.

INTELLECTUAL EVOLUTION

The global scale has two main intertwined threads. The first comes with a strong colouring of natural science and has its roots in historical studies of the past with an ecological basis, though some current interpretations of *historical ecology*²⁵ may go beyond that position. The second is provided by historians and other social scientists paying attention to the normal textures of their trade. There are difficulties still in interfacing the two in common languages: natural science still finds it hard to abandon notions of the supremacy of the natural world at the largest scales, even if locally thinking can outwit the global flows of nature; social scientists are apt to accept the hard-edged numbers that come from the palaeoenvironmental work without carefully examining the kind of errors inherent in such data. Flows common to the human and natural worlds, such as energy (and *environment*,²⁶ its *systems*²⁷ and *prospects*²⁸), provide a quantitative basis of apparent fact but are not necessarily explicatory. At the other margin, there is not much appetite for weaving into the web of understanding the 'softer' concepts of the humanities and in particular the apparently less rational side of being human: emotions and myths, for example, though the history of *fire*²⁹ worldwide has perhaps pioneered the way in refusing to ignore such factors. (Perhaps humans are too bound up in their present resource-environment myths to be comfortable with the story of Prometheus.) Everybody treads warily round notions of chance and contingency since they can make nonsense of any statement that looks forward as well as back. The coalescence of the economic and the ecological in the *free trade*³⁰ globality now being enforced is possibly politics rather than history but as that system's tentacles grasp ever tighter, it needs its environmentally-aware chroniclers.

So there is work to be done: in collecting more evidence for the past from all kinds of sources; in archiving it so that it is freely available to those who wish to work with it; in finding ways of ordering it that satisfy the demands of intellectual coherence (i.e., what gets left out?) and indeed the flow of it to non-specialists and much wider audiences; in watching other disciplines such as *Geography* for their possible contributions;³¹ and in issuing cautions to those whose only interest is to bolster rather too generalised a case for 'sustainability'. But the field is a long way from the unintegrated beginnings of *Mother Earth*³² and the rather limited outlook of the classic *Man's Role*;³³ progress requires a grounding in the disciplines of conventional scholarship, to be sure (as in the post-1700 studies of *Transformations*³⁴), but also a willingness to consider and to weave together many types of information. The young would be best at it but are apt to fear for their careers, so maybe it is the unsackable and unpromote-

able who have the greatest responsibility: as Eliot said, ‘old men ought to be explorers’.³⁵

NOTES

¹ F. Fernández-Armesto, *Civilizations* (London: Macmillan, 2000).

² J. Diamond, *Guns, Germs and Steel* (London: Cape, 1977).

³ C. Ponting, *A Green History of the World: The Environment and the Collapse of Great Civilisations* (London: Sinclair-Stevenson, 1991).

⁴ An early example is R. A. Watson and P. J. Watson, *Man and Nature: An Anthropological Essay in Human Ecology* (New York: Harcourt Brace and World, 1969).

⁵ F. Capra, *The Turning Point: Science, Society and the Rising Culture* (New York: Simon and Schuster, 1982). Capra’s earlier *The Tao of Physics* (Berkeley: Shambhala Press, 1975) was really famous at the time and inspired several imitators from quantum physics, whose influence is still felt in ideas about chaos, complexity and contingency.

⁶ E. Gellner, *Plough, Sword and Book: The Structure of Human History* (Chicago: Chicago University Press, 1988).

⁷ See for example the variety of topics in L. Jeleček et al. (eds.), *Dealing with Diversity*, Proceedings of the 2nd International Conference of the European Society for Environmental History (Prague: Charles University, 2003).

⁸ J.D. Hughes, *An Environmental History of the World: Humankind’s Changing Role in the Community of Life* (London and New York: Routledge, 2001); there is a good bibliographic essay (pp. 242–8) which can be supplemented by updates from the websites of e.g., the American and the European Societies for Environmental History.

⁹ J. McNeill, *Something New under the Sun: An Environmental History of the Twentieth Century World* (London: Allen Lane, 2000); his references embrace more than one language, which is unusual and very impressive.

¹⁰ J.D. Hughes, (ed.), *The Face of the Earth: Environment and World History* (Armonk, NY: M.E. Sharpe, 2000).

¹¹ D. Worster (ed.), *The Ends of the Earth: Perspectives on Modern Environmental History* (Cambridge: Cambridge University Press, 1988).

¹² J. Goudsblom et al. (eds.), *The Course of Human History* (Armonk, NY: M.E. Sharpe, 1996).

¹³ R. Denemark et al. (eds.), *World System History* (London and New York: Routledge, 2000).

¹⁴ A.G. Frank and B.K. Gills (eds.), *The World System: Five Hundred Years or Five Thousand?* (London and New York: Routledge, 1993); I.M. Wallerstein, *The Modern World System I-III* (San Diego: Academic Press, 1974–1989).

¹⁵ R.C. Hoffman, ‘A longer view: is industrial metabolism really the problem?’, *Innovation*, 14(2001): 143–55.

¹⁶ H. Ibsen, *Mennesketts Fotavtrykk: en oekologisk verdenshistorie* (Oslo: Tano Aschehoug, 1997).

- ¹⁷ D. Worster, 'World without borders: the internationalizing of environmental history', *Environmental Review* 6(1982): 8–13.
- ¹⁸ R. Tignor and 6 co-authors, *Worlds Together, Worlds Apart* (New York and London: W.W. Norton, 2002).
- ¹⁹ K.D. Alverson, R.S. Bradley and T.F. Pedersen (eds.), *Paleoclimate, Global Change and the Future* (Berlin: Springer, 2003).
- ²⁰ W. Steffen, J. Jäger, D.J. Carson and C. Bradshaw (eds.), *Challenges of a Changing Earth* (Berlin: Springer, 2003).
- ²¹ S.C. Chew, *World Ecological Degradation: Accumulation, Urbanization and Deforestation 3000 B.C.–A.D. 2000* (Walnut Creek: Alta Mira Press, 2001).
- ²² A.W. Crosby, *Ecological Imperialism: The Biological Expansion of Europe 900–1900* (Cambridge: Cambridge University Press, 1986).
- ²³ R.H. Grove and J. Chappell (eds.), *El Niño : History and Crisis. Studies from the Asia-Pacific Region* (Cambridge: White Horse Press, 2000); M. Davis, *Late Victorian Holocausts: El Niño Famines and the Making of the Third World* (London and New York: Verso, 2001).
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- ²⁶ J. Martínez-Alier, *Ecological Economics: Energy, Environment and Society* (Oxford: Blackwell, 1987).
- ²⁷ R.P. Sieferle, *The Subterranean Forest: Energy Systems and the Industrial Revolution* (Cambridge: White Horse Press, 2001).
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- ²⁹ S. Pyne, *World Fire: The Culture of Fire on Earth* (New York: Holt, 1995).
- ³⁰ J.D. Hughes, 'Global dimensions of environmental history', *Pacific Historical Review* 70(2000): 91–101; *idem*, 'Are there common themes in world environmental history?', in Jeleček et al., *Dealing with Diversity*, pp. 294–8.
- ³¹ D. Demeritt, 'The nature of metaphors in cultural geography and environmental history', *Progress in Human Geography*, 18(1994): 163–85; M. Williams, 'The relations of environmental history and historical geography', *Journal of Historical Geography* 20(1994): 3–21.
- ³² A. Toynbee, *Mankind and Mother Earth: A Narrative History of the World* (Oxford: Oxford University Press, 1976).
- ³³ W.L. Thomas (ed.), *Man's Role in Changing the Face of the Earth* (Chicago: Chicago University Press, 1956).
- ³⁴ B.L. Turner et al. (eds.), *The Earth as Transformed by Human Action: Global and Regional Changes in the Last 300 years* (Cambridge: Cambridge University Press, 1990).
- ³⁵ In *Four Quartets*, III, *The Dry Salvages*. Let us hope he meant women as well.