

THESES ON RADKAU

*Comment on Joachim Radkau's lecture, delivered at the GHI,
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In 1845, the young Marx wrote his "Theses on Feuerbach," published some four decades later in 1886 by Engels. This was Marx at his most philosophical, grappling with the moral responsibilities of intellectuals. He concluded with an eleventh thesis, which consisted of the famous aphorism: "The philosophers have only interpreted the world; the point is to change it."¹

Here I shall offer a mere ten theses on Radkau, regrettably without any pithy aphorisms. This should not be interpreted to mean that he is any less worthy of attention than was Feuerbach—he is certainly more comprehensible. Rather, it is a format that responds directly to the organization of Radkau's article, and is intended to ease the navigation between the two texts.

The domain of Radkau's ten points is the environmental history of the world, territory that Radkau explored in his book *Natur und Macht* (2000).² The intent is to identify those respects in which European environmental history (here confined mainly to Central and Western Europe) follows its own trajectory, and those respects in which its trajectory is shared elsewhere around the world. This is an ambitious and intrinsically interesting pursuit, which requires command of an immensity of data, not merely from history but ranging into the natural sciences from anthropology through zoology. The difficulties are enormous, but the rewards are too.

1. In his plea for caution in regard to the spiritual approach, Radkau is if anything too cautious. Not only has Elvin's research in Chinese environmental history undermined the naïve position that eastern religions brought gentle treatment of earthly environments, but the whole premise of the argument advanced by Lynn White was convincingly refuted not long after White published it.³ The main difficulty with religious arguments is that individuals and institutions are capable of bending or ignoring religious (and any other) precepts as occasions seem to warrant. Economic necessity or opportunity inspires endless ingenuity in the reinterpretation of principles. So has (and does) anxiety about security. Thucydides remarks on much the same thing in his passage on the Corcyran revolution, where he wrote (Book III, chapter 82) that revolution is a stern master that brings men's character down to the level of their

circumstances. Convictions are easily compromised or abandoned when confronted by necessity or even convenience. This is not true of all people of course; merely most of us.

2. In calling for an institutional approach to environmental history, Radkau is also surely on firm ground. The sustained collective behavior of the many is normally more decisive than the ideas or actions of individuals, perhaps more so in environmental history than in most other varieties, e.g. military history where a single decision may have vast and enduring consequences. Here Radkau argues that there are elements of European exceptionalism in the long-term importance of law, especially as it restrains the state, and in the widespread institution of private property. This is an interesting assertion, but not, to my mind, convincingly demonstrated. Were not Islamic potentates also constrained by law, even to the point where ordinary people could sometimes use the law against the state? Did not the Chinese gentry (before 1949) enjoy private property in land? It seems to me uncertain that these institutions and practices were confined to Europe, or were even more prominent in Europe than elsewhere. Before the nineteenth century, many parts of Europe had extensive common lands; the property regime was a complex one, in which private property was only one element. But Radkau is surely right to focus on the significance of property regimes for environmental change. Different arrangements entailed different incentives and risks for users of land and other resources, provoking different behavior and different consequences.⁴

3. In drawing attention to the unusual presence of livestock in European life, Radkau is at once following a well-trodden trail and making a new suggestion. As he recognizes, this characteristic has often been cited as a source of European military or economic advantage. In this respect, Europe was probably distinctive among agrarian societies, although obviously only in degree. Indeed, Andrew Sherratt has shown that heavy reliance on livestock was a European characteristic from the time when the Neolithic complex first took hold in Europe, about 7,000 to 4,000 B.C.⁵ Did the balance between field and pasture help stabilize agrarian ecosystems, specifically by slowing or eliminating fertility loss? It may well have done so, precisely because livestock could browse in forests, meadows, heaths, and other non-arable lands, and via their manure provide a reliable nutrient subsidy to farmers' fields.

It does seem that in comparative perspective Central and Western European agriculture before chemical fertilizers showed remarkable sustainability. This of course derived from a number of things, not merely livestock and manure, but also, for instance, an equable climate. Another was the resort from at least the fifteenth century onwards to nitrogen-fixing fodder crops such as alfalfa and clover.⁶ Beyond that, while Euro-

pean agriculture may have shown remarkable stability, it did not show unique stability. Other societies found other routes to the same end. For example, Egypt, from Pharaonic times until the construction of the Aswan Dam in the 1960s, featured an extraordinary agricultural continuity based on the annual flood of the Nile with its silt subsidy from the Ethiopian highlands. The fishpond-silkworm-rice paddy complex of southern China, which developed at least as early as the Song Dynasty, is another example of an agricultural system that endured without significant degradation or disruption over many centuries. Agriculture that received reliable nutrient subsidies in the form of nightsoil (human excrement) could also prove very stable over the centuries. This practice is mentioned in Homer's *Odyssey*, and so presumably existed in Bronze Age Greece, but probably was most institutionalized in Japan and parts of China. Lastly, long-fallow shifting agriculture could also be very stable over long periods of time if population growth did not require shortening the duration of fallow. So with respect to the balance between pasture and field, one can say that the European path was probably a special one, but that a few other societies reached the same destination (agricultural stability and near-sustainability) along different paths.

4. The Western European marriage pattern is a fascinating subject that has attracted considerable attention ever since Hajnal pointed it out in 1965. No one, to my knowledge, has systematically considered its ecological significance. It was, as Radkau suggests, probably of utmost importance in stabilizing population/resource ratios.⁷ Late marriage and socially suppressed fertility, which allowed societies to adjust population levels to resource availability, surely evened out some of the fluctuations in resource exploitation. The question remains, however, whether or not this was genuinely peculiar to Europe. Some recent scholarship considering the limited Chinese data puts this in doubt; and it is beyond doubt that from at least 1600 Japanese society systematically suppressed fertility and thus, like Western European societies, had the capacity to raise it when circumstances warranted, for example in the wake of an epidemic. The Chinese studies are not definitive because the quality and quantity of the data are weak, relying heavily, for example, on records pertaining to the imperial lineage of the Qing Dynasty, which might not be representative of the population at large. But these studies at the very least raise serious questions about the notion that Chinese population growth went unconstrained by social checks on fertility. The new evidence suggests that patriarchs exerted great power over their extended families, and, as it were, granted licenses to married couples to have babies. Through abstinence, abortion, infanticide, and perhaps other means, young couples avoided births and children that they, or at least the patriarch of their family, did not want. Of course, in chaotic times the patriarchs lost their

authority over young people, and fertility surged, as for example during the Mao years. If this revised appreciation of Chinese fertility history is correct, it poses problems for Radkau (and others) who emphasize Chinese population growth and attribute it to unchecked fertility. It may be that here, as with Radkau's third point, Europe's specific path was distinctive, but other societies reached the same destination (socially controlled fertility) via other paths. The mix of infanticide, abortion, abstinence within marriage, postponed marriage, and constraints on remarriage differed from case to case, but in Japan, possibly in China, as well as in Europe, societies could adjust population size to fit economic and ecological circumstances. That said, however, it may still be the case that Europe's mechanisms of fertility control were more precise or more effective than those elsewhere. This remains a promising and important field for research for Europe and the rest of the world alike, one that unites social, demographic, economic, and environmental history.⁸

5. Radkau's fifth point is closely connected to his third. Radkau considers sustainability explicitly here, wondering whether steppe nomads had a sustainable society and commenting on the self-conscious sustainability of German forest management. With respect to sustainable agriculture, the long-term champion, as I noted above, was Egypt, although this was due to special circumstances prudently exploited by Egyptian farmers. With respect to steppe nomads, it seems to me likely that their habits sometimes were sustainable and sometimes not. The key variable was probably livestock populations, which were subject to change on account of a number of forces, including epizootics as well as supplies of water and grass. On the semi-arid and arid steppelands, marginal differences in climate could have great effects, so the concept of sustainability is complicated by sharp oscillations in ecological conditions. A given density of livestock population might be entirely sustainable for five years but completely unsustainable for the next five. In any case, the historical work on these subjects for the steppe has not been done, so far as I know. Contemporary anthropology seems to support Radkau's doubts about the sustainability of nomadic society.⁹ Perhaps it is best to think of steppe nomads as practicing a sometimes unsustainable economy but with a resilient society, so that after calamities both human and livestock populations rebounded and reclaimed their territories. After all, pastoral nomads in Eurasia managed to survive, albeit with frequent difficulties, for several millennia. That they have in recent centuries become marginal rather than prominent in history is a matter of politics and power, rather than of ecology and sustainability.

6. The nexus between forests and power is also a fascinating subject. Radkau suggests that Europe's experience may be different from China's and India's, at least since medieval times, because states and peasants had

a shared interest in and acceptance of the principle of forest conservation. States needed forests for naval timber; peasants needed them for fuel-wood, and for nuts and berries; and peasant livestock needed them for browse—shoots and shrubs to get them through the winters. It seems that forest protection for naval purposes was rare in India and China. This may be so, although it could also be an impression derived from the nature of the sources, which for India at least are very thin prior to the nineteenth century. My belief is that Radkau is essentially correct here, for two reasons. One is that from the fifteenth century the competition for naval power in European waters remained fierce, and so the incentive to maintain the oak, pine, and fir forests on which naval power depended was consistently strong. The recurrence of war and the consequent unreliability of foreign markets made it seem preferable for each naval power to have a ready domestic supply. Only the Dutch Republic deviated from this policy, drawing ship timber from the Baltic and the Rhine basin. The second reason is that forests and timber in early modern Europe may already have become scarce in a way that they were not (yet) in India. In Mughal India, forests remained abundant, at least in the north, and Mughal policy concentrated on rewarding the clearing of forests for cultivation.¹⁰ The Mughals never developed much of a navy. In China, too, the state encouraged deforestation in frontier zones. Chinese styles of agriculture did not easily mesh with forest preservation, as Radkau notes, and the Chinese emperors rarely felt the need for a large navy, because China had no challengers at sea (although pirates often made trouble). Resources were better spent on the Inner Asian frontiers. Forest protection generally did not fit the economic or military priorities of the Chinese or Mughal state.

One major exception to this rule must be acknowledged. The Qing dynasts, whose origins lay in Manchuria, actively preserved forests in Manchuria, hoping to maintain an environment in which they enjoyed hunting (rather like European nobility), and to maintain Manchuria for ethnic Manchus. A belt of forest, called the “willow palisade,” was intended to help keep both Mongols and Chinese out of Manchuria from the 1640s until the 1850s (it did not work).¹¹

7. The advantages of European polycentrism is an argument that has often been made to explain the military, political, and economic success of Europe in recent centuries. Here Radkau extends the notion to environmental management on the grounds that large-scale states cannot know enough about local conditions to devise and enforce suitable policy, and that multiple polities could easily learn from one another which practices are best. The latter argument is one routinely used to justify federal systems of government. Radkau turns to German forest history to make his case, and does so persuasively.

But can it prudently be extended beyond forestry to other aspects of environmental management? Probably the argument holds in those arenas where management is undertaken locally and the components of the managed ecosystems stay put, like trees. But local, small-scale environmental management presumably runs into difficulty in cases where the things to be managed refuse to stay still and instead move around from one jurisdiction to another. When it comes to migratory birds and wildlife, river water, or air pollution, for example, the appropriate scale for regulation and management is probably a larger one, and the advantages of polycentrism become disadvantages. Historically, of course, few of these things were subject to much regulation or management, but that has changed lately. The Rhine, for example, has been the focus of considerable efforts at regulation since at least 1815, and European polycentrism has made this effort more, rather than less, difficult.¹²

8. The absence of large-scale irrigation is surely one of the distinguishing features of European agriculture and society. The equable climate is the basic reason irrigation was never sufficiently rewarding. Whether large-scale irrigation gives rise to bureaucratic centralism or not (and it surely cannot account for the Russian case), it clearly has had ecological consequences. As Radkau notes, those may become important only slowly, after centuries of salt accumulation. And they may vary greatly in severity from place to place: Mesopotamia and California probably are among the most severely affected, although in the former case clever adjustments allowed Mesopotamia to host some of the world's richest societies from about 3500 BC until the Mongol invasion of 1258. California is unlikely to match this record! It will be interesting to see whether in the American West abundant money and technological power will be deployed to check or reverse the environmental costs of large-scale irrigation agriculture.¹³ Again, Egypt is a special case, an exception until the Aswan Dam, but one that since the 1960s is the exception that truly proves the rule: without the annual flushing and silt deposit from the Nile's flood, Egyptian irrigation agriculture in recent decades has shown an impressive record of environmental degradation.

9. Radkau's perspective on the ecological repercussions of overseas colonialism is another very interesting position, but I think it begins with a misreading of Alfred Crosby. In his book *The Columbian Exchange*, published before *Ecological Imperialism*, Crosby considered the ecological and demographic consequences for Europe of maize, potatoes, and other imports from the Americas.¹⁴ As an Irish-American familiar with the story of the Irish potato famine, Crosby would be among the last to suppose that the ecological effects of colonialism in Europe promoted stability. In tilting his lance at Grove's *Green Imperialism*, Radkau may have hit his target more squarely. Grove did downplay the intellectual importance of

European environmentalism, especially in Central Europe.¹⁵ But critiques of Crosby and Grove aside, the real thesis here is that overseas colonialism disturbed ecological balances in Europe. This is surely true in that it provided windfall subsidies (what E.L. Jones called “ghost acreage”) of grain, timber, and fish among other things. And, as Radkau notes, the new American crops improved the food supply in Europe. This helped to ignite the long-term population growth beginning in the eighteenth century, although the reduction in lethal epidemics was probably just as important here (remember that this was a global, not merely European demographic trend). Radkau judges the environmental repercussions of colonialism as less than fortunate for Europe. That is probably true in that the colonial windfalls discouraged efforts at sustainability and allowed expansions of several sorts—expansions probably crucial for European wealth and power in the modern world. In this respect, colonialism represents an alternative version of what coal provided after about 1820: a windfall that encouraged growth and discouraged balance and sustainability. Colonialism was a subsidy from another place; coal a subsidy from another time. Oil, except for that produced within Europe, was (and remains) both.

10. In his tenth and final point, Radkau warns that in apparent ecological success may lie the seeds of later crisis. He sees this pattern in the Chinese past. But consider the lessons of his seventh point about the benefits of polycentrism. If China has suffered environmentally from its very success, it is surely in no small part due to its history of centralization, which made experimentation with unorthodox practices difficult, and thereby limited the rate of learning from experience. Polycentric Europe, on the other hand, ought to be well positioned to avoid the perils of success, precisely because its fragmentation allows experimentation and systematic learning from experience and observation of what works best. And in any case, Europe’s successes seem not to have concealed the elements of unsustainability: who is more attuned to issues of sustainability than northern Europeans?

One of the concerns many environmental historians share is that their work should prove useful in the quest for a more prudent ecological order on earth. When environmentalists look at environmental history, this is precisely what they are searching for. For them, the point is not merely to describe and interpret the world as it is and as it has unfolded, but to change it. Given the global scope of environmental issues, any such ambition will require a sense of the whole as well as of local details. In his paper, and in his book, Radkau has been bold enough to think about large-scale questions in environmental history, here posing them as possible issues of European distinctiveness. The project is as valuable as it is bold, regardless of whether or not one agrees with any specific claim to

European uniqueness. The diligent accumulation of detail is of course indispensable, but by itself provides very limited insight. Coupling it with synoptic vision and restless imagination is what yields the most intellectually exciting results, and the most appropriate basis for contemplating how to change things. Radkau has done just that.

Notes

¹ In the original: "Die Philosophen haben die Welt nur verschieden interpretiert, es kömmt drauf an sie zu verändern."

² His predecessors in this terrain include Clive Ponting, *A Green History of the World* (London, 1990); Ian Simmons, *Environmental History* (Oxford, 1993); Sverker Sörlin and Anders Öckerman, *Jorden en ö: En global miljöhistoria* (Stockholm: Natur och kultur, 2001). Successors include John F. Richards, *The Unending Frontier: An Environmental History of the Early Modern World* (Berkeley, 2003); J. Donald Hughes, *An Environmental History of the World* (London, 2001); B. de Vries and J. Goudsblom, eds., *Mappae Mundi* (Amsterdam, 2002).

³ Yi-fu Tuan, "Discrepancies between Environmental Attitude and Behaviour: Examples from Europe and China," in *Canadian Geographer* 3, 175–191.

⁴ See, for example, John F. Richards, ed., *Land, Property, and the Environment* (Oakland, CA, 2002).

⁵ A. Sherratt, "Plough and Pastoralism," in I. Hodder, G. Isaac, and N. Hammond, eds., *Patterns of the Past* (Cambridge, 1983), 261–305.

⁶ On alfalfa and clover, see Mauro Ambroselli, *The Wild and the Sown: Botany and Agriculture in Western Europe, 1350–1850* (Cambridge, 1997) and Thorkild Kjaergaard, *The Danish Revolution 1500–1800: An Ecohistorical Interpretation* (New York, 1994).

⁷ I make this argument emphasizing the economic, not ecological side of things in J.R. McNeill, "The Reserve Army of the Unmarried in World Economic History: Flexible Fertility Regimes and the Wealth of Nations," in Derek Aldcroft and Ross Catterall, eds., *Rich Nations—Poor Nations: The Long-Run Perspective* (Cheltenham, UK, 1996), 23–38.

⁸ Among the new literature on Chinese fertility, see Ts'ui-jung Liu et al, eds., *Asian Population History* (Oxford, 2001); James Lee and Wang Feng, *One Quarter of Humanity: Malthusian Mythology and Chinese Realities* (Cambridge, Mass., 1999). The leading skeptic is Arthur P. Wolf, "Is There Evidence of Birth Control in Late Imperial China?" in *Population and Development Review* 27 (2001): 133–54.

⁹ Caroline Humphrey and David Sneath, *The End of Nomadism? Society, State and the Environment in Inner Asia* (Durham, NC, 1999); Caroline Humphrey and David Sneath, eds., *Culture and Environment in Inner Asia* (Cambridge, UK, 1996), 2 vols.

¹⁰ Richard Eaton, *The Rise of Islam and the Bengal Frontier, 1204–1760* (Berkeley, CA, 1993); Richards, *The Unending Frontier*, 32–38.

¹¹ Patrick Caffrey, "The Forests of Northeast China, 1600–1953," Ph.D. thesis, Georgetown University, 2002.

¹² See Mark Cioc, *The Rhine: An Eco-biography* (Seattle, 2002).

¹³ Australia's Murray-Darling basin is another interesting case where money and expertise are available to address the problems of salinization—which are both recent and severe.

¹⁴ A. Crosby, *The Columbian Exchange: The Biological and Cultural Consequences of 1492* (Westport, CT, 2003 [1972]).

¹⁵ I still insist that Grove has excellent points in his emphasis on Indian ecological thought and practice upon Portuguese, Dutch, and British officials and thinkers, as well as in his argument that colonial islands brought out environmental issues more clearly than did most other settings.