

How certain can we be that artists present reality (or a part of it) and are not led by their fantasies? How certain can historians be when they contend that artists had events (shipbuilding) or objects (tools) in front of them while they worked?

The answers are hidden among the details – as in Unger's book. The author expresses doubts about the presentation of Noah sitting while working with an axe (illustration 20, thirteenth-century Oxford Psalter). I consider it more important that Unger ignored that the frame saw shown in the same illustration is technically incorrect. The twisted cord to provide the tension is in the wrong place. An art historian would have concluded that the artist had never seen a saw or had not understood its mechanics. But it is probably the case that the artist's model was too small or inexact. Artists have often made similar mistakes when illustrating ships using other artistic works as a model, especially if they have neither seen a ship nor understood anything about them. Such mistakes may not reduce the artistic quality of a work; however, the value of the piece as a source for the history of technology sinks considerably. This is where the question of

artistic style takes on considerable importance. This book examines pictures over a period of about 1300 years. The pictures are all illustrations of only one story – Noah's Ark – but they belong to different periods of style and various regions. These different styles and regions alter the thematic statement of the pictures. Unger did not deal with this problem. This is unfortunate as it blunts the methodology that he took great pains to set out in the first chapters.

Another flaw, from the point of view of art historians, is that the technical specifications to the pictures illustrated are missing. It is important to know how large a work of art is, whether it was intended for private use (as a psalter) or if it was accessible to the public (as the mosaics in San Marco). From this information it is possible to make deductions about the commission, the artistic intention and the social conditions of the viewer.

These critical comments are not intended to prevent the readers of this review from reading the book. I consider *The Art of Medieval Technology: Images of Noah the Shipbuilder* a very important contribution to material history and it should provide an incentive for intensive discussion.

David Goodman and Michael Redclift, *Refashioning Nature: Food, Ecology and Culture*

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Goodman, David and Redclift, Michael. *Refashioning Nature: Food, Ecology and Culture*. London: Routledge, 1991. 279 pp., 25 illus. Cloth U.S. \$59.95. ISBN 0-415-06702-2. Paper U.S. \$18.95, ISBN 0-415-06703-0.

The basic human prerequisites for life are air, water and nutrition. While these elements are ubiquitous, ensuring their provision has required the exploitation, organization and transformation of aquatic and terrestrial habitats. As human numbers increased and as technology became more sophisticated, the landscapes of production dominated our ecumene. Indeed, perhaps agriculture has done more than industry in changing the face of the earth.

But it is more than a matter of somatic needs fulfilled by biological inputs organized into

unchanging staple diets. The dynamic dimensions of taste, preferences, avoidances and fads are also central determinants of production. Thus, nature is refashioned by the equation of food, ecology and culture, a theme that has been explored by several writers over the years. Redcliffe Salaman's *History and Social Influence of the Potato* (1949), F. J. Simoon's *Eat Not This Flesh* (1961), Sidney Mintz's *Sweetness and Power: The Place of Sugar in Modern History* (1986) and S.A.M. Adshead's *Salt and Civilization* (1993) all underscore the social, economic and political contexts of patterns of consumption, modes of production and systems of distribution of foodstuffs.

David Goodman and Michael Redclift's *Refashioning Nature: Food, Ecology and Culture* is the most recent contribution to this

œuvre. As the subtitle suggests, it too positions the study of food in the context of ecology and culture. This is heady stuff. The development of the modern "food system" is elucidated by a political-economic concentration; environmental degradation; and trade disputes. These several developments are represented as,

the outcome of the drive of industrial capitals [sic] to control 'nature' in agricultural production and food manufacturing and the interest of the state in pursuing cheap food policies (p. xv).

The analysis presented here also demonstrates how these same forces have served to "disarticulate" the agriculture of the nations of the south. It is posited that it is the loss of indigenous food-security that is responsible for rural poverty, rural-urban migration and increased dependence on exotic grain and animal protein. For the authors, the responsibility for the erosion of indigenous production of staples by a peasant system is laid at the feet of the western world. It is the systemic penetration of the western system of expropriation by transnational corporations (TNCs) that has perpetrated so much of the global environmental degradation and food shortages. Ironically, it is the same western world – if different components of it – that exercises itself with the need for moralistic intervention to ameliorate the symptoms.

Given the comprehensiveness of the analysis of the modern food system, it is predictable that reference is made to recent biotechnological innovations in food marketing and processing. Often touted as the panacea for global hunger, the widespread application of "agrigenetics" poses major problems: the emphasis on production growth rather than on low-input production sustainability; corporate appropriation of "agri-biotechnologies"; the privatization of the biosphere. These developments have been energized by the unholy alliance between the interests of "pure" perspective on the interactions between such matters as science and technology, social justice and gender relations. The essential thesis is that it is the "commoditization" and "industrialization" of food production, processing and consumption that has revolutionized what, how, and where we eat (p. 88).

Thus, the first substantive chapter, "Food into Freezers: Women into Factories," refers to the social processes that have accompanied the "commoditization of food" in advanced indus-

trial societies since World War II. These include increased participation by women in the work force; increased consumption of consumer-durable goods for the home; and increased consumption of processed foods. For the authors, such developments were central to the establishment of the modern food system through the collapsing of private and public domains into domestic and commodified activities.

Another transformed reality was that of rural society where the perpetuation of family farming continues in association with the breakdown of natural organic cycles and the increased integration of agricultural and industrial processes. Following an excellent critique of the deconstruction of the fundamentals of local rural communities, the authors conclude with the paradox that "while urban society has elevated 'rural' values to the ideological level, the society from which they are supposed to emanate has passed away" (p. 86).

Rural society, therefore, has been the locus of introduction of the principal components of a modern "agri-food" system that has been industrialized in a "fordist-productionist" model: mechanization; "agri-chemicals"; genetics and hybrids; farm research and crass profit. Already, genetically engineered organisms (GEOs) have been introduced into the environment in the U.S. and the U.K. as the "agri-food" system enters into a new relationship with its ecosystems. As Goodman and Redclift point out,

The relationship between the agri-food system and the environment thus takes on dimensions which have yet to be revealed and whose irreversible consequences are unknown and unforeseeable (p. 197).

Taken together, this study demonstrates the symbiotic relationship between the technological initiatives in reshaping nature and the economic and political forces that are restructuring society. In particular, it is argued that the relationship between sustainability and development rests on paradigms that have historical and geographical bases and social and economic contexts. With the particulars of "environmental consciousness" understood, progress can then be made with "the organization of alternative forms of social action to redress environmental problems" (p. 231).

This study is a signal demonstration of this precept. The authors may be forgiven, however, for what is left unaddressed: the fundamental question of the appropriate ideological catalyst for such social action. At a time when socialism has collapsed, capitalism is shuddering

and selfish materialism is thriving, the search for a corrective "grand design" for a sustainable and non-exploitative system of production promises to be a daunting one. However, few would disagree with Goodman and Redclift's

concluding statement: "We need to address the sustainability of our own models, then, before we are in a position to hand them down to others" (p. 256).

David E. Nye,
Electrifying America:
Social Meanings of a New Technology, 1880-1940

LOUISE TROTTIER

Nye, David E. *Electrifying America: Social Meanings of a New Technology, 1880-1940*. Cambridge, Mass.: The MIT Press, 1991. ISBN 0-262-1404-89.

L'historiographie américaine des deux dernières décennies a surtout envisagé l'électrification dans des perspectives relevant des sciences économiques, des sciences pures et appliquées et de la technologie, comme en témoignent les écrits de D. Clayton Brown, Robert Friedel, Bernard Finn, Thomas Hughes et Louis Hunter. C'est essentiellement le contexte social du développement de l'électricité pendant les soixante premières années de son application aux États-Unis qui est envisagé dans l'étude de David Nye. L'hypothèse de départ de l'auteur repose sur le fait que, d'une part, la technologie demeure une extension de la vie humaine et, d'autre part, l'électrification est un processus social variable suivant les époques et les cultures et dérive de l'interaction complexe de divers facteurs économiques, politiques, techniques et idéologiques. Dans les huit chapitres de l'ouvrage, ces facteurs seront repris ponctuellement pour décrire les transformations et contradictions majeures qui, de 1880 à 1940, résulteront de la consommation de l'électricité dans le milieu urbain, rural, industriel et familial.

Comme l'auteur le sous-entend à plusieurs égards, l'électrification, c'est d'abord et avant tout une question de puissance, de concordance de circuits, de création de tensions, tant sur le plan énergétique que politique et économique. Il rappelle que la décentralisation des pouvoirs publics, éminemment pertinente au contexte américain, a favorisé les intérêts du

secteur privé en lui permettant de réglementer et de contrôler la production, la distribution, la vente et la demande d'électricité ainsi que la fabrication d'équipements et d'appareils destinés au milieu domestique, rural et industriel. C'est donc un marché oligopole qui, malgré ses fréquents débats et dissensions, va œuvrer à la fabrication d'une conscience électrique et d'un esprit de consommation massive de cette nouvelle source d'énergie. Ce marché est constitué des « poulpes » General Electric, Westinghouse et leurs filiales, des compagnies municipales, de « lobbyistes », tels la National Electric Light Association (NELA) et la National Electric Manufacturers Association, de sociétés d'État, telles la Tennessee Valley Authority (TVA) et la Rural Electrification Association (REA), ainsi que de grands consortiums financiers.

L'avènement de l'électricité sur la scène publique a été grandement favorisé par les foires, les parcs d'attraction et les expositions universelles. Selon Nye, ces manifestations ont joué un rôle primordial dans la présentation et le développement de techniques qui, dans la plupart des grandes villes américaines, vont dominer les systèmes d'éclairage des rues, commerces, édifices publics et panneaux publicitaires ainsi que l'organisation du transport urbain et qui inspireront la scénographie des théâtres. Nye relève les influences reçues dans la conception architecturale et l'illumination des édifices publics et résidentiels, le design et les courants esthétiques caractérisant, par exemple, la production artistique de l'École de New York. À cet égard, il est intéressant de noter l'impact du « White Way » dans la compréhension des œuvres d'Alfred Stieglitz, de Georgia O'Keeffe et de Mark Rothko.