as well as within, coexisting social formations—those which are at similar levels of complexity and technological advance, for example feudalism and Asiatic modes, and those whose energy-mobilizing capacities are vastly different, as with capitalism and its peasant peripheries. Among other things, such interactions further the diffusion of powerful forces that affect domestic labor but that ignore all boundaries—for example rates of disease and infant mortality, innovations in birth control and infant nutrition—and economic shifts that affect the cost of living, the cost of raising children, and the demand for labor. I do not mean to imply that these variables are independent. They too take their shape from the dynamics of a world political economy. But they seem to cut across economic systems, and sometimes across class lines, raising the possibility that domestic labor mediates not only particular modes of production but transnational economic and demographic trends as well.

There is another reason why this book does not convince us that contrasting modes of production by themselves explain variations in domestic labor: its chapters give disproportionate emphasis to women under capitalism, and a socially limited range of women at that. Different reviewers might identify different contexts in which they would like to see the relations between production and reproduction more fully developed. For me, comparative analysis could benefit from additional case studies of women's activities in agrarian societies where extreme sexual segregation, with accompanying notions of seclusion and shame, is common. It is above all here that a dualistic framework of analysis is tempting, so much so that Bujra and other contributors, in their references to such societies, appear to adopt it despite their strictures to the contrary. Bujra, for example, writes that women are "withdrawn from productive labour and restricted to purely domestic activities . . . [becoming] an appendage of a structure of property relations in the productive sphere" (p. 32).

It is true that under precapitalist yet class-stratified conditions landed property and the means of agricultural production are often monopolized by men, and women are persecuted when they initiate religious, political, or economic movements. But it is also true that such women are, like the examples Ursula Sharma offers from her village in the Himalayas, self-confident and self-respecting—anything but powerless and feeble. Sharma concludes that the high status formerly accorded secluded females accounts for this contradiction, but I suspect this is only a partial explanation. In keeping with Bujra's assertion that in agrarian societies productive labor is the labor of men, it underestimates what used to go on in the domestic sphere. Both authors, and also Croll in her description of China before the revolution, imply that work done at home, if not oriented toward providing goods or services for an external arena as in petty commodity production, is merely an extension of biological and social reproduction.

Bujra, in discussing agrarian societies, identifies them as "intermediate economic forms" between "simple subsistence economies" and "developed capitalist society" (p. 32). This is, of course, an evolutionary rather than a mode-of-production classification, and its ahistoricism perhaps accounts for the tendency to overlook how extensively industrial commodities have undermined domestic *production* in all parts of the world, reducing the home front to cooking, laundry, child care, and sweeping up. A comparative account of economic systems, even if its focus is contemporary, should call our attention to the recent past when mothers and daughters, aunts and nieces, were the chief manufacturers and sole managers of family heirlooms and treasures, status goods and gifts, and functional and ornamental coverings for the house and its many residents. Such goods were frequently stores of negotiable wealth that enhanced the security and social networks of entire kinship groups and undoubtedly provided a foundation for women's leverage vis-à-vis men, if not always for their solidarity. One wants to learn more about how they were made, transmitted at marriage, used in hospitality, exchanged in crises, and so on, an important aspect of the articulation between production and reproduction.

If *Women United, Women Divided* does not quite fulfill the promise of its introductory chapter, that of incorporating empirical studies of women's solidarity and collective action into a theoretical framework based on contrasting modes of production, it is nevertheless a stimulating book. And if its range of case materials seems too narrow, this is only to say that much remains to be done. The virtue of collections of essays that grow out of seminars and small groups is rarely comprehensive exploration of a given problem or balanced presentation of cases. These are potential virtues of the "reader" for which articles are commissioned or assembled from published materials. The seminar or discussion-group product has another virtue: the capacity to disseminate fresh ideas and stimulate further talk, as well as to add more data to the information pool. This book is commendable on both these counts.

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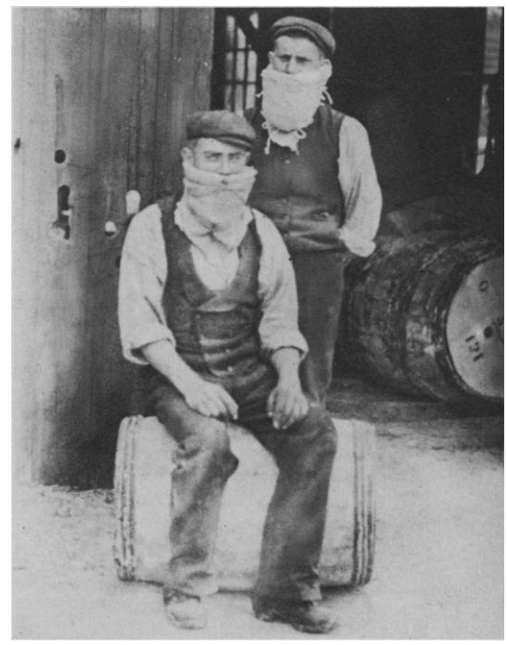
Social and Technical Remains

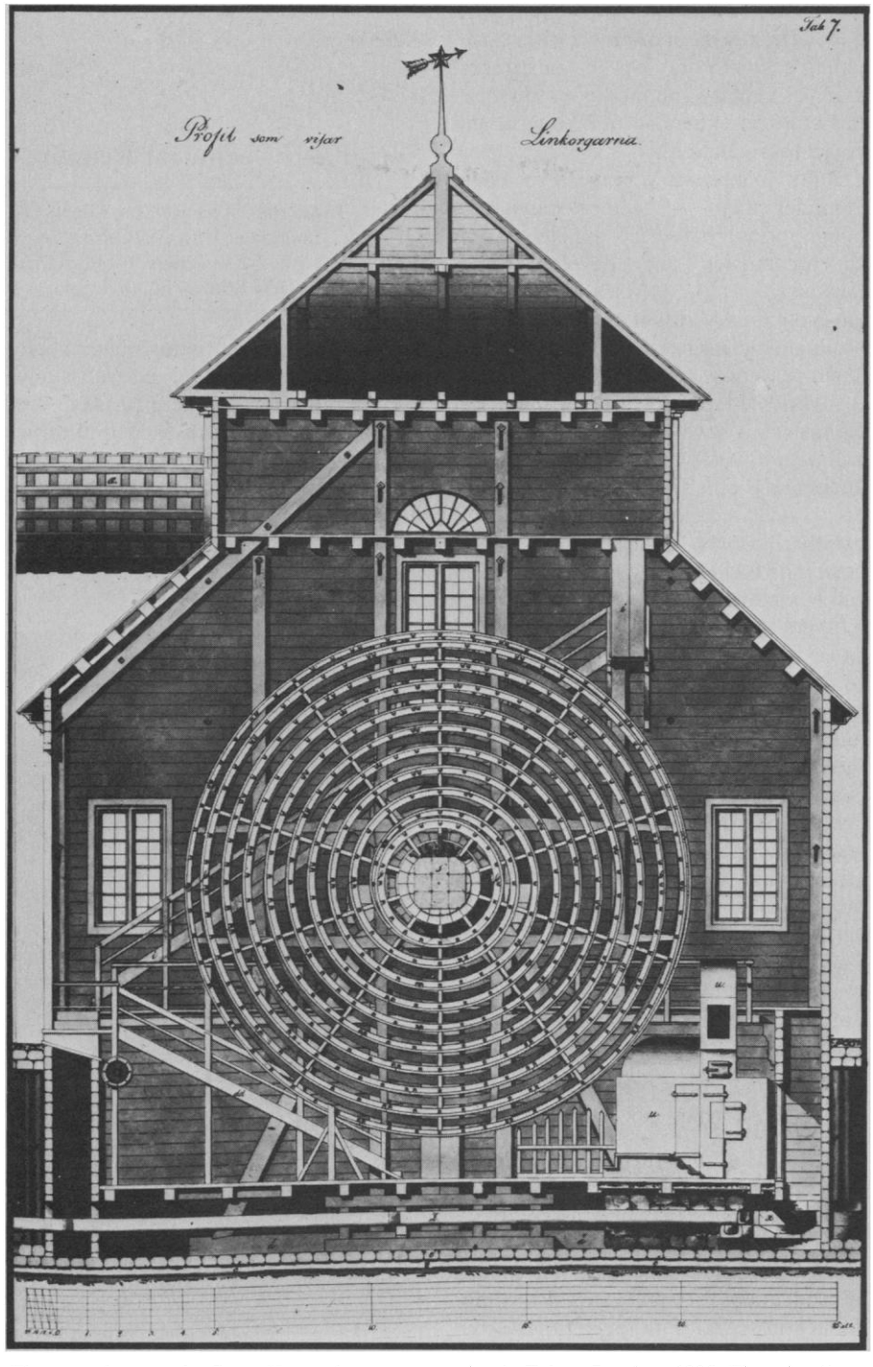
World Industrial Archaeology. KENNETH HUDSON. Cambridge University Press, New York, 1979. viii, 248 pp., illus. Cloth, $37.50; paper, $9.95. New Studies in Archaeology.

Since the 1950's, "industrial archeologists" have been concerned with studying, recording, and where possible preserving the remains of industrial structures and machines of the last 200 years. Kenneth Hudson is an Englishman who has written numerous books in a campaign to arouse general interest in the



Bleach packers at a Tyneside chemical works around 1900. "At the peak of its prosperity [Tyneside] gave employment to at least 10,000 people." Alkali, sulfuric acid, and soda were produced. "The work ranked among the most unpleasant that industry had to offer. This was especially true of bleach packing and lime dressing. Men engaged on these tasks wrapped their faces in a roll of flannel several yards long. . . . No other form of protective clothing was available. Minor acid burns were frequent and men fell into the soda vats from time to time and were not uncommonly overcome by fumes." [W. A. Campbell; reproduced in *World Industrial Archaeology*]

physical remains of industry and their social significance. The remains, be it noted, include not only working places but also industrial housing, pubs, shops, churches—the physical context of the workplace. Furthermore, Hudson insists, the people who lived in that context, whether as workers or in whatever role, are valuable artifacts. They carry with them significant information and emotions that can contribute importantly to the "complete picture" of social as well as technical aspects of an industrial topic.



The rope drum at the Stora Kopparberg copper mine in Falun, Sweden, 1805. The mine "was first worked in the eleventh century and ore was being exported by the twelfth. . . . By the middle of the seventeenth century Stora Kopparberg . . was producing most of the copper used in Europe. . . . Until very recently, the mine buildings at Falun were constructed mainly of wood and their survival rate has consequently not been high. A further hazard has been the continuous widening of the Great Pit—in order to go deeper, one was compelled to go wider—which inevitably meant that the buildings around the edge were being constantly demolished and replaced on a more suitable site." The company maintains a museum near the Great Pit that "makes it possible to study the technical developments in their proper context. . . . The various elements one needs in order to acquire a full understanding of the industry are all present." [Stora Kopparberg Berlags Aktiebolag; reproduced in *World Industrial Archaeology*]

This book is addressed to industrial archeologists, but it is interesting to a casual reader because it provides capsule sketches and illustrations of 50-odd industrial sites in Europe and America: mining communities, textile mills, salt pans, dams, ironworks, railroads, and many others. We are reminded what few of us have thought about, that the auxiliaries constructed to support an industry frequently outlast the industry itself. In the English coalfields around Bristol, for example, the workings were largely obliterated as the city grew and changed, but the miners' houses and associated buildings have survived and are still being used. In Le Grand Hornu, Belgium, another mining community, destruction of the workings has been arrested by the sudden local awakening to the fact that it is not always necessary to destroy in order to renew. A political struggle in Paterson, New Jersey, recently diverted a destructive highway and spared a historic district centering on three 19-century locomotive works and an abandoned hydroelectric plant.

Hudson continually introduces questions that occur to him but that have not been answered by those who have written about the places he describes. He wants to know more about the social significance of a physical environment. What did the different parties—workers, owners, managers, others—get out of the enterprise in the way of "income, satisfaction, accidents, ill-health, standards of living?" Hudson stresses the need for fieldwork (which, by the way, seldom involves digging) and the importance of talking with people who have known some aspect of the subject at first hand. The fieldwork requires careful observation, but it also includes contemplation: "There is no substitute," Hudson writes, "for the thoughts and emotions which take place on the site." He would have the industrial archeologist convey to a reader an understanding of ambiance, of total surroundings, that he or she has developed through fieldwork and archival research. This is certainly an admirable vision of the way industrial history should be written. To give a "complete picture," one involving the emotions as well as the intellect, is the aim of historians who class history in the humanities rather than in the social sciences. If Hudson can convince historians that they should go look at the things they write about, he will have accomplished a great deal; if those historians who go look will develop a sense of what "things" can add to their understanding, then the quality of historical writing will surely rise.

However, industrial archeology, as it was developed in Great Britain and the United States, has been much less concerned with well-written monographs than with trying to preserve some of the fast-vanishing factory buildings, railroad stations, canal locks, and other physical evidence of our industrial "roots." Where preservation is impossible, industrial archeologists have tried to insure that a record will be made before the wrecker's ball hits.

Hudson describes with approval the work of the Historic American Engineering Record (HAER), a division of the Department of the Interior's Office of Archeology and Historic Preservation. The remarkable quantity of careful fieldwork done by that young and enthusiastic organization is indeed impressive. That recording of physical remains leads to advocacy is a point insufficiently recognized in Hudson's book. HAER has, for example, studied the economies of rehabilitating rather than destroying structures and has encouraged private investors to renew rather than simply replace old buildings. Also in America, the Society for Industrial Archeology (SIA) has supported the production by John Karol of a first-rate film entitled "Working Places," which argues eloquently for "adaptive reuse"—that is, rehabilitation—of industrial buildings and other endangered structures. The nicely illustrated *Newsletter* of the SIA, issued by Robert Vogel, a Smithsonian curator, is a model of succinct reporting. Losses of structures are deplored; the decision to preserve an iron furnace in Alabama is reported as a triumph; very little in the way of relevant books and articles is missed in that lively and informative publication.

The industrial archeology movement had its origins in museums and among collectors of machinery of various kinds. A number of university professors have joined the ranks, particularly in England and Germany. The strength of the movement is not in providing a shelf of books but in making it possible for the rest of us to go see and experience at first hand the impressive and interesting structures that the builders of our technological civilization have left behind as a legacy. To prevent the kind of massive public vandalism that destroyed Pennsylvania Station in Manhattan is the mission of industrial archeologists. Each succeeding generation must discover for itself the reality of such great industrial structures. The aura that clings to a Lowell mill or an original Watt steam engine cannot be conveyed in books, nor can matters of scale and texture be understood through either words or pictures. I hope that academic historians will take seriously Hudson's suggestions and admonitions, but I should hate to see industrial archeologists dissipate their enthusiasm and dedication to preservation by shifting their emphasis to simply recording the "whole picture" in books.

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Deep-Seated Rocks

Proceedings of the Second International Kimberlite Conference. Santa Fe, N.M., Oct. 1977. F. R. BOYD and HENRY O. A. MEYER, Eds. American Geophysical Union, Washington, D.C., 1979. In two volumes, illus. Vol. 1, Kimberlites, Diatremes, and Diamonds: Their Geology, Petrology, and Geochemistry. viii, 400 pp. $19. Vol. 2, The Mantle Sample: Inclusions in Kimberlites and Other Volcanics. viii, 424 pp. $19.

An international conference on kimberlites was held in Capetown, South Africa, in 1973 and dramatically marked the rebirth of interest in these deep-seated rock types. The conference and its associated field trips were such a success that it was agreed that a second conference should be convened in four years. These two volumes contain the papers presented at the second conference. Thousands of samples were collected at the first conference, and research on some of them is well represented in the two volumes.

Volume 1 deals mainly with the field relations, mineralogy, petrology, geochemistry, and eruptive mechanism of kimberlites and related rocks and with experimental studies concerning the genesis of kimberlite. It also includes specific studies of diamonds and their inclusions from a wide range of localities. Volume 2 discusses eclogite and peridotite xenoliths from kimberlites in Africa and from the Colorado Plateau as well as xenoliths from basalts and other volcanic rocks in various parts of the world. The diversity of work reported in the two volumes is a clear indication of the health and vigor of research in these areas. The 69 papers represent a major step forward, although there are of course many unresolved questions.

Gurney, Harris, and Rickard have studied inclusions from a large number of diamonds from the Finsch pipe, whereas Tsai *et al.* have studied diamond inclusions from four African localities. These studies add to our knowledge of peridotitic and eclogitic suites found in diamonds from specific localities, but there is still a need to relate such studies more closely to kimberlitic and xenolithic populations in the same localities.

Skinner and Clement propose a new classification of kimberlite, which is badly needed, and apply it to 12 southern African localities with wide mineralogical diversity. Mineralogical and petrological studies extend well beyond Africa and include new studies in India by Akella *et al.*, in Greenland by Scott, in Canada by Mitchell, and in the western United States by C. B. Smith *et al.* In addition, much more emphasis is being given to specific mineralogical studies that are sorely needed for a better understanding of kimberlites and their genesis. Elthon and Ridley attempt to distinguish xenocryst, phenocryst, and groundmass minerals such as olivine and phlogopite in kimberlite from the Premier Mine. Raber and Haggerty have studied the complex zircon oxide reactions in diamond-bearing kimberlites, some of which appear to be due to the availability of carbonatitic fluids. McMahon and Haggerty have studied magnetite and pyrochlore in the Oka carbonatite complex. J. V. Smith *et al.* have studied potassium, rubidium, and barium in micas from a wide variety of kimberlites and xenoliths and discuss the implications for the origin of basaltic and related volcanic rocks.

Much progress in experimental work has been made by Ellis and Wyllie and by Eggler and Wendlandt. Experiments have been extended to higher pressures, with varying amounts of carbon dioxide and water. These studies are of critical importance in understanding the phase relations of garnet peridotite xenoliths and megacrysts. Analogous experimental studies of eclogites and spinel peridotites are needed.

Important studies of eclogite and peridotite xenoliths in numerous localities cannot all be noted here. Evidence for pervasive metasomatic processes is presented in several papers, especially the paper by Boettcher *et al.* There has been much progress in the use of deformation textures in interpreting the history of peridotite xenoliths. Severe deformation accompanying eruption is found to be more important than slow creep at depth. Inclusions from the Kao pipe, the Premier Mine, and Orapa, Botswana, have received special study, but lower crustal granulites and eclogites from Lesotho have also been interpreted. Numerous studies of megacryst assemblages from widely separated localities as well as studies of specific minerals such as ilmenite, enstatite, and pyrox-