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BRUCE HEVLY

Mark Luccarelli. *Lewis Mumford and the Ecological Region: The Politics of Planning.* (Critical Perspectives.) x + 230 pp., illus., index. New York/London: Guilford Press, 1995. $26.95.

"If we are to address the twin crises of urban decay and natural destruction," Mark Luccarelli argues, "we must have what Donald Worster called the 'ecological imagination' " (p. 5). Luccarelli finds that sort of imagination in the writings of Lewis Mumford—especially those dating from the 1920s and 1930s, when Mumford worked actively to promote a new form of regional planning. Accordingly, he offers a close reading and critical appraisal of Mumford's work. The result is a thought-provoking book on a subject of profound significance.

Both in his writings and in his work as a member of the Regional Planning Association of America (RPAA), Mumford maintained that "regionalism" provided the only practical alternative to the continued spread of the dehumanizing and environmentally destructive industrial city. Mumford's definition of regionalism was complex, joining three key concepts. Regional planning would, first, use "neotechnics"—a new set of technologies capable of restoring a healthier human relationship with nature. Second, it would encourage a cultural "organicism," the creation of literature, architecture, and urban forms that drew inspiration from nature. Third, it would promote "community" by relying on small-scale development.

Luccarelli's exposition of Mumford's thought is clear and often suggestive. Again and again, Luccarelli demonstrates, Mumford offered valuable commentary on the environmental dilemmas of modern civilization. He was quick, for example, to warn against the transformation of the metropolitan countryside into a mere backdrop, a setting for recreational retreats from the stresses of the industrial city: in Mumford's view, the resort was a new way to consume nature, not a part of a healthy relationship with the nonhuman world.

In the chapters on Mumford's intellectual debts, Luccarelli also offers useful summaries of the work of a number of insightful yet neglected thinkers, especially Benton MacKaye, a leading figure in the RPAA. For MacKaye, the greatest challenge in planning lay in the effort to create a more organic relationship between production and consumption, and Mumford's friendship with MacKaye allowed him to think more deeply about the nature of a truly regional economy.

As the subtitle of the book suggests, Luccarelli devotes most of his critical energy to the economic and political shortcomings of the regional planning idea. Though briefly acknowledging that Mumford's environmental vision was unsophisticated by today's standards, he accepts the "ecological" aspects of Mumford's thought with hardly a reservation. But the subject of Mumford's use of science deserves more scrutiny.

Mumford often wrote about the need to adapt cities to regional topography and geography, and Luccarelli routinely treats those comments as evidence of Mumford's ecological approach to planning. To judge from Luccarelli's work, however, Mumford was not deeply engaged with the discipline of ecology. Indeed, although a number of Mumford's contemporaries were exploring the potential of natural forms and natural systems as models for human activity, Luccarelli offers no evidence that Mumford was inspired by their work. Mumford attacked regional "monocultures" and advocated solar energy, yet he did not do much more to anticipate recent work on urban and industrial ecology. He evidently considered "science" mainly as a metaphor—a way to describe a new kind of thinking about relationships.

Although this book might disappoint historians of science, Luccarelli succeeds in drawing attention to a set of important ideas. Mumford's arguments for regionalism depended on a fundamental insight: even in the metropolis, the most elaborate of human constructs, we are always part of a larger world of plants, animals, and microorganisms, of water, soil, and air, and we ignore the complexities of that larger world only at our peril. The implications of Mumford's insight are, of course, still worth pondering.

ADAM W. ROME

Regis Ladous. *Des nobel au Vatican: La fondation de l'Académie pontificale des Sciences.* 219 pp., apps., bibls. Paris: Editions du Cerf, 1994.

In an age in which the Church of Rome displays an increasing interest in scientific subjects, the Pontifical Academy of Sciences naturally assumes considerable significance, at least for the Catholic world. *Des nobel au Vatican* relates the

history of the foundation of this academy about sixty years ago, presents some of its important members, and outlines its main activities.

Despite its relatively recent foundation, the Pontifical Academy of Sciences traces its origin to the early Lincean Academy, founded in 1603; it cannot, however, predate 1801, the year of its first "false start." Eventually it became the Pontifical Academy of the New Lincei, which was abandoned by most of its members when the Italian Royal Lincean Academy was founded following the unification of Italy in 1861. The few loyal New Lincei kept the flame burning until in 1936 Pope Pious XI elevated it to approximately its present position. It is this last transformation that is the main focus of Regis Ladous's book.

The core of the book describes the various stages in the foundation of the Pontifical Academy of Sciences, primarily the efforts of its first president, the cleric-neurologist Agostino Gemelli. Relying on archival material, Ladous presents a sympathetic, detailed, anecdotal description; he includes information on, for example, the formulation of the Academy's aims and statutes, the criteria for and delays in the selection of the first academicians, the search for a modus operandi, and the numerous difficulties naturally entailed in the establishment of such a peculiar academy.

The many anecdotes Ladous recounts indicate that although the Pontifical Academy of Sciences numbered many Nobel Prize winners among its members, it was certainly not run by saints. In particular, Ladous's account illustrates the traditional Vatican policy of never sticking its neck out. Thus Einstein was not made a member (he was too much of a determinist); the great paleontologist and Jesuit Teilhard de Chardin, whose theories were rejected by pious Catholics, was nominated but excluded: his field was represented by the more innocuous Lucien Cuénot (a zoologist, rather than an unpredictable anthropologist); the prominent anatomist Giuseppe Levi might have been most welcome as a Jew, but, alas, he was too antifascist. Eminent members were welcome, but preferably not until they reached an advanced age; Paul Dirac (who won the Nobel Prize in Physics in 1933, when he was 31) had to wait until 1961 to be admitted. Despite its high universal ("acatholic") aspirations, the Academy in practice has linked membership and political orientation—just like any other earthly academy.

In the last part of his book, Ladous outlines the manifold activities of the Academy more or less up to the present day, under the several popes and different presidents of the Academy. The Pontifical Academy of Sciences has dealt with *inter alia* such major scientific topics as the big bang, cancer, and bioethics; it also considers the relation between science and peace and science and religion—obviously important questions for such an institution.

Divided into short sections whose headings precisely indicate their contents, this historical account flows well and may serve as a guide to an analytical sociological study of a scientific society that is, after all, in many senses unique. The clarity of the table of contents somewhat compensates for the most regrettable lack of an index.

MICHAEL SEGRE

■ Sociology & Philosophy of Science

Gerard M. Verschuuren. *Life Scientists: Their Convictions, Their Activities, and Their Values.* ix + 273 pp., figs., tables, index. North Andover, Mass.: Genesis Publishing Company, 1995. $34.50.

When scientists become interested in the philosophy of their subject, they ought to have appropriate works to read. Most of the literature on the philosophy of science, including biology, is either too specialized or not particularly applicable to the interests of scientists. Gerard Verschuuren has provided just what is needed: a concise survey of the philosophy of biology that is readily intelligible to someone without much background in either philosophy or biology. The book can thus be read with profit by a wide range of individuals, but it should be especially appealing to historians and philosophers of science as well as to biologists.

Having said that, one hesitates to suggest how the subject might have been treated somewhat differently. The philosophy is pretty orthodox, and in a work like this such orthodoxy is on the whole a good thing. But it is eclectic and therefore tends to suffer from a certain degree of inconsistency, a mild symptom of which is Verschuuren's advocacy of "pluralism." It seems to me that both he and his readers would benefit from a clearer distinction between ontology and epistemology. Similarly, he refers to "metaphysics" as a justification for religion when it would appear that he means not metaphysics but mysticism.

One area in which orthodoxy—or, perhaps, tradition—seems not to be a very good thing is the philosophy of physics. Not that Verschuuren