France Puts Diderot in the Limelight

The bicentenary of the philosopher's death is being used to stimulate a new interest in science and technology

Paris. Visitors to the French capital earlier this summer will have come across three large tents at the foot of Paris's monument to 19th century technology, the Eiffel Tower, containing an exhibition on the anticipated contribution of France's scientific community to one of the major technological fields of the 21st century, telecommunications.

Proceeding to the Conciergerie, the famous room where many opponents of the French Revolution spent their last hours before being escorted to the guillotine, they will currently find a display comparing the regional technologies of the 18th century to those used in the same industries and regions today.

And descending to the new underground shopping precinct which has replaced the city's famous food market, Les Halles, they will have been able to visit an exhibition celebrating France's greatest science fiction writer, Jules Verne, and comparing (with assistance from the U.S. National Aeronautics and Space Administration) his predictions of yesterday with the technological achievements of modern space engineers.

Each of these separate events, together with many other initiatives taking place throughout the country, form part of a broad government-backed campaign in France to stimulate what is known as *la culture scientifique et technique*, a phrase which translates literally into "scientific and technical culture," but perhaps corresponds more closely to the Anglo-Saxon concept of scientific and technical literacy.

Concern to integrate an enthusiasm for science and technology into what—despite the efforts of Eiffel, Verne, and their contemporaries in the late nineteenth century—remains a predominantly literary culture, has been growing steadily since the mid-1970's and is now a top government priority.

At the center of many of these efforts currently stands the figure of the 18th-century polymath and philosopher Denis Diderot, the bicentenary of whose death in 1784 is being used as a vehicle for conveying the message that technical change is an essential part of human culture and social evolution, and should not be seen as a threat to either.

Opening an international seminar in Paris on Diderot's work at the beginning of July, the Minister of Culture, Jack Lang, praised the philosopher lavishly as "the architect of a conciliation between scientific and technical culture on the one hand, and artistic and literary culture on the other." Diderot fought, said Lang, "to restore the values of experimentation and making—the values of science and industry—into the world of culture; we are trying to do the same thing today."

Diderot's extensive writings on philosophy, art, and religion have made him widely known as one of the key figures of the European Enlightenment, helping to set the conditions for the French Revolution, which occurred 5 years after his death.

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Yet, as is now being emphasized, he was an equal enthusiast for science and technology. The 28-volume *Encyclopédie*, which he edited with the mathematician d'Alembert and which preoccupied over 20 years of his life, contains many detailed articles describing the scientific ideas and technological practices of the day, a large number of which—ranging from the psychology of perception to the casting of cannons—were written by Diderot himself.

In the past, this aspect of his writing has been relatively neglected by historians. "Very little work has been done on the scientific and technological content of the *Encyclopédie*," says Kris Markowski, who is preparing an exhibit on this subject for the new science museum being built in Paris's Parc de la Villette. "Yet it raised many questions about the relationship between technical and social change that have contemporary echoes, and did this in a popularization which combined consideration of the arts and the sciences into a single project."

It is this aspect of Diderot's work that is being used to stimulate a renewed enthusiasm for *la culture scientifique*, in an effort to make the latter—as France's new Prime Minister, Laurent Fabius, described earlier this year while still Minister of Industry and Research—"an integral part of the culture of our time."

One project which draws directly on Diderot for inspiration is a series of regional exhibitions currently being organized in different parts of France aiming to compare the local technologies of the philosopher's time as described in the *Encyclopédie*—such as metallurgy and agriculture in the Borgogne, shipbuilding in Brittany, or glassworking in Picardy—to the modern techniques, often involving the use of computers and other forms of advanced technologies, being used in the same industries today.

Under the title of *Encyclopédie Vivante*, the project, according to coordinator Jacques Darolles, director of the Maison de la Culture in Reims, "will allow us to measure the road we have travelled [since the 18th century] and to question ourselves about the future, faced as we are with the dawn of a new era marked by the development of new technologies linked in particular to electronics, to biology and to the development of new materials."

Darolles stresses that the purpose of the project is not merely to celebrate technological progress uncritically, but to place it in its proper social context. "We want to compare the state of technology at the time of the Enlightenment with that of today not in order to draw up two balance sheets, but to illustrate two separate historical dynamics: the passage from the craft to the industrial era on the one side, that from the industrial era to the information era on the other."

A second project which aims to recreate the spirit of the original *Encyclopédie* is an ambitious plan to produce a multimedia "National Encyclopedia of Science and Technology." This new encyclopedia will combine printed volumes on scientific and technical subjects with the extensive use of computerized databases to store up-to-date information on all fields of science.

Stimulated largely by a national colloquium on science policy organized by the government at the beginning of 1982, the project received enthusiastic backing from President François Mitterrand and his first research minister, Jean-Pierre Chevènement, both of whom saw it as a

manifestation of the government's commitment to encourage greater public dissemination of scientific information.

One important part of the project, as currently conceived, is the production of a series of books, each intended for a lay readership, on some of the social and philosophical issues raised by recent developments in science and technology.

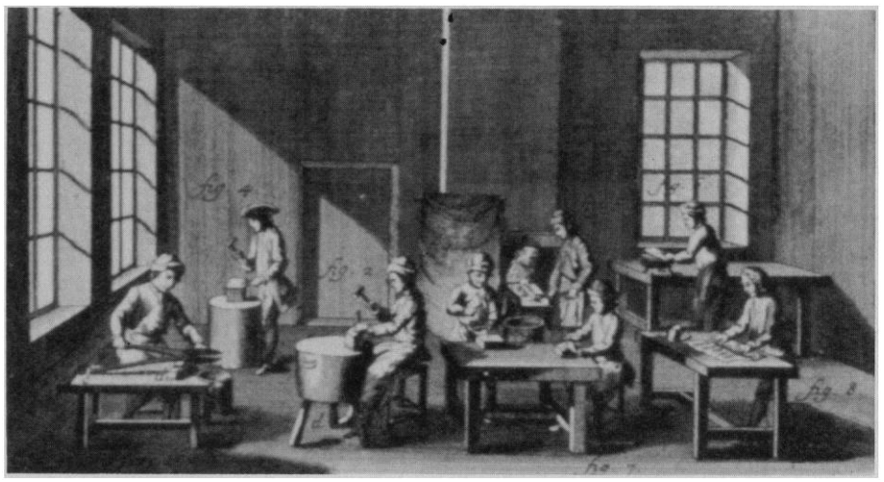
According to coordinator of the encyclopedia, historian of science Dominique Lecourt, each of these books would be the result of a round-table discussion held with scientists, philosophers, politicians, and lay people. Up to 50 such books are currently planned to appear each year, using a number of different commercial publishers, and ranging from topics such as the disposal of radioactive wastes to the concept of "empty space" in physics.

After an initial preparatory period, the *Encyclopédie Vivante* was given the go-ahead by Fabius earlier this year and a promise of an annual government grant of $500,000 for the next 4 years. Sponsorship in the form of subscriptions to the printed volumes is now being sought from private-sector institutions and individuals. And in homage to the project's spiritual roots, a 58-member overseeing committee has been set up under the name of the Commission Diderot and is currently polling the scientific community for suggestions on which "hot topics" should be looked at first.

Lecourt sees a multidisciplinary approach as overcoming a danger present in some of the other projects aimed at spreading *la culture scientifique*—even those being carried out in the name of Diderot—that they will concentrate excessively on the simple presentation of scientific facts and technological objects without giving proper consideration to less tangible, but nevertheless equally significant, aspects that characterize the original *Encyclopédie*'s "angle of attack on reality."

The *Encyclopédie Vivante*, for example, he describes as a project which is both very promising and "very perilous," since unless carefully handled it threatens to encourage "a fetishism of the object" and to encourage a fatalistic attitude to technological change rather than a critical reflection on the history of technology. In contrast, the new multimedia encyclopedia, he says, will be "a massive invitation to the public to reflect on the challenges and goals of contemporary science," creating the conditions for "a type of intellectual mastery of what is happening" in the world today.

Lecourt is not the only one to emphasize the dangers that lie in invoking a superficial interpretation of Diderot's ideas. Speaking at a meeting in Reims held earlier this year to launch the *Encyclopédie Vivante*, Jacques Proust, a Diderot expert from the University of Montpellier, cautioned that the extensive illustrations of eighteenth century technologies which occupy the final 12 volumes of the *Encyclopédie*—and which form the starting point for many of the *Encyclopédie Vivante* exhibitions—should not necessarily be taken at their face value.



Needlemaking

Diderot's illustrations of manufacturing enterprises influenced both Adam Smith and Karl Marx in their analyses of the capitalist division of labor.

"The society represented in these plates is the idealized image that part of this society wanted to project," says Proust. He points, for example, to the omission from illustrations such as that of pinmaking—which influenced both Adam Smith and Karl Marx in their analyses of the capitalist division of labor—of any attempt to portray what working long hours in cramped, overcrowded conditions was actually like. Indeed some illustrations of factories contain no people in them at all.

Whatever reservations might be held about the nature of the *Encyclopédie* as a publishing project, however, there is enough of a man of all seasons in Diderot to suit a wide range of political tastes—a fact which has added potency to his temporary adoption as a symbol of reconciliation between different cultural and political traditions.

Bernard Stasi, for example, a leading member of the main parliamentary opposition party, the Rassemblement pour la République, described it at Reims as a "happy coincidence" that the bicentenary of Diderot's death was being celebrated at a time when France was facing major new challenges posed by technical change. "The philosophers of the Enlightenment have shown us that economics is not independent of philosophy, and also that social development requires a proper marriage between economy and culture," said Stasi. "To liberate, to unify, this is what leads us to Diderot as a travelling companion."

From the other end of the political spectrum Jean-Marc Lévy-Leblond, professor of physics at the University of Nice and co-ordinator of a project to create a new regional cultural center for science and technology, also holds up the *Encyclopédie* as an example of a project that was both "living and unified" and integrated science and technology into their surrounding culture.

Lévy-Leblond emphasizes the important model it provides of "a desire to intervene in a critical sense, to insert a critical perspective" into the discussions of the time about the relationship between technical and social change—the type of intervention which, he argues, is still required today.

It is this political thrust stimulated by Diderot's philosophy in his own time, rather than any explicit political views which he expressed, that has tended on balance to make him an intellectual hero of the left rather than the right. Indeed Minister of Culture Lang says that he would like the various events commemorating Diderot's work and ideas to be extended in some form—perhaps through a semipermanent exhibition at the Musée de la Villette—up to the celebrations being organized for another bicentenary, that of the French Revolution, which falls in 1989.

Meantime the National Center for Scientific Research is currently preparing a complete new edition of Diderot's writing, confident in the knowledge that they will outlive the short-term uses to which they are being put.—**David Dickson**