

maze of claim and counter-claim, and emerges at the end with some fresh insight into a fascinating episode in British social history.

From microparasites that pollute water to the macroparasite, Man, who exploits waters: in 1988 geographers at Loughborough University met in a series of seminars to discuss the impact of water engineers on the environment. *Water, Engineering and Landscape* contains the papers given at these seminars. The topics include hydrology in sixteenth-century Venice, the draining of the East Anglian fenslands in the seventeenth century, and the extraordinary and little-known campaign conducted by François Roudaire in the nineteenth century, to create "la mer intérieure" in vast stretches of the Sahara which lie below sea level, by building canals from the gulf of Gabes to admit the waters of the Mediterranean. It was a grandiloquent gesture of French imperialism which created a storm of controversy in the 1870s. In addition to these essays in historical geography there are

papers on contemporary problems: hydro-technology in Quebec, the fiercely disputed project for a dam on the Danube, and the perennial problem, inseparable from the aspirations of Welsh nationalists, of how Wales should deploy its rich resources of water.

It was doubtless the repertoire of the Loughborough geographers that determined this choice of topics. The value of a seminar lies in the interaction between those who take part in it rather than in the content of individual papers. The papers are interesting but one does not get the impression that any one of them is relevant to any other. To use the analogy of music, Hamlin's book has the coherence of a symphony (even including some of the *longueurs* that occasionally afflicted Schubert); whereas the book edited by Cosgrove and Petts is more like a Victorian *salon* concert, where each of the 11 artists performs his party piece. □

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Technical targets

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Science, Technology, and Reparations: Exploitation and Plunder in Postwar Germany. By John Gimbel. *Stanford University Press: 1990. Pp. 280. \$29.50.*

As usual, a Hague Convention applied. It allowed seizure of enemy property that had direct military use or, in the case of occupation, that belonged to the state. And, as usual, the victors ignored the convention. That was a boon for many American industrialists and also for John Gimbel, whose latest book on the occupation of Germany concerns the 'exploitation' (the term of art used by the Americans) of German industry for private benefit in the United States.

The exploitation developed from wartime intelligence missions, such as ALSOS (which rounded up German nuclear physicists and their 'secrets'), BIOS and CIOS (respectively, the British and the Combined Intelligence Objectives Subcommittee). The main charge of these missions was to acquire personnel and *matériel* that might help in the war against Japan and, more generally, to insure that the Allies would have the advantage of all significant military developments made in Germany during the war. In furtherance of this programme, the Americans corralled specialists in military hardware in detention centres coyly called 'Ashcan' and 'Dustbin' and brought rocket scientists and their hardware to the United States through project 'Overcast'.

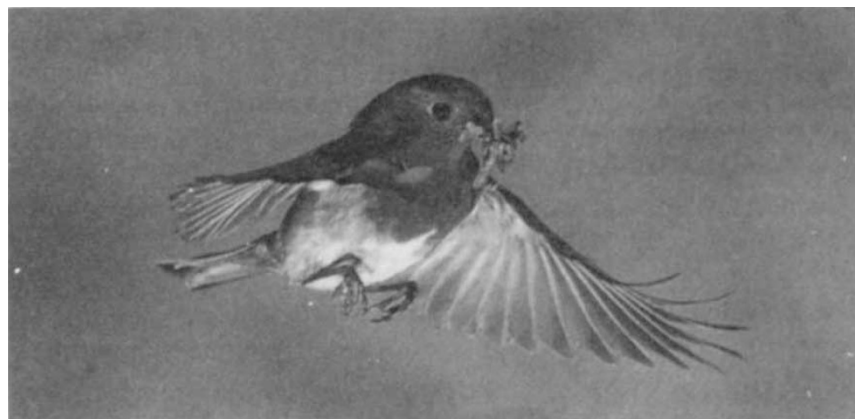
Overcast was the beginning of a more general importation of German brains, the notorious 'Paperclip', which aimed not only at exploitation but also at 'denial'. A persuasive argument for legitimizing Paperclip in the United States was the importance of denying the other occupying powers the opportunity to recruit or kidnap German technical experts living in the American Zone.

A draft press release, dated 11 March 1946, laid out the rationale for Paperclip so clearly that the Joint Chiefs of Staff classified it 'secret'. Gimbel prints it in full. It states Paperclip's goal as 'the complete exploitation of Germany for technical information'; provides for a limited importation of German specialists, all clean politically and intellectually "comparable to Prof. Einstein"; stipulates exploitation for civilian-industrial as well as military-technological purposes; and characterizes its way of business as

"vacuum cleaner methods".

The most energetic agency for industrial exploitation was the Office of Technical Services (OTS) of the Department of Commerce. Its director, John C. Green, liked to say that German trade secrets were "the only solid and permanent reparations we are going to get out of this war". The OTS recruited men from American industries to inspect plants dedicated to similar businesses in Germany, to identify useful machinery for removal to the United States, to interrogate technicians and managers, and to examine blueprints, drawings and manufacturing records. Their activities abroad were coordinated by the Field Intelligence Agency, Technical (FIAT) which also arranged for the wholesale copying of the records of German firms. The reports of the inspection teams and FIAT's micro-filmed records were sold for the cost of reproduction by OTS. (Amtorg, the Soviet Purchasing Agency in the United States, was OTS's most faithful customer.) No industry, however humble, escaped the vacuum cleaners of FIAT and OTS. There were obvious targets like synthetic fuels, artificial rubber, tape recorders, machine tools, optical apparatus and jet planes, but also manure spreaders, cosmetics, milk cans and stuffed animals. The means of making teddy-bears, a German speciality, stood revealed to the world.

There was not much chance that German industry would recover in an environment that threatened teddy-bears. The United States' Office of Military Government (OMGUS), commanded by General Lucius D. Clay, decided that it could not fulfil its mission with FIAT in the field. Gimbel tells the story of the resultant interagency battle clearly and economically. Green won the opening round by coaxing President Truman to write to OMGUS about the importance of FIAT. Clay retaliated by asking that an exact account be made of the dollar value of the technical know-how and equipment



Avian aerodynamics — A robin approaching the nest with its prey. *Bird Flight* by Robert Burton discusses some of the skills involved in getting, and staying, airborne. Published by Facts on File, price is £14.95. □