most violent political reactions he had known in 30 years of Parliamentary life. Blackett's unorthodox views on world affairs, including the need to co-operate with the Soviet Union to avoid the division of the world into nuclear blocs, was the cause of much of this reaction. But he made a major contribution to NRDC, and in the late 1950's and early 60's, with Labour out of office, his experiences at the corporation had a powerful influence on his thinking about how the next Labour government might improve links between science, technology and industry. The deliberations of such as Snow, Bernal, Blackett, Carter and Bronowski helped lead to the Ministry of Technology which was in some ways NRDC 'writ large'.

It was Blackett, Wilson continued, who, when Mintech was formed, warned of the British computer industry's distress. Supportive action had to be taken within weeks, and Cabinet took a lead by reviewing all proposed departmental purchases of foreign computers. This soon cut down enthusiasm for imports, although there was probably, he added, a good PhD thesis for someone in studying how this new form of protectionism had fitted in with GATT. □

Paying for pollution

In a Hobart paper published this week by the Institute of Economic Affairs (£1), Dr Wilfred Beckerman has refined his case in favour of charges as a method for controlling pollution and reinforced his criticisms of the alternative method of governmental regulation.

Dr Beckerman, who is a member of the UK's Royal Commission on Environmental Pollution, originally made his points with Lord Zuckerman in a minority report of the Commission in 1972. He suggests that production "uses up" the environment as well as labour and raw materials. With the environment a "scarce resource", the rational objective of "optimal pollution" is to be achieved using the means accepted for the allocation of labour and raw materials.

The polluter, he contends, has to be induced to economise in "using up" the environment, and encouraged to discover means of reducing it through the price mechanism. This, Dr Beckerman suggests, would be as efficient and equitable a method as any, and would also be cheaper. In addition "cosy relationships" between polluters and officials would be circumvented. □

French research body branches out

from the Staff of La Recherche

One of France's major scientific research bodies, the *Centre Nationale de la Recherche Scientifique* (CNRS), has recently been taking steps to fulfill more adequately one of the roles assigned to it by its constitution, which states that it should carry out research which will be of direct benefit to the advancement of science "or to the national economy".

The institution has established an industrial relations committee to coordinate a policy of cooperation with industry which it has launched, and is also making strenuous efforts to encourage its researchers to consider the socioeconomic impact of their work. Alongside the traditional scientific disciplines—physics, chemistry, biology—two new branches have been created: science for the engineer, and an interdisciplinary research programme on solar energy.

In addition, the CNRS has signed agreements for the exchange of research workers with several public or semi-public companies including the oil company Elf-Erap and the French Petroleum Institute. It has also reached an agreement on scientific collaboration with the big private chemical company Rhône-Poulenc (R-P) which allows collaboration in all the major fields covered by the company or its subsidiaries. These include organic chemistry, textiles, biology, and toxicology.

Under the latter agreement, a committee with equal representation from R-P and CNRS will choose projects for joint research and organise the training of research workers. Researchers from CNRS, while retaining their salary, will be seconded for one month to the R-P laboratories, and *vice versa*. It is also hoped to involve some personnel from R-P in various committees of CNRS on which industrial representatives could serve. In order to maintain the confidentiality necessary to industry, one clause requires that "no confidential information may be passed on to a third party . . . for fifteen years". Nevertheless, researchers can publish if they have authorisation from the joint committee. If a new process should be invented through this cooperation, R-P, if it wishes, can be the sole beneficiary. Payment to the CNRS would be calculated appropriately.

The terms of the agreement, only recently made available to researchers, trades unions and journalists, have caused an outcry. This has surprised the signatories, for whom the agreement merely makes official the links which already exist between certain CNRS laboratories and the company. They had hoped it would serve as a model for agreements with other companies: the next one is expected between the CNRS and a giant in the French chemical industry, the Péchiney-Ugine Kuhlmann company.

According to its directors, the CNRS does not commit itself to anything, since in principle every researcher is free to accept or refuse to collaborate with R-P. But for many scientists the basis of the agreement is debatable. The advantage to R-P is obvious, in that they will have the use of research workers trained and paid by the CNRS. For the CNRS, the advantage is not so clear; indeed, the agreement appears to be a gift from the public sector, not to industry as a whole, but to one privileged member. Whether or not the research workers, traditionally chary of collaborating with industry, finally feel reassured, they will have great difficulty in publishing their results, often with a delay of a year, and sometimes 15 years.

Of course, the board of directors of CNRS could be apprised of their work. How that information could be transmitted to the scientific community, or to the committees which decide promotion steps in a research worker's career, remains unclear. However, contrary to the practice in other countries, there is very little important high level research going on in industrial laboratories in France, and a period of instruction within a firm should lead, according to the thinking of the CNRS directors, to a mobility of researchers and so free CNRS posts. At present this happens only rarely.

The manner in which the agreement was made is also regarded by many as questionable. There was no consultation, or prior warning to either the commissions (made up of researchers and elected members), or to the other bodies controlling the CNRS (such as the Directorate, or the Administrative Council). But the CNRS apparently intends to push its researchers to cooperate with industry, and to reorientate its research programmes to be more directly applicable.

The idea is not a bad one in principle: recent meetings, when industrial researchers explained their problems to the more basic research workers, have shown that dialogue is possible. It is believed essential, however, that the CNRS should profit from the agreement it makes, and that it should ensure that the results of research financed by the nation are evenly shared and exploited by the nation; this is not seriously safeguarded in the contract with Rhône-Poulenc. Moreover, the more applied research must also leave room for fundamental research.