

## CSIRO

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CSIRO (the Commonwealth Scientific and Industrial Research Organisation) and its forbears have undergone many transformations, reflecting twentieth century shifts in the relationship between science and government.

In the midst of World War One, impressed by Germany's technological might, Prime Minister W.M. Hughes enthusiastically declared his support for the creation of a 'national laboratory'. An Advisory Committee representing science, government and business was set the difficult task of reconciling this vision with the realities of federalism. After softening the proposal's supposed centralist overtones, legislation was finally passed in 1920. The Institute of Science and Industry was established.

Unfortunately the Institute, led by [G.H. Knibbs](#), was burdened with both an ambitious research program and a severely-limited budget. While some important programs were initiated, Australia's national research effort seemed destined to fail until Prime Minister S.M. Bruce intervened. In 1926 he introduced legislation for a new organisation, stressing its role as a coordinator of scientific research across the states. The organisation would be guided by state-based committees, and governed by a council of scientists and industrialists. The crippled Institute was replaced by the Council for Scientific and Industrial Research (CSIR). This pre-history is chronicled by George Currie and John Graham in *The Origins of CSIRO* (1966).

The management of this new organisation fell to a three-man executive. Although ultimate power was invested in the council, it was the executive that shaped the programs, the structure and the spirit of CSIR. For almost twenty years this comprised just three men - [G.A. Julius](#), a respected businessman and engineer; [A.C.D. Rivett](#), formerly Professor of Chemistry at the University of Melbourne; and [A.E.V. Richardson](#), an agricultural scientist.

CSIR needed to provide evidence of science's benefit to the nation if its future was to be secured. Consequently, it was decided to focus on the problems of the primary industries, still the country's main source of wealth. Divisions of Animal Health, Animal Nutrition, Economic Entomology, and Economic Botany, were amongst the first established. However, it was a research program initiated under the Institute that gave CSIR its first public victory - a South American caterpillar was found to control the rapidly-spreading prickly pear.

But CSIR's ambitions lay beyond problem-solving for industry. Rivett, in particular, was frustrated by the reactive, short-term nature of much of the work that CSIR was forced to undertake. Committed to the freedom of scientific inquiry, and certain of the benefits that long-term, fundamental research would bring, Rivett continually sought ways of encouraging such research within CSIR. The diversity spawned by this balancing act helped give CSIR/O its strength.

The Depression and the demands of defence self-reliance focused attention on secondary industry. In 1936, Julius led a government committee that recommended CSIR take on a number of new responsibilities associated with manufacturing. These included research in aeronautics, maintenance of basic standards of measurement, and the provision of an industrial research service.

CSIR's move into the physical sciences was accelerated by World War Two. The Division of

Industrial Chemistry, established to provide the desired research service, was joined by the Lubricants and Bearings Section. A Radiophysics Laboratory was created in secrecy to undertake the development of radar for local use. Staff numbers quadrupled from 1939 to 1945, and by 1949 CSIR was one of the largest scientific research organisations in the world. Boris Schedvin traces the organisation's development up to 1949 in *Shaping Science and Industry* (1987).

The war not only changed CSIR, it changed attitudes to science. There could now be no doubt that scientific research was valuable – indeed, perhaps it was too valuable to be left in the control of scientists! Cold War hysteria and political opportunism merged in the late 1940s as the opposition parties attacked the CSIR for its handling of secret information. Rivett, the unabashed advocate for the freedom of science, was an easy target.

Under pressure, the government excised aeronautics research, and initiated an inquiry into CSIR. In 1949 the organisation was reconstituted, its administrative structure was overhauled, and its staffing decisions brought under the purview of the Public Service Board. CSIR became the Commonwealth Scientific and Industrial Research Organisation. Close to retirement, Rivett could not reconcile himself to the new order, and so resigned.

Rivett's martyrdom was made more poignant by the fact that under a new chairman, [Ian Clunies Ross](#), CSIRO was about to enter its golden age. With strong support from the responsible minister, [R.G. Casey](#), the organisation was at last able to undertake a substantial program of fundamental research. The radiophysicists turned their aerials towards the sun, becoming world leaders in the new field of radioastronomy. Industrial Chemistry gained international recognition in many fields of research. The success of myxomatosis in controlling rabbit numbers brought new public prestige, and a detailed program of wool research was undertaken.

By the late 1960s, public enthusiasm for science had begun to cool. In government circles there was a demand for increased planning and accountability. Reviews and inquiries proliferated throughout the 1970s culminating in the 1977 report of the Birch Committee, which, while it recommended some structural changes, was basically content with CSIRO's mix of pure and applied research.

Within ten years the rise of economic rationalism had changed the climate once more. A report by ASTEC, adopted by government, argued that CSIRO should concentrate on application-based research, closely linked to the needs of industry. After so long, perhaps, Rivett's fears were finally realised.

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