29 June 1973, Volume 180, Number 4093 **SCIENCE**

Noblesse Oblige in Science

In the fall of 1972, the press carried the news of the award of the Nobel Prize for Physics to John Bardeen and his two co-workers. What is not generally known is the purpose for which Bardeen used his share of the prize. Bardeen, for whom this was a second Nobel award, used his share to set up an endowment fund at Duke University to support the London Memorial Lectures at Duke and to provide funds for the Fritz London Awards. The latter are a feature of the International Conferences on Low Temperature Physics sponsored by the International Union of Pure and Applied Physics.

London left Germany in the days of Hitler's rise to power to join the physics group of Oxford University. He later moved to Paris to become maître de recherche at the Institut Henri Poincaré. He went to Duke as a visiting professor in 1938, becoming professor of chemical physics in September 1939. A few years later, his initial appointment in chemistry was changed to a joint one with physics, a post he held until his death in 1954.

London's great interest in low temperature phenomena started when he was offered a fellowship by Imperial Chemical Industries to go to Oxford. At the time the offer came, a similar offer was made to Franz Simon, a colleague of London's. Simon was a gifted experimentalist, and the two men were to develop a program in low temperature at Oxford. The collaboration between the two, which began at Oxford, continued after London went to Paris.

Some time after London arrived at Duke, came physicist William Fairbank. He was an outstanding experimentalist working in the low temperature field, and the team of London and Fairbank made great progress toward understanding some of the puzzling phenomena taking place at extreme low temperatures.

The significance of London's contribution to theoretical physics in the area of low temperatures was well summarized by Felix Bloch* in June 1954, shortly after London's death:

> London's genius has not failed to impress those who were well acquainted with him and his work, and his influence has been far out of proportion to the external signs of his recognition. The lasting value of London's scientific achievements lies not only in the light shed on hitherto unexplained phenomena but also and particularly in his opening of new roads to be traveled in the years to come.

Bloch's evaluation of London's contributions was indeed prophetic in light of subsequent events. Bardeen, in his statement concerning the Duke gift in 1973, said of London: "He was one of the world's most distinguished leaders in theoretical aspects of physical phenomena at extremely low temperature. More than anyone else, he pointed out the path that eventually led to the theory of superconductivity, for which Leon N. Cooper, J. Robert Schrieffer, and I were awarded the Nobel Prize for Physics in 1972."

This is a time of growing anti-intellectualism, in which scientists are accused of narrow self-interest, of a lack of humanity, and of many other objectionable characteristics. In the face of this, it is heartening to note the following words of Bardeen in acknowledgement of an intellectual debt to one of his predecessors, Fritz London: "We are all very grateful to him for the deep insight that helped light the way to understanding."

In science, there still is, as there always has been, a spirit of noblesse oblige.—PAUL M. GROSS, *William Howell Pegram Professor of Chemistry (Emeritus), Duke University, Durham, North Carolina 27706*

* F. London, *Superfluids* (Wiley, New York, 1954), vol. 2, p. ix.