

This Week's Citation Classic

Bradley P B & Elkes J. The effects of some drugs on the electrical activity of the brain. *Brain* 80: 77-117, 1957. [University of Birmingham. Department of Experimental Psychiatry, Birmingham, England]

Using animal preparations carrying chronically implanted electrodes and two acute preparations, the *encephale* and *cerveau isole*, it was possible to differentiate between drugs with similar effects on electrical activity and behaviour, and those which caused 'dissociation.' Certain actions could be related to the brain stem reticular formation. [The SCF[®] indicates that this paper has been cited over 220 times since 1961.]

Philip B Bradley
University of Birmingham
Department of Pharmacology
Birmingham, B15 2TJ England

March 6, 1978

"It is very pleasing to learn that one's first major paper, published more than 20 years ago, has become a 'Citation Classic,' although it is difficult to think of reasons why this should be so. It is probably fair to say that at the time the research reported in this paper was being carried out we were pioneering, in the sense that there were very few others working in the same field. Thus, there were few centres working on the CNS, probably because of the lack of suitable techniques and almost none, at least in Europe, where centrally acting drugs were being studied. In England our work did not seem to meet with the approval of the scientific establishment and our presentations at the meetings of the Physiological Society provoked little discussion. At the time I found this very discouraging as I had doubts about whether or not I had done the right thing in leaving the discipline in which I had been trained (Zoology) for a completely new

area, which only later became known as 'Neuropharmacology,' and which at that time seemed to have a doubtful future.

"However, while I was busy trying to integrate different kinds of basic research, i.e., behavioural studies and electrophysiology, my colleague, chief, and co-author, Joel Elkes was occupied with developing the clinical aspects of our work. This was in the days before psychotropic drugs were even thought of, and we first heard about newly discovered drugs such as LSD 25 and chlorpromazine by word of mouth, usually from the representatives of the pharmaceutical industry, who also supplied us with our first samples of these new compounds. Suffice it to say our work caught the interest of many clinicians, psychiatrists, neurologists, neurosurgeons, etc. It was a result of a suggestion by Lord Brain, then Sir Russell Brain and editor of the journal *Brain*, that our first major publication was submitted to a clinical journal.

"In retrospect, considering the enormous increase in both interest and in the volume of active research, utilising highly sophisticated techniques, on the actions of drugs in the CNS, I find it surprising that our 21-year-old paper, which describes some relatively simple experiments, should still be quoted. Most of the findings were not unexpected, and only one, that of the 'pharmacological dissociation' between behaviour and the EEC when antagonists of acetylcholine were administered, has caused any controversy. Even this was not a new discovery, as similar effects had been reported in the dog. In my view the controversy still exists only because we have, been *misquoted* and perhaps I might end with the plea, *not* to quote us without reading the original paper first."