



DRS. TORSTEN WIESEL, DAVID HUBEL AND ROGER SPERRY
 . . . Their research has helped in treatment of brain disorders

U.S. Scientists Get Nobel Prize For Unraveling Secrets of Brain

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Three American-based researchers whose pioneering work helped penetrate the complex inner workings of the brain were awarded the 1981 Nobel Prize in Physiology or Medicine on Friday.

Half of the \$180,000 prize went to Dr. Roger Sperry, 68, a researcher at the California Institute of Technology who was cited by Sweden's Karolinska Institute for "extracting the secrets" of the two hemispheres of the brain.

A Harvard University team — Drs. David Hubel and Torsten Wiesel — was honored for discovering the manner in which visual images are processed in the brain.

In addition to their theoretical advances in basic brain research, the findings of all three also have had practical applications in the medical treatment of patients with various disorders involving the brain.

AN OFFICIAL at the National Institute of Mental Health, which has funded his research for 23 years, called Sperry a "bridge between the

then went off for a game of tennis (which he lost).

Hubel, reached by telephone, said he was "surprised," even though he and his colleague had been considered likely candidates for a number of years. All three of the new Nobel laureates long have been recognized as leaders in the emerging area of brain research.

Sperry, who has been at Cal Tech in Pasadena since 1954, began attracting attention at that time with his famous "split-brain" experiments. These involved animals in which the connective fibers between the two cerebral hemispheres had been surgically separated.

In these and succeeding studies with epileptic patients who had undergone similar surgery as part of their treatment, he was able to demonstrate that the two sides of the brain were entirely independent with regard to learning and retention.

SPERRY THEN began to map the various portions of the brain and their highly specialized functions. He

showed that the left hemisphere, which controlled speech, was more involved with abstract thinking and logical reasoning, while the so-called "mute" right side focused on spatial and visualizing abilities.

The work of Hubel and Wiesel provided a different insight into brain functioning, as their experiments with animals — cats and monkeys — unraveled the steps by which the brain processes visual information.

It previously had been thought that messages that reach the brain from the eyes were transmitted point by point, projecting the image on the cerebral cortex much as a movie is projected onto a screen.

Hubel and Wiesel went to Harvard Medical School in 1959 after working at Johns Hopkins in Baltimore. Although their scientific partnership spanned more than two decades, Hubel noted that they now are conducting separate studies. He has gone into sleep research, with Wiesel continuing on vision research. Their research has been funded by the federal National Institutes of Health.