Dr. Bruce Peter Halpern

Listen to this obituary

Obituary

Send Flowers

Dr. Bruce Peter Halpern

Dr. Bruce Peter Halpern of Kendal at Ithaca died peacefully on Monday, January 31, 2022 at the age of 88.

Bruce was born on August 18, 1933 to Leo and Thelma Halpern in Newark, New Jersey. He grew up in East Orange, New Jersey, where he enjoyed horseback riding and photography. In 1951, he graduated from East Orange

High School and began his studies at Rutgers University. While at Rutgers, Bruce was a Henry Rutgers Scholar and a member of the Sigma Alpha Mu fraternity.

During his college years, Bruce also met his future wife, Pauline. Bruce and Pauline married in 1956 and recently celebrated their 65th anniversary.

In 1955, Bruce graduated with honors from Rutgers and began his PhD in Psychology at Brown University. After completing his doctorate in 1959, Bruce spent two years at Cornell University as a post-doctoral student. He served as an assistant professor at Upstate Medical University in Syracuse from 1961 to 1966, then returned to Cornell as an assistant professor in the Department of Psychology and the Section of Neurobiology and Behavior in the Division of Biological Sciences. He eventually become a tenured professor, was named the Susan Lynn Sage Professor of Psychology, and served as the Chair of the Psychology Department for a total of 12 years. Bruce loved teaching and mentoring both graduate and undergraduate students, all while conducting a broad range of research focused on taste and smell. He also took several sabbaticals while at Cornell, most notably as a visiting professor at Osaka University in Japan. Even after retiring from Cornell, Bruce remained active in research for NASA, working on a project simulating life on Mars.

Bruce and Pauline moved to Kendal in 2011. Bruce quickly became involved in the Kendal culture of volunteerism, helping other residents by serving on the computer committee and providing AV support for many concerts. Bruce and Pauline also traveled for fun, including an archaeological trip to the southwestern United States sponsored by the Smithsonian and a trip to China as well as returning to Japan. In addition, Bruce continued to explore his interests in American history, comparative religion, and science fiction.

Bruce was a devoted husband, father, and grandfather. He is survived by his wife, Pauline; his children, Michael and Stacey; and his grandchildren, Caitlin, Dylan, Jakob, and Maya.

A small, private memorial was held at Bruce and Pauline's home earlier this week. Donations in Bruce's honor may be made to Cornell University's Bruce P. Halpern Undergraduate Research in Psychology Fund, Number 0009969: https://bit.ly/bruce-halpern.

Arrangements have been entrusted to Bangs Funeral Home, online condolences can be left www.bangsfuneralhome.com

Posted online on February 04, 2022
Published in The Ithaca Journal

Taste-dependent decisions occur in milliseconds, Cornell

By Roger Segelken |

March 1, 1996

Watch some wine-tasters contemplate their choice and you might think flavors take forever to register in the brain. In fact, humans can make taste-dependent decisions after as little as 50 milliseconds (50 thousandths of a second) of tasting, research at Cornell University is showing.

That's a good thing, says sensory physiologist Bruce P. Halpern, Ph.D. For a while it looked like even rats made up their minds faster than humans.

"Rats need only 125 milliseconds to make a taste-dependent decision, but for years it was thought that humans require 700 to 1,000 milliseconds," said Halpern, chair of the Cornell Department of Psychology and a professor of neurobiology and behavior. "Taste was always described as the 'unusually slow sensory system' in humans." Granted, rats have a life-or-death reason to make up their minds quickly about taste -- especially tastes that may be poison. Rats drink by rapid licking, and they can't vomit away their mistakes, Halpern explained. Humans are suction drinkers and can hold liquids in the mouth for several seconds before swallowing or spitting out. But could rats really be nearly 10 times faster at tasting? Halpern designed a series of experiments that eventually demonstrated that humans are both fast and flexible tasters. In one test, volunteers were asked to spit out a "target" flavor and swallow any others while throat microphones and lip electrodes measured events for computer analysis. The target flavor was reliably spit, even when -- a few minutes before -- it had not been the target flavor and had been consistently swallow instead.

"The spit test was never popular," he said. "Volunteers didn't mind, but lab assistants hated it." Now that the sensory physiologist has humans registering taste in the 50-milliseconds range, Halpern has moved on to more complex questions of interest not only to physiologists and psychologists but to the food-and-beverage industry. For example, how long does a taste sensation take to peak in intensity, change or disappear? Sweetener makers don't want the taste to rise too slowly or leave an aftertaste, he noted. But beer makers may want to provide a slowly increasing perception of bitterness.

His efforts at time-intensity tracking required redesigned experiments, and one, he said, "is similar to something that Cornell students apparently have a lot of experience with -- video games." Students use a joystick to draw pictures of changing taste intensities as they experience them. Another test, time-quality tracking, requires a little more training: learning keyboard codes for 24 taste descriptions, such as "fruity," "bouillon" and "yuck."

At Cornell, Halpern teaches Chemosensory Perception, Sensory Function, and Effects of Aging on Sensory and Perception Systems. Research in sensory physiology also has clinical applications, potentially improving the diagnosis and treatment of chemosensory (smell and taste) disorders, the scientist noted.