

Doreen Kimura

behavioural psychologist

World expert on sex differences in the brain.

"Don't take too seriously the advice of people who supposedly know better than you do. As long as you are finding out things we didn't know before, you are doing something right."

The Person

Birthdate ca. 1940 (Doreen Hogg)

Birthplace Winnipeg, Manitoba

Residence London, Ontario

Office Dept. of Psychology, University of Western Ontario

Family Members

¥ Mother Sophia N.

¥ Father William J. Hogg

¥ Daughter Charlotte Vanderwolf

Title Professor

Status Working on brain and hormonal mechanisms in human cognitive function, including sex and hand preference

Degrees

¥ B.A. McGill U. 1956

¥ M.A. McGill 1957

¥ Ph.D. McGill 1962

Awards

¥ Ontario Mental Health Foundation., Research Associate, 1973-81

¥ Fellow, Canadian Psychological Association

¥ Fellow, American Psychological Association

¥ Recipient of 1985 Canadian Psychology. Assn. award for Distinguished

Contributions to Canadian Psychology as a Science

¥ Recipient of 1986 Can. Assn. for Women in Science award for

Outstanding Scientific Achievement

¥ Faculty of Social Science Research Professorship, 1986-87

¥ Fellow, American Psychological Society

- ¥ Fellow, Royal Society of Canada
- ¥ John Dewar Award, The Ontario Mental Health Foundation, 1992
- ¥ Honorary doctor of Laws, Simon Fraser U. 1993

Mentors Donald O. Hebb and Brenda Milner, who taught her to think of behaviour in terms of the nervous system.

Character Independent, non-conformist, self-assured

Favourite Music Blue Rodeo "Outskirts", Rhythm & Blues, Rolling Stones.

Other Interests

¥ Founding president of a society for the maintenance of academic freedom. "I'm concerned about new rules in the university research environment. For instance, for politically correct reasons, certain research is now frowned upon as it might offend certain groups (like fat people or women). Also I do not like the emphasis on collaborative research. Both these trends kill the creative freedom of the individual. You just have to go ahead and find things out for yourself. This is the mark of a good scientist."

The Story

The room is dimly lit, quiet and small. It's in the big modern psychology building at the University of Western Ontario. A young university student sits at a table ready for the test.

There are no windows. The ventilation system is the only sound. A slightly older graduate student administers the test from the other side of the table. She places a sheet of paper with rows and rows of little pictures in front of the subject and starts a stopwatch. The fellow taking the test is getting \$10 dollars to sit for a half hour checking off pictures that match. As soon as he finishes one page, she puts another one in front of him until two minutes are up. It's kind of fun at first but it gets a little bit boring after a while; especially for the older student who has given this test almost a hundred times already. The stopwatch sets the pace of the action in two minute intervals as different subjects come into the room to do the test.

Later, the graduate student tabulates the results to see how many rows of pictures men matched correctly compared to how many rows the women got right. Doreen Kimura comes in and takes a look at the raw data. Right away she can see they are onto something and a subtle smile crosses her face.

History

Kimura grew up and went to school in a small town in Saskatchewan (Neudorf, near Yorkton), where facilities to do science were almost non-existent; so her interests were

in writing, languages, and algebra. Before finishing High School, at the age of 17 Kimura dropped out to teach in one- roomed rural schoolhouses in Saskatchewan and Northern Manitoba. While in Manitoba she saw an ad in a teacher's magazine for an admission scholarship to McGill, applied for the fun of it, and got it!

At McGill she became interested in Psychology as a result of hearing Donald O. Hebb lecture in the introductory course. She got a BA, MA and PhD at McGill, the latter in Psycho-biology, and then spent two years as a post-doctoral Fellow at the Montreal Neurological Institute, before sojourns at UCLA Medical Center and the Zurich Kantonsspital in Switzerland. She became a professor in Psychology at UWO in 1967. She also has a small consulting business which sells neuropsychological tests that she developed.

The Science

Behavioural psychologists study how brains work to understand how people differ from each other. They do this by giving people psychological tests. For instance you might be shown a series of pictures where you have to match the ones that are the same. The test is timed and the faster you do it the higher your score.

1. Mental Rotation Test On average, men can pick out matching rotated objects faster than women. Women are better at matching objects based on their surroundings.

2. Aphasias Aphasias, or speech disorders, occur most often in women when they have brain damage in the front of the brain. In men, these disorders occur when the damage is in the back of the brain.

3. Finger Ridge Counts Kimura counts the number of finger ridges between two specific points on a person's fingerprint. People with high ridge counts on the left hand are better at "feminine" tasks. On average any sample group of people will have more ridges on their right hands. But Kimura has found that on average, sample groups of women and groups of homosexual men have a higher incidence of individuals with more ridges on their left hands.

Activity

Find someone you can watch for five minutes while they are talking. They don't need to be talking to you. They could be in a restaurant or a bus or they could be talking to someone else with you. They should have nothing in their hands. The idea is to record their hand movements while they talk for five minutes.

Make a table to record your data. The table has three columns one for right and one for left hands, and one for both hands. It also has two rows so you can record self-touching movements as well as free movements.

After observing several different people, count up the totals of hand movements for

each individual. Did you record more right hand movements or left hand movements? While people are talking they use speech centres on the left side of the brain. Which side of the brain controls the movements of the right hand? Your experiment might help answer this question. If you pool your observations with dozens of others at your school you may have enough data to calculate a left and right hand movement average for men and an average for women. Which sex uses their right hand the most while they are talking?

Mystery For Future Generations

Kimura offers no mystery for future generations to solve, saying that it's the unpredictability of science that makes it interesting.

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