



Research Project Highlights:

- The LTS has been ongoing for 19 years, making it one of the longest running studies of its kind in the United States.
- Since the summer telephone tests began in 1994, 836 participants have completed at least one summer test.
- The LTS has received 8 grants over the years to continue this type of valuable research
- Over 70 articles have been published using LTS data.

Genes, Environment & Adolescence

One of the most dramatic periods of life transition occurs in adolescence. As children mature into adults, physical, emotional, social and mental changes seem to 'go into overdrive'. Many of these processes are biologically driven, the result of an individual's genetic makeup. However, even traits with a strong genetic component are affected by the environment. A main goal of the LTS is to find out what processes influence the changes that occur during childhood and into adolescence and adulthood.

Several new studies conducted at the Institute for Behavioral Genetics have explored this transition. The following are summaries of recent findings:

- Reading Performance:

Reading Performance was assessed at ages 7, 12, & 16 and compared with parent performance. Researchers found evidence for strong genetic influence at all three ages, and little evidence for changes during adolescence. In this study, reading performance appeared to be strongly influenced by genetics.

- Sibling Relationships:

Researchers found that as siblings aged, their relationships tended to become less intense. Both warmth and conflict declined as siblings entered adolescence. Sisters reported more warmth and self-disclosure during adolescence than those in other sibling relationships.

Summer Interviews Underway

This year the summer interviews will cover a variety of familiar subjects including questions about family, friends, personality and behavior.

The phone interview will take approximately 30 minutes per person. Some participants will also be asked to complete a small booklet over the phone with a researcher. These tasks measure things like reading and memory. The booklet takes an



Genes play a large role in reading performance

- Cognitive Development

Looking at data from birth through early adolescence, researchers found that the stability of cognitive ability was due largely to genetic factors, whereas changes in cognitive ability were due to environmental factors.

The youngest participants in the LTS are in the midst of adolescence, whereas the oldest are entering adulthood. Data collected in the next several years will be very important as we seek to understand what drives the dramatic changes that occur during the teenage years. If you would like a copy of any of our research articles, or have any questions, please contact us at the addresses on the back. We very much appreciate your continued participation and support of this important research.

additional 50 minutes. As in prior years, participants will be compensated for their time. 16 year old participants will either visit our lab or be visited by a researcher for a more in-depth interview.

If your family is planning a long summer vacation, or if there are certain days you know would work well for these interviews, contact us so that we can best accommodate your schedule. We look forward to visiting with you again this summer!

University of Colorado

Longitudinal Twin Study
Institute for Behavioral
Genetics
1480 30th St
447 UCB
Boulder, CO 80309

Phone: 303-492-4473
Fax: 303-735-2741
Email: wrightc@colorado.edu



Research Staff



Sally Ann Rhea
Project Supervisor



Annie Johnson
13-15 year Manager



Corinne Wright
16 year Manager



Amy Ledbetter
16 year Scheduler

13-15 Telephone Testers



Rob



Blake



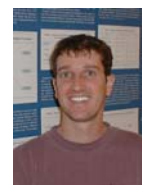
Andy



Margaret



Stephanie



Dan

Behavioral Genetics: Mapping Our Inner Surroundings



For centuries explorers have mapped the world around us in order to gain knowledge and understanding of the complex place we inhabit. With advances in technology, scientists have been increasingly able to map our inner surroundings as well. In 2000, the first complete map of the human genome was created. This map charts the location of all the genes that make up a human being, around 35,000 in all. Variations in these genes contribute to differences in our physical attributes and behavior. However, researchers are just beginning to find out what many of these genes do. The field of behavioral genetics is at the forefront of this search, and the results from your tests are helping us discover many exciting new aspects of human development and behavior.

Behavioral genetics is the study of genetic and environmental factors that create behavioral differences among individuals¹. This is the classic nature (genetics) vs. nurture (environment) debate. Researchers are finding that instead of “vs.” however, it would be more appropriate to say “nature **and** nurture”, as different combinations of genetics and environment make us who we are, it is not strictly one or the other.

Currently, researchers in behavioral genetics are focused on 1) finding behaviors and traits that are associated with specific genes and groups of genes, and 2) discovering how genes interact with the environment to make us each unique individuals. In order to find these connections, projects such as this one are being conducted around the world. Data about emotional, mental, and physical traits are collected through questionnaires and interviews, and DNA is collected through blood or saliva in order to match certain behaviors with certain genes. Researchers have begun pinpointing the functions of many genes, including those involved with reading disabilities, addictive behaviors, sleep, and memory.

This is an exciting time in the field of behavioral genetics, and your contribution to our understanding of the human experience is invaluable. Thank you again for your continued participation as we fill in the map of our inner surroundings.

1. Plomin, R. (1996) Nature and Nurture: An Introduction to Human Behavioral Genetics. Wadsworth Publishing. pg. 4