

University of Colorado at Boulder Institute for Behavioral Genetics

# **Colorado Adoption Project News**

lssue #33

Summer 2006

Current Interviews		
Туре	Age	Time
NNSD Phone Interview	18-35	30 min to 1 hour
ACE Phone Interview	18-21	l hour
CADD Phone Interview	26-27	1-3 hours
NNSD Spouse/ Partner Interview	18-35	45 min

## Project Highlights:

- 170 books, book chapters, and articles have been published using CAP data.
- 620 telephone interviews were conducted between summer 2005 and summer 2006.
- Over 4500 NNSD phone interviews have been conducted with 1624 participants since the NNSD began 7 years ago.
- 85 percent of original CAP families are still participating .
- The CAP is the longest currently running study of its kind in the world!

## Raising the Bar: Reading Achievement in the CAP

Of reading, writing and arithmetic, it can be argued that mastery of reading is the most important of the three. Reading ability influences competency in all academic pursuits, affects future job opportunities, and can even have an impact on relationships and emotional well-being. In a book published this year, titled "Developmental Contexts in Middle Childhood"\* researchers looked at various influences on reading development in the CAP.

Specifically, researchers looked at the impact of genetics, shared environment, and nonshared environment on reading ability. Shared environment refers to experiences that siblings share while growing up, such as some aspects of home life. These experiences generally contribute to similarities in behavior. Nonshared environment is experienced separately by siblings. Examples of nonshared environments include teachers, classes or friends that are unique to one sibling or another.

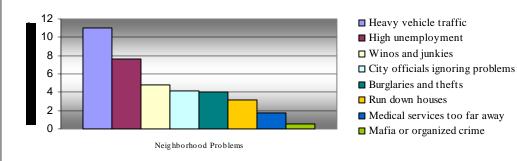
What researchers found was that reading achievement was influenced by all 3 factors. Overall, reading ability at age 7 predicted reading ability at older ages. If a child had high ability at age 7, that child would most likely have high reading ability at age 16. This was due to genetic influences on development as well as shared environmental influences, such as parents reading to their children. The only factors that caused a child's reading ability to rise or fall significantly from age 7 to 16 were elements in the nonshared environment. This finding suggests that influences outside the home can have a substantial impact on reading achievement.

Results from this study show that genetics and shared environment may 'set the bar' for reading ability at a young age, but that the influence of teachers, friends and classes can either lower or raise that bar over time.

\*Wadsworth, S.J., Corley, R.P., Plomin, R., , Hewitt, J.K., and DeFries, J.C. (2006). Genetic and environment influences on continuity and change in reading achievement in the Colorado Adoption Project. In A.C. Huston & M.N. Ripke (Eds.), Developmental contexts in middle childhood (pp. 87 - 106). NY, NY: Cambridge University Press.

## Few Problems Reported in CAP Neighborhoods

Overall, neighborhood problems were minimal among CAP participants. The chart below shows a sample of problems that were reported in neighborhoods. The scale measures the percentage of CAP participants who rated each item as a "big problem" in their neighborhood in our fifth NNSD telephone interview.



#### University of Colorado at Boulder Institute for Behavioral Genetics

Colorado Adoption Project 1480 30th St 447 UCB Boulder, CO 80309

Phone: 303-492-7991 Fax: 303-735-2741 E-mail: johnsoab@colorado.edu

ibgwww.colorado.edu/cap



# **30 Years and Counting!**

We would like to thank you again for your important contribution to this research project. Researchers in the field are beginning to find many new connections between behavior, environment and genetics thanks to your participation. In particular, IBG researchers are very involved in isolating genes that may influence certain behaviors, including addiction, cognitive ability and antisocial behavior. Recently we have identified several areas of high interest on chromosomes 3 and 9 which warrant further investigation.

Current and future research aims for the CAP include:

- To further investigate the function of specific chromosomal regions as they relate to different aspects of behavior.
- To test hypotheses about genetic and environmental influences on educational and occupational attainment.
- To assess the transitional experiences of adopted vs. nonadopted children as they enter young adulthood.

30 years is certainly a very long time for a research project to thrive. We continue to receive funding because of the quality of the data and the ongoing participation of so many CAP Families. Thanks for sticking with us!

# From Hypothesis to Journal: The Publication Process

Results from the CAP have been published in over 40 scientific journals. From Nature to Behavior Genetics to Scientific American, each journal has a different focus, style, and audience. Despite these differences, the publication process often runs a similar course.

## **First Things First**

A researcher or team of researchers formulate a hypothesis about the CAP data. This can take several forms. Researchers may look to confirm or deny results from other studies, or they may look for interesting relationships between environment, behavior and genetics. After the hypothesis is conceived, statistical analysis is run on the data. This analysis will either confirm or disprove the hypothesis. Even when the hypothesis is proven to be incorrect, a paper is still often written, sharing these results.

### **Poster Presentation**



Before going to press, preliminary results from a paper are sometimes summarized in poster form. These posters are then presented at various conferences across the country and world. There, professional colleagues and other researchers have a chance to discuss the findings and make suggestions about the final course of the paper. From here, it's a matter of finding the right journal.

## **Journal Submission**

There are hundreds of scientific journals, however only a few are appropriate for each paper. Once a researcher locates a suitable journal, the paper is submitted. It must follow general guidelines, such as the inclusion of introduction, methods, results and discussion sections. It must also conform to specific guidelines set out by each journal.

## **Publication**

A review board at each journal will ultimately decide whether a paper is published. Often a paper is sent back to the authors with requests for revisions. If these revisions are made to the board's satisfaction, the paper is accepted for publication. CAP researchers then take a moment to pause, celebrate, and begin hypothesizing all over again.

A list of CAP publications can be found on our website. If there are any papers that interest you, please let us know and we'll be happy to send you a copy.