

Wisconsin Twin Research

University of Wisconsin - Madison

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Feature Articles:

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Twin Temperament Similarity and Sibling Relationship across Childhood and Adolescence

Oi Kam Chow and Nicole Schmidt,
Wisconsin Twin Project

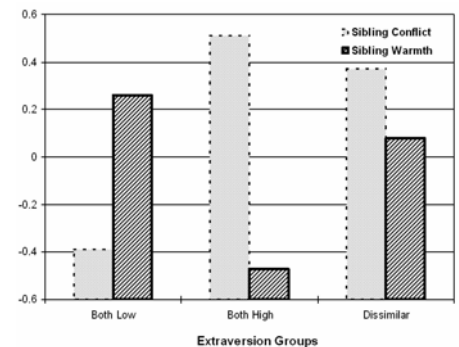


The relationship between twin siblings is unique in many ways. Twins (and other multiple births) are the only individuals who experience a sibling before birth and may know each other better than any two people. Many parents reflect on moments shared between twins as heart-warming, quirky, and amusing. Although twins engage with one another in comfortable and somewhat predictable ways, there is a range of affection, conflict, and competition between twins. A hypothesis posited in a paper published in a 2001 issue of *Biological Psychiatry* suggests that personality has an additive effect on sibling relationship quality. Thus, two siblings who have difficult temperament have more conflict and less warmth. Two siblings with an easy temperament have less conflict and more warmth. Dissimilar siblings fall between the two extremes. We examined features of temperament of twins at age 7 and age 14 and the association between temperament and sibling warmth and conflict. **The goal of the study was to learn more about how the similarity or difference in temperament impacts sibling relationship quality over time.** A unique feature of the study was the use of events observed during sibling interactions at age 7 (snack time and playdough) and the relationship between observed interactions with ratings from twins and a parent.

The study included 300 twins who participated in the Wisconsin Twin Project when they were age 7-9 and again at age 12-16. Each twin and a parent reported about sibling relationship quality at both time points. At age 7, twins reported about their sibling relationship during a conversational interview with puppets during an in-home visit. An example item from the warmth scale is "How much does your twin admire and respect you?" An example item from the conflict scale is "How much do you and your sibling yell at or fight with each other?" Twins also participated in

naturalistic interactions during which they ate a snack together and played with playdough. Parents rated the twins on a number of items related to a dimension of temperament identified as *extraversion* (composed of high activity, impulsivity, lack of inhibitory control, and lack of shyness). Twin pairs were divided into groups based on parent-rated extraversion (both twins as high extraversion, both low extraversion, and discordant extraversion ratings).

Twin pairs in the high extraversion group had significantly higher conflict level and lower warmth level during observed interactions than the twin pairs reported as both having low extraversion. The conflict and warmth level between discordant sibling pairs fell between the two extremes although the differences were not significant.



The same pattern was found for child-rated sibling conflict at age 7. **Does early personality relate to later sibling relationship quality? Our results suggested yes; greater extraversion at age 7 was associated with greater conflict at age 14. This project is one of the first of its kind to incorporate observational twin interactions and longitudinal data.**

Oi participated in twin research for over 6 semesters and recently wrote a senior honors thesis which was submitted and accepted for presentation at the annual meeting for the *American Psychological Society* this spring.



Spring 2009 Graduates



Each year, approximately 50 talented undergraduate students work on our research projects. Most of these students work with us for two or three years, so working in our lab is often a large part of their UW experience and contributes to their plans for graduate school and long-term career goals. The project recently celebrated another cohort of graduating seniors who have begun other exciting work.



Sarah Beckman

Sarah Beckman (First Pictured)

I've been with the Wisconsin Twin Project (WTP) since the beginning of summer 2007. I am an experimenter for adolescent home visits. I have also conducted telephone interviews with parents and adolescent twins. After graduation, I will begin a Master's program in School Psychology in Whitewater.



Carly Greenstein

I started working at WTP in the spring of 2007 doing telephone interviews and going on a few home visits as a camera person. I currently conduct interviews with families of adolescent twins and I am an experimenter on home visits. Next year I am going to Boston's Northeastern University for the MA/CAGS School Psychology program.

Oi Kam Chow (second pictured)

I started working at WTP the summer of my sophomore year. I work with the age 7 study. I currently work with the palm prints, code the behavioral assessment, attend home visits as a camera person, and conducted telephone interviews. I am planning to do a Master of Social Work program in Hong Kong after graduation.



Maddie Greene

I've worked with WTP since May 2008. I've worked as an experimenter on adolescent home visits and as camera person on age 7 home visits. I have also conducted telephone interviews with adolescents and parents. As far as my post graduation plans go, I plan on working in research for the next year or two and then going back to graduate school for my Master's of Social Work.

Kelly Pickett (third pictured)

I have been working at WTP for 2 years. While at the lab, I was an experimenter on home visits for both age 7 and adolescent studies, conducted telephone interviews, and completed other miscellaneous jobs. After graduation I will begin my Master's and Teaching Certificate training program at the cross-categorical Special Education program at UW – Madison, emphasizing in emotional-behavioral disabilities.



Kelly Cozine

Samantha Wood

I've been working at WTP for a year. I've done telephone interviews, and was a camera person on home visits for the age 7 study. After graduation I plan on working for a year and then going to law school.

Kelly Cozine (fourth pictured)

I started working at WTP in June of 2007. I have been camera person and experimenter for the age 7 and adolescent home visits. After graduation, I will begin an M.S./E.D.S in School Psychology at the University of Minnesota - Twin Cities.



Dan Vatterott

Dan Vatterott (fifth pictured)

I have worked at the Twin Autism Project (TAP) since summer 2008. During my time working at TAP, I was a helper/coder. After graduation I plan on finding a job and looking into graduate school programs in psychology.

Megan Wyman

I worked at TAP for 1 year. While with TAP, I went on home visits, assisted with visits at the Waisman Center, and entered data. After graduation, I will be moving to Bozeman, Montana to pursue a Master's Degree in Marriage and Family Therapy.



Rachael Harden

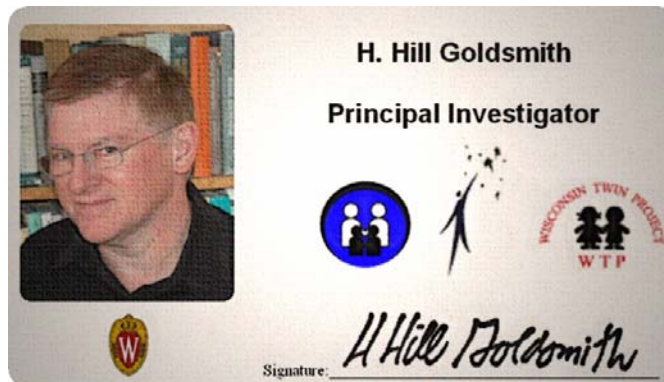
Rachael Harden (sixth pictured)

I started September of 2006, so I have been with TAP for 2.5 years. I was a research assistant, a helper/coder, helped train new members, and did various clerical duties. After graduation, I plan to seek a job pertaining to child care and education.

Hill Goldsmith: P.I.

A Little About Our Principal Investigator

Dr. Hill Goldsmith is the director of the UW-Wisconsin Twin Research Program and currently holds two distinguished professorships at the University of Wisconsin. He has published more than 150 professional articles and chapters and has a long history of grant support from the National Institutes of Health and other organizations. He earned his Ph.D. in 1978 at the University of Minnesota and has held faculty positions at the University of Texas at Austin, University of Nijmegen in the Netherlands, and the University of Oregon. He came to Wisconsin in 1992 with his wife, Dr. Morton Ann Gernsbacher, a Vilas Research Professor. Dr. Goldsmith's research concerns children's emotional development, behavioral challenges, and the autism spectrum. The research incorporates perspectives of psychology, genetics, neuroscience, and developmental epidemiology. He is recognized as a leading theorist of human temperament and a key empirical contributor to the fields of developmental behavioral genetics and childhood psychopathology. Dr. Goldsmith has studied twins for over 35 years and has included over 20,000 twins age 6 months to over age 18 years. Dr. Goldsmith is currently Principal Investigator on six external grants, an investigator in three Centers, and a faculty member on three training grants. Dr. Goldsmith's highly collaborative research involves many UW faculty and colleagues at their institutions.



Dr. Goldsmith has received numerous honors and awards, including a Research Career Development Award from NICHD and a MERIT award from NIMH. He was elected Fellow of AAAS and has served in several advisory roles at NIH. At UW-Madison, Dr. Goldsmith has held various leadership positions, including chair of the Department of Psychology; he teaches at all levels of the curriculum and trains some 50 undergraduates in his laboratories each year. In his free time, he enjoys skiing, bicycling, and kayaking and once participated in competitive volleyball.

For more information, visit our website:
<http://www.waisman.wisc.edu/twinresearch/staff/goldsmith.shtml>



Exploring Culture In Our Twin Studies

Twin studies present a unique opportunity to learn how culture and family background influence child behavior and emotion. **We are committed to upholding a national standard of culturally sensitive research, so we need your help!** We want to enroll more families of ethnic-minority descent, including African American, American Indian, Asian, Hispanic and other families of twins with diverse backgrounds. Families are paid for participation. If you or a family you know may be interested in learning more about this research opportunity, please call us toll-free at (866) 230-2560 or email Patrick at pheath@wisc.edu.

Twins and Research on Autism

The study of twins and autism is completing its fifth year of research and preparing a new grant from the National Institute of Health to help understand the complexities of Autism.

We now estimate that there are as many as 200 pairs of twins in Wisconsin under the age of 18 in which one or both twins has autism or some other form of pervasive developmental disorder (PDD-NOS or Asperger Syndrome). We have great personal and scientific interest in these disorders.

In the first phase of our current work, parents are interviewed via telephone about their child(ren)'s developmental and medical history.

The interview generally takes 45-60 minutes and can be scheduled whenever is convenient to the family. Families are paid \$25 for participating in this interview. In the next phase, we re-contact some families and ask them to participate in a follow up interview, which is also compensated.

In order to accurately assess the prevalence of autism in twin pairs, we would like to know if your family or someone you know has a family where one or both twins have some form of autism, even if they choose not to participate.

Thus far, we have located about 160 twin pairs in which one or both has autism or a related challenge.

We would appreciate a phone call or email from parents of twins with autism living in Wisconsin. It is not important if the twins are identical or fraternal, boys or girls, or even if the co-twin has any behavioral issues or not; we are interested in all aspects of the autism spectrum.



Please contact Heather Eckholm for more information:
tap@waisman.wisc.edu
 (866) 230-2560 [toll-free]
 (608) 262-5574 [local]



Thank you for participating in our telephone interviews, questionnaires, and home visits! Your perspective is invaluable to our work, and we have enjoyed meeting so many wonderful families. Your participation contributes to advances in child development research and improves our understanding of individual differences and the complexities of personality and behavior. Thanks again 😊

Enjoy your twins, and have a wonderful summer!

Moving? Want to know more about how to get involved? Contact us now!

☎ Toll free phone: (866) 230-2560
✉ Email: wisconsintwins@waisman.wisc.edu
<http://waisman.wisc.edu/twinresearch>

✉ Write Us:
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