

Personal Statement, Relevant Background, & Future Goals

During my final year as an undergraduate at Washington University, I went on a search for a remarkable, yet lost dataset – the Kelly/Connolly Longitudinal Study on Personality and Aging (KCLS). The KCLS seemed to have vanished from psychology; the last KCLS articles had been published 25 years ago.^{1,2,3} After a lengthy search, Dr. Joshua Jackson and I relocated Dr. James Connolly – the heir to the 1935 marriage study, who had been working to improve the dataset all along. Since making that contact, I have had the pleasure to collaborate with Dr. Connolly, Dr. Jackson, and a whole team of personality researchers to revive the KCLS.

Home Making or Bread Making?

Growing up, marriage was *the* topic around my family’s dinner table. My grandmother took it upon herself to advise me on the ideal husband. “Marry a doctor,” she said. “He’ll be respected and wealthy.” Money was the key selling point in these conversations; a wealthy husband meant I could stay home. And stay home I did – I spent my youth delving into stories about the post-war Baby Boom. During these readings, I became fascinated by the irreconcilable images of the 1950s housewife. On one hand, housework fulfilled the Betty Crocker wife, who managed to clean, cook, and care for her family whilst bedecked with pearls. On the other, the Betty Friedan wife found herself bound to her kitchen and destined to serve her family without a purpose of her own. I felt that these images could not depict the same reality. That said, although my mother did not vacuum in pearls, those idealized gender roles colored my youth and early perception of marriage.

As I was finishing my economics degree, I enrolled in a course that addressed the irreconcilable images of the American housewife. Our readings presented evidence from both sides. May’s *Homeward Bound*² approached the debate with a psychology study. May used the KCLS to explore the early Cold War domestic experience. She posited that home life was dominated by a culture of “domestic containment,” where Cold War anxiety drove individuals to endorse traditional gender roles and to ostracize anyone that didn’t conform.

Although domestic containment theory seemed reasonable, I immediately found May’s interpretation problematic. She claimed that the KCLS participants embodied the American cultural standard. “These norms represent[ed] the ideal toward which [all] Americans strove. During the postwar years, there were no groups in the [US] for whom these norms were irrelevant.”² The KCLS may have been representative of the middle class, but the KCLS participants were not the norms towards which everyone strove. For example, ethnic minorities and homosexuals did not strive to fit themselves into that box.

I was frustrated. Such a strong claim of external validity made me question the conclusions that May drew, particularly about KCLS gender differences. After numerous avid disagreements with my history professor, I decided that my best strategy was to empirically test May’s claims. This decision motivated my search for the KCLS.

Early Research

Econometrics I had enrolled in an applied regression course, where I quickly learned that I could not use regression to directly examine gender’s influence on marital satisfaction with the KCLS, because the family structure in the dataset violated assumptions of independence. Using May’s book as a guide,² I located the first two waves of the KCLS at Harvard University. Then, for my final project, I replicated some of Kelly and Connolly’s findings.¹ I discovered that the predictive core of the study – the multiple ratings of personality – were missing! Undaunted, I located adequate proxies and compensated for the complex family structure by analyzing husbands and wives separately. I ran a paired t-test to evaluate marital gender differences. There were none.

Through this research effort, I realized I could use my quantitative toolbox to address intriguing questions. Inspired, I switched my 2nd major from history to psychology and scoured the psychology department for quantitatively inclined faculty. I found two: Dr. Strube and Dr. Jackson.

Social Behavior Lab The following semester, I joined Dr. Strube's lab, where I assisted with longitudinal studies, conducted measurement studies, and completed my honors thesis with the KCLS. My thesis used prenuptial values to predict marital satisfaction within a two-level model (Garrison, 2013)⁴. By using a multilevel framework, I directly assessed gender differences within the predictive model. Again, no gender differences. By this point, I realized that my interest was not in gender differences, *per se*, but in evaluating individual differences within family structures.

KCLS Revival

While pursuing my thesis, I contacted the other faculty member I had identified – Dr. Jackson. I felt compelled to find the missing personality variables. Dr. Jackson and I both appreciated the scientific importance of the marriage study. Therefore, we requested full access to the KCLS; however, Harvard did not have the personality variables, the 1980 Connolly follow-up, or Dr. Connolly's contact information. Undaunted, I poured every spare moment into finding Dr. Connolly.

After a considerable search, I made contact with Dr. Connolly. Dr. Connolly informed us that despite great practical obstacles, the KCLS was in the process of being revived and extended. Drs. Connolly and Leveille had recently recovered and reformatted many of the missing personality variables from a 25-year-old magnetic tape. More importantly, Drs. Connolly and Leveille had recently ascertained longevity data on the 600 KCLS participants and performed preliminary analyses on the data. Dr. Jackson and I agreed with Drs. Connolly and Leveille to collaborate on a series of papers using the KCLS data.

Dyad Modeling After creating reliable measures of the full Big Five from 1935 peer- and self-reports, we could examine personality's impact on couple and individual level outcomes. However, the family structure embedded within the KCLS would make these examinations problematic. Our first publication examined personality's impact on longevity (Jackson, Connolly, Garrison *et al*, in press)⁵. We evaluated the partners separately because the KCLS had too few participants for multilevel survival analysis. However, we could not separate the couple to evaluate the personality's impact on the timing of divorce, because excluding either partner would bias our results.

During my 1st term of graduate school, I developed a variant of dyad modeling incorporating additive survival analysis and profile similarity indices. We've found that openness and neuroticism are strong predictors of earlier divorces, whereas agreeableness is influential throughout the entire 45 years of marriage (Garrison *et al*, 2014)⁶. Moreover, the main effect of the couple's personality, not gender or couple similarity, impacts marriage duration. I have begun extending the model to test within-dyad outcomes, thereby enabling tests of personality's impact on spousal longevity. Early results suggest a gender difference. The wife's personality impacts her husband's longevity, even after controlling for her husband's level; the reverse does not hold (Garrison *et al*, 2015)⁷.

Vanderbilt University

My successful work with the KCLS helped me obtain admission to one of the top Quantitative Methods (QM) programs in the country. My doctoral advisor is Dr. Joseph Rodgers, a well-known quantitative psychologist, who has published research on family studies (including marriage and divorce) and intellectual development. As a QM doctoral student, I am developing modeling and measurement expertise, while also continuing my research with my KCLS colleagues. Drawing upon my early work modeling the KCLS couples, my advisor and I have developed a variant of

dyad modeling, using sibling difference scores to control for genetic and shared environmental influences (Rodgers, **Garrison et al**, 2014)⁸. We have used this model to assess the independent causal influences of intelligence and conscientiousness on health at midlife (**Garrison**, Hadd, & Rodgers, 2015)⁹. My NSF research proposal aims to apply and expand this modeling framework to explore causal mechanisms of the SES-health gradient. My master's thesis will extend this model to incorporate varying degrees of kinship relatedness.

NIH Kinship Links In tandem with further developing these dyad kinship models, I am providing statistical and technical assistance in the final year of my advisor's NIH grant. Our research team identified and validated kinship pairs (twins, siblings, cousins, *etc*) in the National Longitudinal Survey of Youth (NLSY) 1979 dataset. My role has included improving the program's website, enhancing accessibility, and providing statistical support in both dyad and behavior genetic modeling as part of a User's Service function to external researchers.

Outreach

Online I have begun coordinating the development of a sequence of online Coursera courses with an education doctoral student. In a joint collaboration between students in the QM program and the Experimental Education Training program, we aim to develop a sequence of courses that graduate students in the social sciences can use to develop quantitative skills that are unavailable at their home institution. We believe that such a program has the potential to expand the average researcher's quantitative toolbox, just as my early experience in economics improved mine.

I have also striven to improve the scientific literacy of the public through my work with print and online social media. On the popular website, Reddit, I am a Science Panelist for askScience and askSocialScience. My responsibilities include answering questions posed by the public about individual differences and basic research methodology. At the multimedia start-up magazine, LoveLogica, I adapt public domain personality assessments for the public. I mate each adapted test with a brief article on the subject (*e.g*, benefits of partner similarity) (**Garrison**, in press)¹⁰.

On Campus I am an active member of Vanderbilt's Women in Science group, where I have consulted repeatedly on the potential development of a longitudinal study to identify potential causes of the leaky science pipeline. Independently, I have begun mentoring undergraduates who have expressed interest in developing a quantitative toolbox. One of my mentored students just presented her research on how access to books in childhood influences later interest in reading, using the dyad kinship model I have proposed to expand (Romick, **Garrison et al**, 2014)¹¹.

Future Goals

My goal is to become a professor of psychology, with a focus on individual differences and their associated methodology. I am particularly interested in the relationship between personality, intelligence, and health using biometrically informed designs. At Vanderbilt, I am developing expertise to study methodology and human intelligence. After completing graduate school, I will seek a post-doctoral position in a personality lab with a strong methods focus. After the post-doc, I hope to become a faculty member in a psychology department, where I can mentor students, teach advanced statistical methods, and continue to conduct individual differences research using datasets like the Kelly/Connolly Longitudinal Study and the National Longitudinal Survey of Youth.

References **1** Kelly & Conley (1987) *JPSP*. **2** May (1988) *Basic*. **3** Gilbert & Connolly (1991) Springer.

4 Garrison (2013) *WashU Hons Thesis Abs*. **5** Jackson, Connolly, Garrison *et al* (in press) *Psych Science*. **6** Garrison *et al* (2014 Jul) *ECP*. **7** Garrison *et al* (2015a Feb) *SPSP*. **8** Rodgers *et al* (2014 Jun) *BGA*. **9** Garrison *et al* (2015b Feb) *SPSP*. **10** Garrison (in press) *LoveLogica*. **11** Romick *et al* (2014 Nov) *TPA*