

Behaviors of the Big Five

Lorien G. Elleman¹, David M. Condon², and William Revelle¹

¹Department of Psychology, Northwestern University; ²Department of Medical Social Sciences, Northwestern University

Figure 1: Participants by country. Darker countries have more participants.

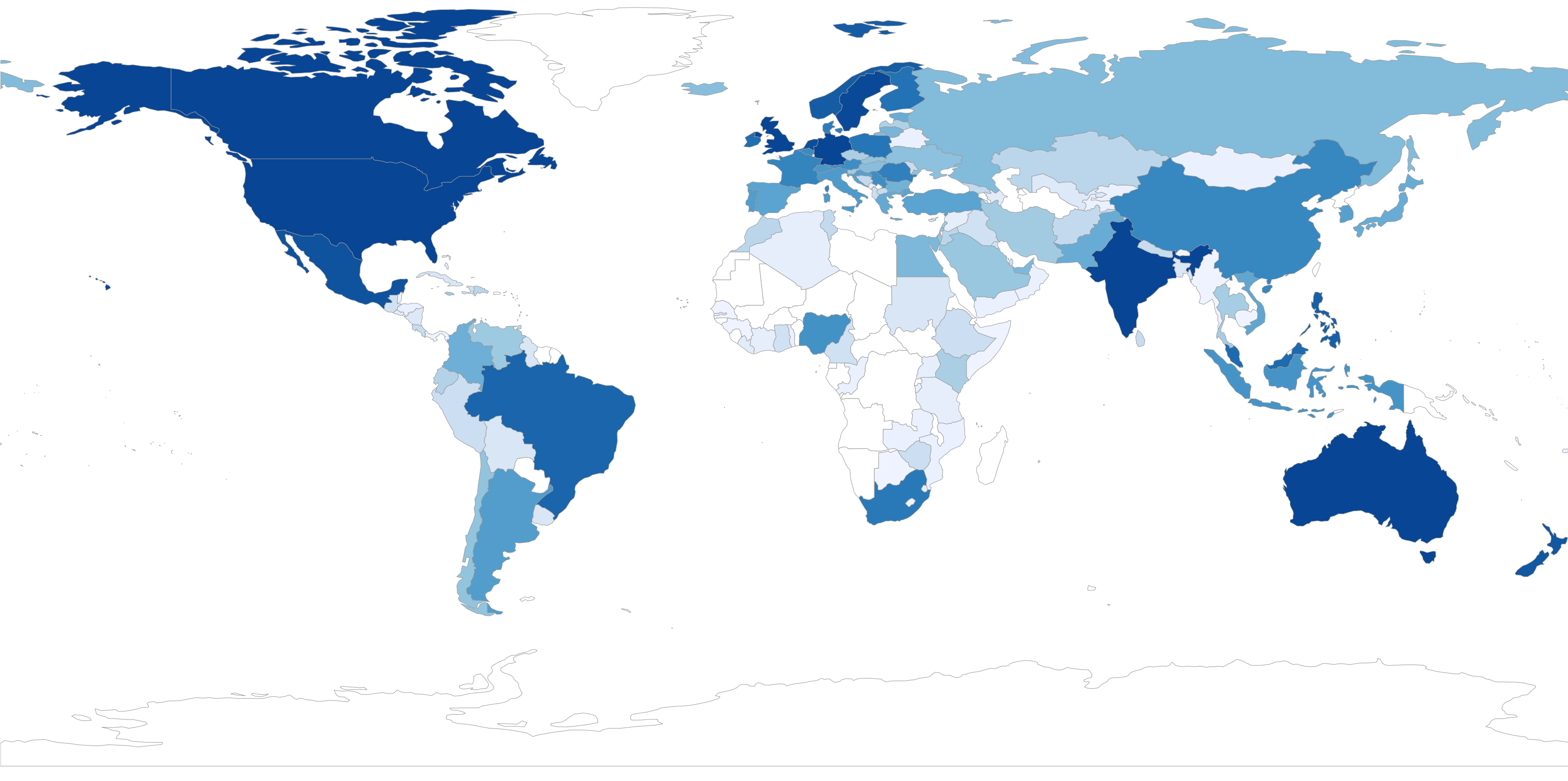


Figure 2: U.S. participants by ZIP code.

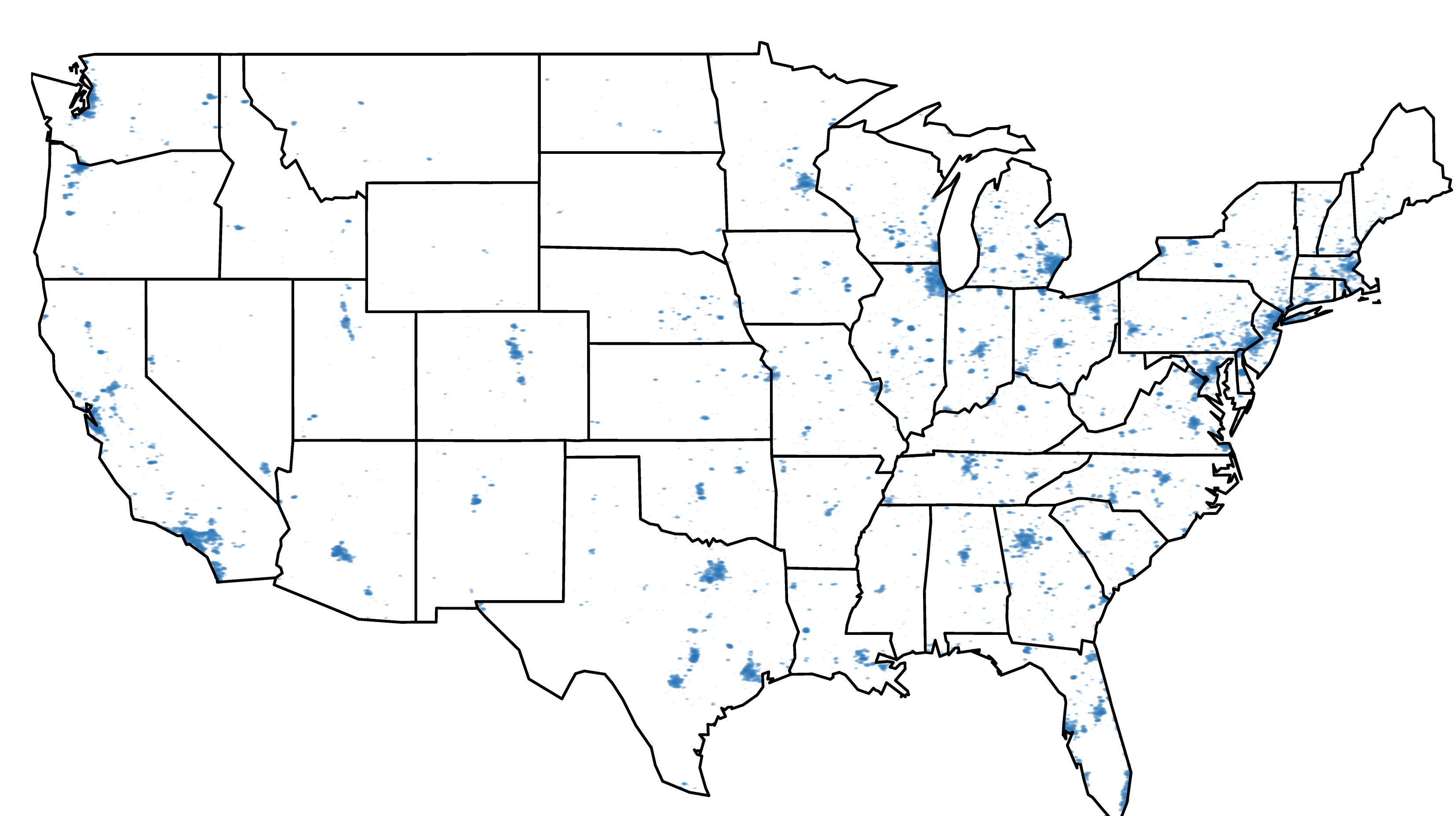


Figure 3: Participants by age and gender.

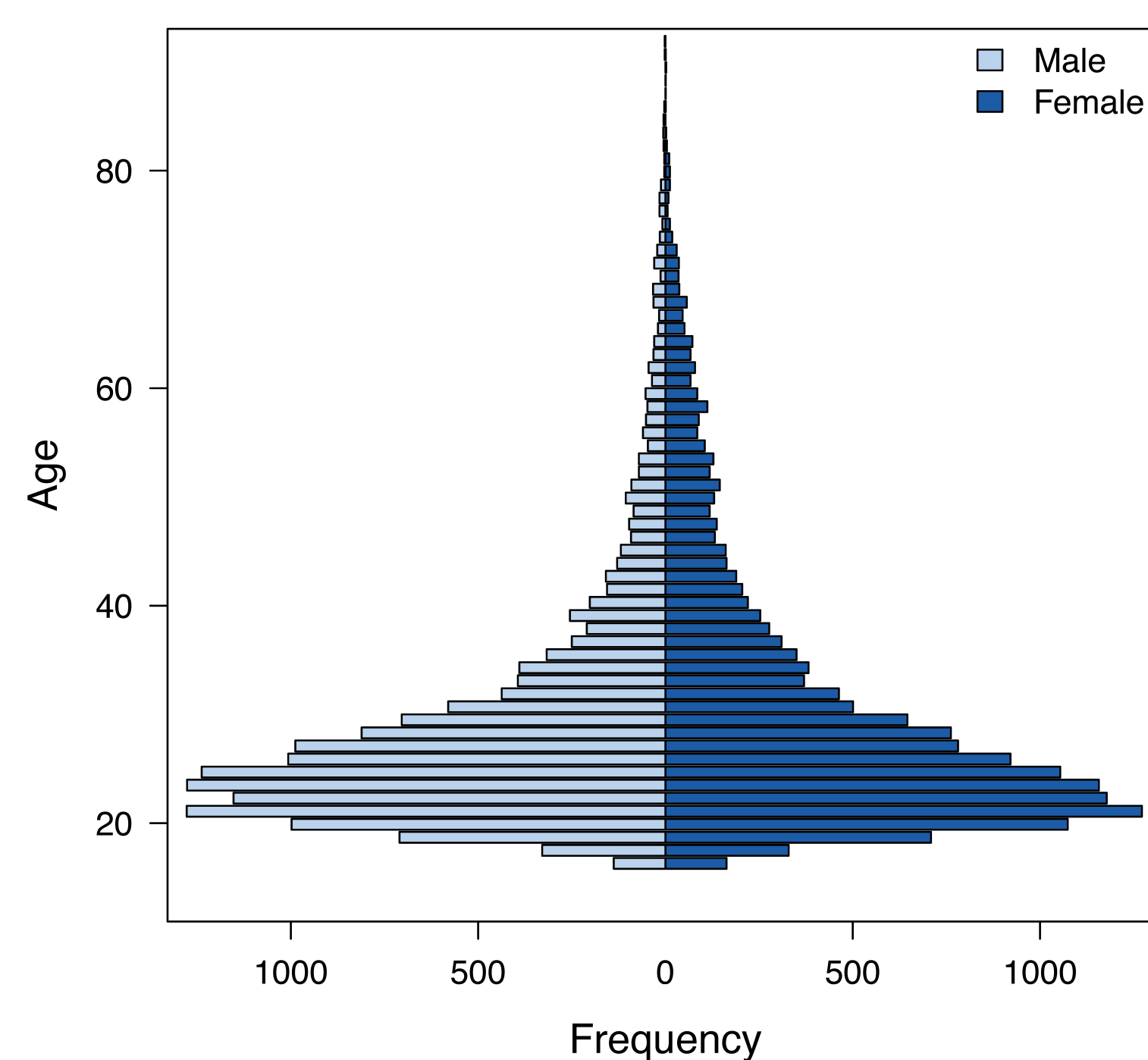
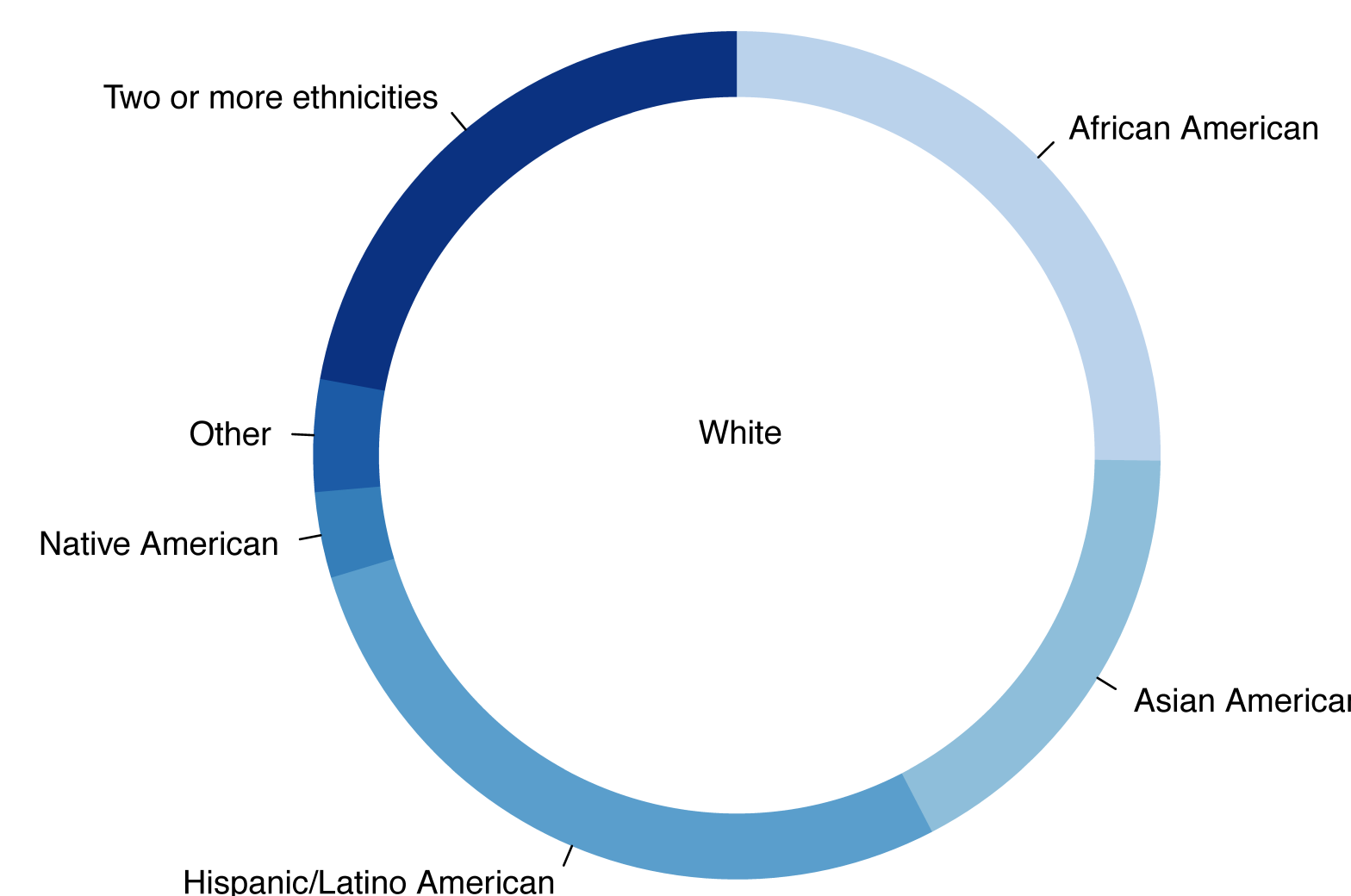


Figure 4: U.S. participants by race/ethnicity.



Tables 1-5: Top 10 behaviors for each Big Five scale (correlation and .95 C.I.)

Table 1: Intellect

| Behavior | Corr. | Lower | Upper |
|-------------------------------------|-------|-------|-------|
| Learned a new skill. | .35 | .31 | .39 |
| Tried something completely new. | .34 | .30 | .38 |
| Read poetry. | .31 | .27 | .35 |
| Read in bed before going to sleep. | .31 | .27 | .34 |
| Produced a work of art. | .30 | .26 | .34 |
| Read an entire book in one sitting. | .29 | .25 | .33 |
| Wrote poetry. | .29 | .25 | .33 |
| Studied some subject. | .29 | .25 | .32 |
| Read a book. | .28 | .24 | .32 |
| Bought a book. | .28 | .24 | .32 |

Table 2: Conscientiousness

| Behavior | Corr. | Lower | Upper |
|--|-------|-------|-------|
| Cleaned the house. | .36 | .32 | .40 |
| Made a bed. | .29 | .25 | .33 |
| Wrote a thank-you note. | .29 | .25 | .33 |
| Took a child on an outing. | .25 | .21 | .29 |
| Bought or picked flowers. | .24 | .20 | .28 |
| Ironed linens or clothes. | .23 | .19 | .27 |
| Worked on a retirement plan. | .23 | .19 | .27 |
| Bought plants for a garden or yard. | .23 | .19 | .27 |
| Prayed (not including blessings at meals). | .23 | .19 | .27 |
| Cared for a potted plant. | .22 | .17 | .26 |

Table 3: Extraversion

| Behavior | Corr. | Lower | Upper |
|--|-------|-------|-------|
| Entertained six or more people. | .48 | .45 | .51 |
| Went to a large party. | .42 | .38 | .45 |
| Planned a party. | .41 | .37 | .45 |
| Had someone over for dinner. | .39 | .35 | .42 |
| Went to a small party. | .38 | .35 | .42 |
| Went dancing. | .34 | .30 | .37 |
| Wrote a thank-you note. | .32 | .28 | .35 |
| Bought a fashionable item of clothing. | .30 | .26 | .34 |
| Went on a date. | .29 | .25 | .33 |
| Bought or picked flowers. | .29 | .25 | .33 |

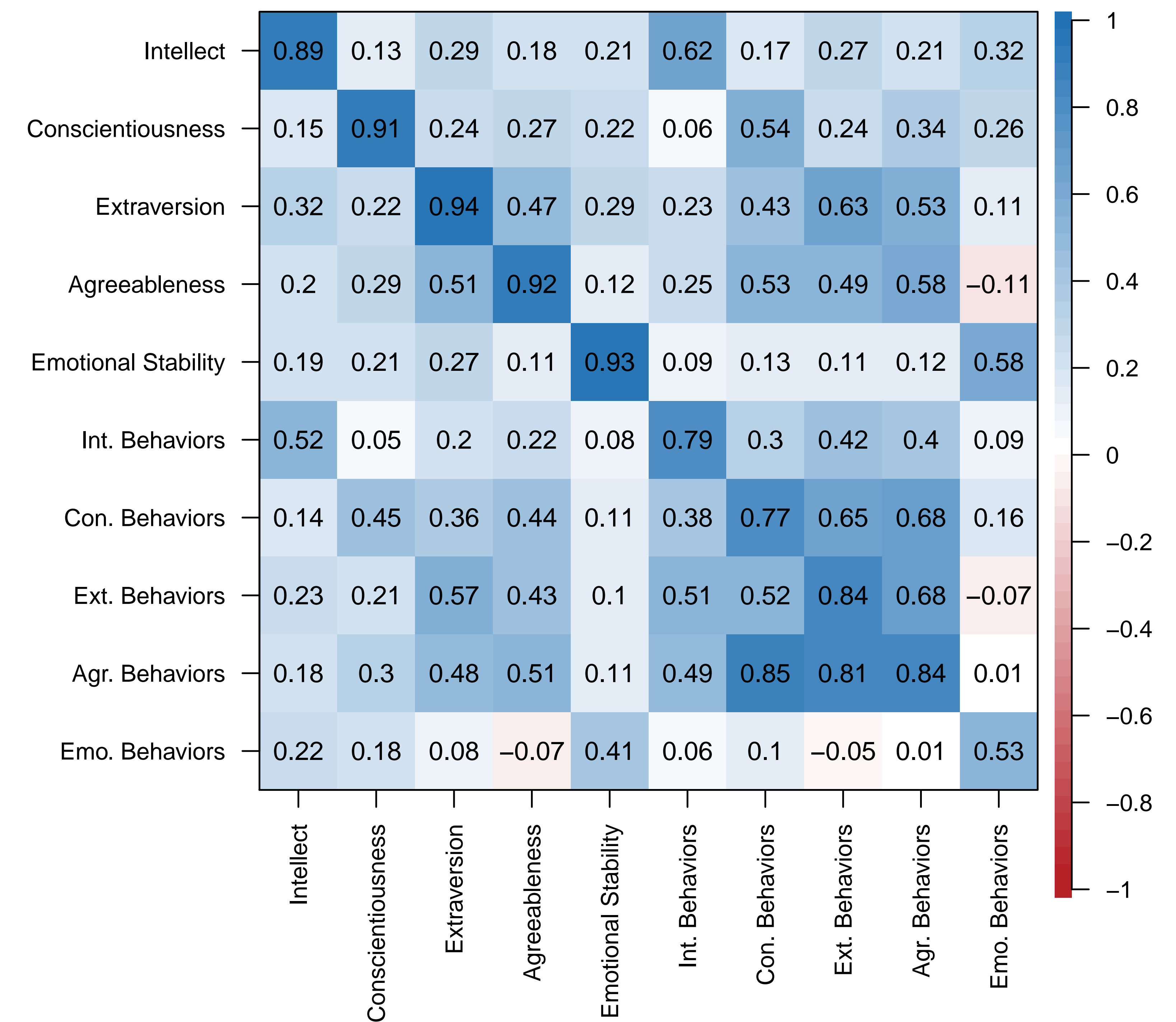
Table 4: Agreeableness

| Behavior | Corr. | Lower | Upper |
|---------------------------------|-------|-------|-------|
| Played with a child. | .38 | .34 | .41 |
| Wrote a thank-you note. | .36 | .33 | .40 |
| Took a child on an outing. | .35 | .31 | .38 |
| Donated money to charity. | .33 | .29 | .36 |
| Bought or picked flowers. | .33 | .29 | .36 |
| Had someone over for dinner. | .32 | .28 | .36 |
| Entertained six or more people. | .32 | .28 | .36 |
| Let a child win a game. | .32 | .28 | .35 |
| Planned a party. | .32 | .28 | .35 |
| Read a story to a child. | .31 | .28 | .35 |

Table 5: Emotional Stability

| Behavior | Corr. | Lower | Upper |
|--|-------|-------|-------|
| Ate too much. | -.21 | -.25 | -.17 |
| Spent > hour thinking about what to wear. | -.20 | -.24 | -.16 |
| Spent > minutes thinking about what to wear. | -.19 | -.24 | -.15 |
| Watched too much television. | -.19 | -.23 | -.15 |
| Obtained stock market prices. | .18 | .14 | .23 |
| Read a book on a financial topic. | .17 | .13 | .21 |
| Went on a hike. | .16 | .12 | .20 |
| Ate or drank while driving. | .16 | .12 | .20 |
| Read a fashion-related magazine. | -.15 | -.19 | -.11 |
| Worked on a retirement plan. | .15 | .11 | .19 |

Figure 5: Correlation matrix of Big Five scales and behavioral scales (each of which is composed of the “top 10” behavioral items from Tables 1-5). Color-coded for size and sign. Lower diagonal: raw correlations. Upper diagonal: corrected for item overlap and disattenuation. Diagonal: alphas.



Summary of study

- Figures 1 and 2: Data in this study were collected from a self-report online personality assessment from May 2013 to February 2014. Participants ($n = 31k$) represented 166 countries. U.S. participants ($n = 19k$) were from 8k ZIP codes.
- Figures 3 and 4: The sample was evenly split between men and women. Participants ranged in age from 14 to 90, with a median age of 22 years. Of participants from the U.S., 28% were non-white.
- Tables 1-5: Two hundred behavioral items (from the ORAIS) were correlated with Big Five scales (from the IPIP BFFM) to determine the ten behaviors that were most associated with each scale.
- Figure 5: Each set of “top 10” behavioral items was formed into a scale and correlated with the Big Five scales. With the exception of emotional stability, behavioral scales had high reliabilities ($\alpha \approx .80$). Each behavioral scale was highly correlated with its corresponding Big Five scale, but had discriminant validity ($r \approx .50$). Behavioral scales of conscientiousness, extraversion, and agreeableness had high intercorrelations, even after accounting for the scales containing some of the same items ($r \approx .70$; upper diagonal).
- Behavioral scales could prove to be useful in addition to typical personality scales. An important future direction will be to compare the predictive validities of the two types of scales.