GALLUP®

Stability of CliftonStrengths® Results Over Time

JIM ASPLUND, 2019

Background

Many of our greatest opportunities for success come from applying our individual talents. By refining our talents with skills, knowledge and training, we can develop them into strengths. For over 50 years, Gallup has investigated the nature of human talents and strengths, resulting in the CliftonStrengths (CS) assessment — an online inventory of personal talent that identifies areas in which an individual has the greatest potential for building strengths. CS provides a starting point in the identification of specific personal talents, and the related supporting materials help individuals build on their talents and develop them into strengths. To date, more than 21 million people worldwide have taken the CS assessment in more than 25 languages.

Gallup defines talents as natural ways of thinking, feeling and behaving, such as a drive to compete, sensitivity to the needs of others, or the tendency to be outgoing at social gatherings. Unlike skills or knowledge, talents emerge naturally over time and cannot be readily acquired.

Some aspects of personality are situation-dependent; an individual without much courage can occasionally behave courageously and many individuals can exhibit discipline when it is needed, but do not present it as a reliable trait. To be a talent, the disposition needs to be a reliable component of a person's personality.

In the 1990s, under the leadership of educational psychologist Donald O. Clifton, Gallup developed the CliftonStrengths assessment as an objective measure of personal talent that could be administered online in less than one hour. The assessment measures the intensity of 34 talent themes, and Gallup provides respondents with a rank order of those themes. These ranked theme data are the focus of the feedback that the respondent receives (for more information, see *The Clifton StrengthsFinder® 2.0 Technical Report*).

Assessing the Stability of Results

Test-retest reliability is assessed by administering the instrument to the same people at two different time periods. It should be noted that retest correlations underestimate stability and overestimate change as a result of random measurement error. There are various sources of this measurement error, including:

- transient error from random fluctuations in response

- uncontrolled testing conditions (e.g., distractions)

- within-person factors like fatigue, anxiety or illness

- changes to the assessment itself

- carryover effects, including exposure to the first assessment and subsequent feedback that influences scores on the second assessment

- developmental changes and exposure to new life events that add variability (for longer test intervals)

These should be the primary sources of measurement error for stable constructs like the talents measured by the CS assessment.

Natural Test-Retest

As of the commencement of this study, over twenty-one million CS assessments have been completed. Within this immense database, it is possible to identify people who have taken CS more than once.

We identified 57,888 of these retakers from multiple countries and across a range of ages. Some of them retook CS only months after their first attempt, while others waited over a decade to do so. We have no specific information on the motives that drove any of these people to retake CS, although we can speculate based on what we have heard from respondents over the years. Motives tend to fall into one or more of these broad categories:

1) They forgot or misplaced their initial results. In the first few years of the CS assessment, most respondents' results were sponsored by their employers as part of a work initiative. For these respondents, the usefulness of CS was often unclear or even suspect (depending on their relationship with their employer) and they were accordingly less careful about learning, using or remembering their initial results. At a later date, some of these people developed a renewed interest in CS and could not find their results. A similar pattern emerges among those who first took the CS assessment as college students.

2) They didn't like their initial results.

3) They didn't take the first attempt very seriously.

4) They didn't complete their first attempt in their primary language. We have observed several hundred cases where respondents retake the assessment in a different language.

5) They enjoyed taking it and wanted to do so again.

6) They are given a free opportunity to take it again, often so results can be incorporated into some form of team activity or exercise.

7) More recently, CS feedback has been enhanced and this has motivated some people to retake the assessment.

Examining the motives for retaking the assessment among this organic sample of 57,888 retakers will likely show less stability over time than what could be expected from the general population. Those who are looking for different results are likely to generate change, even if that change is somewhat random. Those who increase or decrease their cognitive involvement with the assessment will necessarily respond differently to the same stimuli, and switching languages adds variance no matter how good the translation. People who took the CS assessment in college and retook it much later have likely undergone some personal development and had experiences applying their strengths in varying social contexts, which could have affected their self-perceptions. Finally, those who are extremely fond of the assessment and strengths in general, have exposed themselves to so much related content and feedback that certain items in the assessment have varying appeal to them.

We believe that the test-retest results from this sample are conservative and should be considered lower bounds of the true test-retest reliabilities. Nevertheless, we will show that the reliabilities of themes in this most recent study of organic retakers are similar to those in an earlier panel study (Asplund, Agrawal, Hodges, Harter, & Lopez, 2014). We will also show that the scores for the second administration can be predicted with a fair degree of accuracy. These predictions will be used to guide our recommendations about whether respondents may wish to retake the CS assessment.

Results

Table 1 shows the test-retest reliabilities for the respondents who retested within six months. This is a common retest interval in the literature, so this subset of the retest population facilitates comparisons with other assessments. The results are consistent with the six-month retest from the 2008 Gallup Panel study (Asplund et al., 2014), and compare favorably with other published studies on the reliability of similar instruments.

TABLE 1.

n =	12,355
Full Profile	**0.73**
Achiever	0.75
Activator	0.70
Adaptability	0.71
Analytical	0.76
Arranger	0.68
Belief	0.72
Command	0.75
Communication	0.78
Competition	0.77
Connectedness	0.74

Consistency	0.69
Context	0.66
Deliberative	0.77
Developer	0.68
Discipline	0.79
Empathy	0.68
Focus	0.74
Futuristic	0.71
Harmony	0.68
Ideation	0.75
Includer	0.69
Individualization	0.63
Input	0.73
Intellection	0.77
Learner	0.76
Maximizer	0.66
Positivity	0.77
Relator	0.65
Responsibility	0.69
Restorative	0.67
Self-Assurance	0.73
Significance	0.72
Strategic	0.73
Woo	0.82

A random respondent can expect the results of a second attempt to be very similar to their first attempt, but the distribution of retest correlations shows some variability. One of the objectives of this study is to investigate the likely causes of this variability in profile and theme stability in hopes of guiding those who are considering retaking the CS assessment. In this sample, we have additional data available — respondent characteristics with some relevance to the discussion, and about which testable hypotheses can be posed. Those data include:

- respondent age
- elapsed time between the first and second tests
- details about the test experiences, including response times and usage of neutral response options
- gender
- race/ethnicity
- country
- education

Respondents have the opportunity to voluntarily provide characteristic data before completing the CS assessment. Although the provision of these data is voluntary, most respondents provide them. Information about the test experience is available from all respondents and a variety of univariate and multivariate analyses using these data will be presented.

HYPOTHESIS 1: Theme and profile stability will be lower for respondents with longer test-retest time intervals. Over longer periods, developmental changes and exposure to new life events add variability and increased exposure to CS content. Heterogeneity in changing testing conditions is also likelier.

HYPOTHESIS 2: Theme and profile stability will be lower for younger respondents. Strengths formation and refinement is a developmental process that takes place over time and exposure to new life events modifies the salience of individual CS items. Items assessing a specific talent may tap into experiences the respondent did not have until sometime between the first and second tests. The youngest respondents in the sample were also far less likely to pursue taking CS on their own and were thus likely to be somewhat less attentive to the assessment stimuli. We have some anecdotal evidence of this.

HYPOTHESIS 3: Theme and profile stability will be lower for respondents who significantly change their response times or their use of neutral responses in their retest. The only way to reduce retest reliability is to change item responses on the second test; we have data on two test properties that provide insight into systematic changes in response:

- CS item responses are timed and limited to **twenty seconds each**. This limit still permits considerable variation in response time, and within-person differences in response time can be evidence of variances in cognitive involvement or intent.

- CS items are presented to respondents as **pairs of potential self-descriptors**. One possible response is to reject both descriptors by choosing a "neutral" option. Respondents typically make more use of this neutral option on their initial test. We hypothesize that greater familiarity with the testing experience facilitates greater usage of non-neutral selections — and the magnitude of that carryover effect has a corresponding impact on test stability.

HYPOTHESIS 4: Demographic characteristics other than age will not have a significant generalizable influence on test-retest reliabilities. There is ample validity evidence in the published technical reports with specific references to the construct validity of the themes by gender, and of convergent validity with the five-factor model. This accumulated evidence shows only a few statistically significant scoring differences by these characteristics — none of them generalizable across themes. We expect differences from the retest to be more related to the social construction and associated cultural expectations of certain themes.

Hypothesis 1

Test-retest reliabilities by time interval are shown in Table 2. The attenuation in correlations over time is modest and generally follows a logarithmic decay profile that slows as time increases.

TABLE 2.

n =	12,355	7,291	12,826	9,252	6,094	3,941	2,732	1,552	1,661
	< 6 mos.	6 mos. -1 year	1-2 years	2-3 years	3-4 years	4-5 years	5-6 years	6-7 years	7+ years
Full Profile	0.73	0.70	0.67	0.66	0.65	0.65	0.65	0.64	0.62
Achiever	0.75	0.72	0.69	0.66	0.65	0.66	0.64	0.59	0.61
Activator	0.70	0.67	0.66	0.65	0.65	0.65	0.64	0.65	0.63
Adaptability	0.71	0.68	0.66	0.63	0.62	0.62	0.61	0.62	0.60
Analytical	0.76	0.76	0.72	0.71	0.69	0.71	0.69	0.67	0.67
Arranger	0.68	0.62	0.62	0.60	0.60	0.59	0.59	0.56	0.57
Belief	0.72	0.69	0.65	0.65	0.62	0.61	0.63	0.60	0.60
Command	0.75	0.72	0.71	0.68	0.68	0.68	0.65	0.65	0.65
Communication	0.78	0.77	0.76	0.73	0.74	0.71	0.73	0.73	0.71
Competition	0.77	0.77	0.74	0.72	0.70	0.69	0.67	0.70	0.70
Connectedness	0.74	0.72	0.69	0.68	0.66	0.65	0.67	0.63	0.65
Consistency	0.69	0.66	0.62	0.62	0.61	0.62	0.61	0.60	0.58
Context	0.66	0.67	0.65	0.63	0.62	0.57	0.62	0.62	0.60
Deliberative	0.77	0.75	0.72	0.69	0.68	0.67	0.67	0.66	0.64
Developer	0.68	0.67	0.64	0.62	0.60	0.58	0.60	0.58	0.57
Discipline	0.79	0.79	0.76	0.74	0.72	0.74	0.72	0.69	0.67
Empathy	0.68	0.67	0.64	0.63	0.62	0.61	0.61	0.61	0.59
Focus	0.74	0.73	0.69	0.67	0.64	0.65	0.66	0.64	0.63
Futuristic	0.71	0.67	0.64	0.62	0.60	0.60	0.61	0.60	0.58
Harmony	0.68	0.65	0.63	0.59	0.61	0.60	0.60	0.57	0.56
Ideation	0.75	0.73	0.72	0.69	0.69	0.68	0.66	0.65	0.63
Includer	0.69	0.67	0.65	0.63	0.62	0.61	0.59	0.60	0.56
Individualization	0.63	0.61	0.59	0.56	0.57	0.56	0.55	0.53	0.51
Input	0.73	0.71	0.70	0.67	0.67	0.66	0.66	0.64	0.64
Intellection	0.77	0.76	0.74	0.73	0.72	0.71	0.70	0.68	0.68
Learner	0.76	0.74	0.70	0.68	0.68	0.67	0.67	0.65	0.67
Maximizer	0.66	0.60	0.59	0.55	0.54	0.55	0.53	0.53	0.45
Positivity	0.77	0.76	0.73	0.73	0.71	0.69	0.70	0.69	0.68
Relator	0.65	0.62	0.58	0.57	0.55	0.53	0.54	0.53	0.46
Responsibility	0.69	0.66	0.63	0.62	0.59	0.60	0.58	0.56	0.57
Restorative	0.67	0.61	0.59	0.55	0.51	0.56	0.53	0.49	0.48
Self-Assurance	0.73	0.69	0.68	0.64	0.63	0.63	0.62	0.61	0.59
Significance	0.72	0.73	0.69	0.66	0.64	0.66	0.65	0.62	0.65
Strategic	0.73	0.68	0.68	0.64	0.65	0.63	0.63	0.64	0.61
Woo	0.82	0.81	0.79	0.77	0.77	0.76	0.76	0.76	0.73

Hypothesis 2

Test-retest reliabilities by age at first test are shown in Table 3. As discussed in other publications (Fleming & Asplund, 2007), Gallup's assumptions are that talents develop over time, and refining them into strengths is a process that continues throughout life. Increased test-retest reliability at older ages is consistent with this assumption, and with the literature on trait stability (e.g., Roberts & DelVecchio, 2000).

TABLE 3.

n =	4,901	8,581	12,526	10,819	7,687	4,036
Group =	< 24	24-30	30-40	40-50	50-60	> 60
Full Profile	0.64	0.64	0.69	0.72	0.74	0.76
Achiever	0.67	0.66	0.69	0.71	0.71	0.71
Activator	0.59	0.62	0.67	0.69	0.70	0.69
Adaptability	0.60	0.62	0.66	0.68	0.68	0.69
Analytical	0.69	0.69	0.72	0.75	0.75	0.75
Arranger	0.55	0.55	0.59	0.64	0.66	0.68
Belief	0.62	0.64	0.66	0.68	0.68	0.69
Command	0.66	0.66	0.71	0.73	0.73	0.72
Communication	0.71	0.71	0.76	0.78	0.78	0.77
Competition	0.71	0.70	0.73	0.74	0.73	0.71
Connectedness	0.66	0.67	0.69	0.70	0.72	0.71
Consistency	0.56	0.58	0.63	0.66	0.67	0.70
Context	0.62	0.60	0.65	0.66	0.66	0.66
Deliberative	0.68	0.67	0.70	0.74	0.75	0.76
Developer	0.64	0.63	0.62	0.64	0.65	0.65
Discipline	0.73	0.73	0.75	0.77	0.77	0.79
Empathy	0.59	0.60	0.65	0.65	0.66	0.66
Focus	0.66	0.66	0.70	0.71	0.71	0.70
Futuristic	0.60	0.58	0.63	0.66	0.67	0.70
Harmony	0.57	0.57	0.62	0.65	0.67	0.70
Ideation	0.68	0.67	0.70	0.73	0.75	0.76
Includer	0.61	0.61	0.64	0.67	0.66	0.67
Individualization	0.54	0.54	0.58	0.61	0.64	0.62
Input	0.67	0.66	0.68	0.71	0.74	0.72
Intellection	0.69	0.72	0.74	0.76	0.76	0.76
Learner	0.65	0.64	0.69	0.73	0.75	0.75
Maximizer	0.49	0.49	0.56	0.61	0.63	0.62
Positivity	0.71	0.69	0.72	0.76	0.76	0.77
Relator	0.51	0.53	0.58	0.61	0.61	0.62
Responsibility	0.59	0.60	0.62	0.64	0.67	0.65
Restorative	0.54	0.53	0.56	0.59	0.59	0.60
Self-Assurance	0.61	0.62	0.66	0.70	0.71	0.71
Significance	0.63	0.64	0.69	0.71	0.71	0.69
Strategic	0.58	0.60	0.66	0.70	0.72	0.74
Woo	0.74	0.75	0.78	0.81	0.81	0.83

As shown in Table 4 (Appendix 2), the interaction of age and time interval can amplify or dampen stability to a notable degree.

Hypothesis 3

Test-retest reliabilities by differing test conditions are shown in Tables 5 and 6. Respondents were clustered by their usage of neutral items on both assessments. As shown in Table 5, reliability is decreased by greater use of neutral responses, but similar use of neutrals on both assessments significantly aids stability. Clearer test instructions for first-time respondents could improve this.

TABLE 5.

n =	22,645	5,668	686	7,798	9,781	2,489	1,145	2,973	3,048
Neutrals Group	low/low	low/med	low/high	med/low	med/med	med/high	high/low	high/med	high/high
Full Profile	0.73	0.70	0.62	0.69	0.71	0.68	0.62	0.66	0.67
Achiever	0.69	0.67	0.53	0.67	0.70	0.69	0.63	0.65	0.69
Activator	0.68	0.64	0.51	0.63	0.65	0.62	0.53	0.58	0.58
Adaptability	0.69	0.66	0.53	0.65	0.67	0.63	0.57	0.62	0.63
Analytical	0.75	0.70	0.57	0.70	0.73	0.70	0.62	0.67	0.68
Arranger	0.63	0.59	0.44	0.58	0.61	0.59	0.54	0.57	0.60
Belief	0.67	0.64	0.55	0.65	0.67	0.65	0.58	0.64	0.65
Command	0.73	0.68	0.60	0.67	0.71	0.65	0.60	0.63	0.65
Communication	0.78	0.73	0.60	0.72	0.75	0.71	0.62	0.70	0.71
Competition	0.75	0.72	0.61	0.71	0.74	0.70	0.64	0.72	0.74
Connectedness	0.71	0.67	0.57	0.67	0.70	0.69	0.60	0.66	0.68
Consistency	0.67	0.64	0.56	0.64	0.66	0.64	0.57	0.63	0.64
Context	0.65	0.63	0.53	0.62	0.64	0.64	0.55	0.60	0.61
Deliberative	0.74	0.71	0.61	0.69	0.74	0.70	0.64	0.70	0.72
Developer	0.65	0.63	0.47	0.62	0.65	0.61	0.49	0.58	0.60
Discipline	0.79	0.73	0.63	0.74	0.77	0.74	0.66	0.73	0.75
Empathy	0.67	0.64	0.62	0.63	0.65	0.63	0.53	0.61	0.59
Focus	0.71	0.68	0.53	0.66	0.69	0.64	0.57	0.63	0.65
Futuristic	0.66	0.62	0.48	0.61	0.65	0.60	0.55	0.60	0.62
Harmony	0.65	0.62	0.53	0.62	0.66	0.61	0.53	0.61	0.63
Ideation	0.72	0.69	0.61	0.69	0.72	0.67	0.61	0.63	0.66
Includer	0.67	0.64	0.55	0.63	0.66	0.62	0.52	0.61	0.63
Individualization	0.58	0.54	0.46	0.54	0.57	0.53	0.47	0.51	0.54
Input	0.70	0.67	0.60	0.67	0.70	0.69	0.60	0.65	0.69
Intellection	0.76	0.72	0.67	0.71	0.75	0.73	0.65	0.68	0.72
Learner	0.71	0.69	0.61	0.68	0.72	0.68	0.60	0.65	0.70
Maximizer	0.59	0.55	0.40	0.55	0.56	0.53	0.46	0.48	0.52
Positivity	0.75	0.73	0.62	0.72	0.75	0.73	0.67	0.70	0.72
Relator	0.59	0.53	0.44	0.55	0.59	0.54	0.51	0.54	0.60
Responsibility	0.66	0.60	0.53	0.60	0.65	0.62	0.54	0.59	0.63
Restorative	0.60	0.56	0.49	0.58	0.60	0.54	0.49	0.57	0.57
Self-Assurance	0.69	0.63	0.50	0.63	0.65	0.63	0.57	0.59	0.62
Significance	0.70	0.67	0.55	0.66	0.68	0.63	0.52	0.62	0.65
Strategic	0.68	0.65	0.58	0.64	0.67	0.68	0.58	0.62	0.64
Woo	0.80	0.77	0.67	0.77	0.79	0.77	0.69	0.76	0.77

Respondents were also clustered by the average amount of time they took to respond to each item. As with neutral responses, those who spent a consistent amount of time on both tests have much higher reliability. Because these are within-person response times, differences in reading ability or comprehension over the study's time periods should be negligible, and differing response times can more reasonably be assumed to represent differing levels of attention, effort or engagement. Quicker response times are rarer but are still associated with higher reliability.

TABLE 6.

n =	1,326	1,473	161	2,269	22,047	4,955	248	8,601	13,417
Response Time Group	low/low	low/med	low/high	med/low	med/med	med/high	high/low	high/med	high/high
Full Profile	0.74	0.69	0.54	0.72	0.71	0.67	0.68	0.70	0.69
Achiever	0.72	0.68	0.54	0.71	0.70	0.67	0.63	0.68	0.68
Activator	0.70	0.65	0.56	0.70	0.68	0.65	0.67	0.66	0.65
Adaptability	0.73	0.63	0.51	0.65	0.68	0.62	0.58	0.66	0.65
Analytical	0.76	0.73	0.61	0.76	0.75	0.70	0.58	0.73	0.70
Arranger	0.64	0.60	0.48	0.63	0.63	0.60	0.63	0.63	0.63
Belief	0.71	0.66	0.55	0.65	0.67	0.64	0.66	0.65	0.66
Command	0.75	0.70	0.53	0.75	0.72	0.70	0.71	0.71	0.69
Communication	0.79	0.75	0.57	0.77	0.77	0.74	0.80	0.75	0.73
Competition	0.81	0.74	0.58	0.78	0.75	0.71	0.75	0.74	0.71
Connectedness	0.73	0.71	0.51	0.71	0.71	0.68	0.65	0.70	0.69
Consistency	0.71	0.63	0.48	0.66	0.66	0.60	0.57	0.63	0.63
Context	0.68	0.68	0.53	0.68	0.67	0.60	0.65	0.64	0.61
Deliberative	0.73	0.71	0.53	0.74	0.73	0.70	0.68	0.72	0.70
Developer	0.72	0.67	0.45	0.68	0.66	0.63	0.59	0.62	0.62
Discipline	0.84	0.74	0.65	0.80	0.78	0.71	0.60	0.74	0.74
Empathy	0.71	0.68	0.54	0.68	0.65	0.63	0.63	0.63	0.62
Focus	0.75	0.69	0.60	0.73	0.71	0.66	0.63	0.70	0.68
Futuristic	0.68	0.66	0.47	0.66	0.66	0.61	0.58	0.65	0.64
Harmony	0.70	0.63	0.45	0.65	0.64	0.58	0.64	0.64	0.62
Ideation	0.76	0.71	0.59	0.75	0.73	0.68	0.67	0.72	0.70
Includer	0.70	0.65	0.48	0.68	0.67	0.62	0.64	0.64	0.64
Individualization	0.63	0.53	0.35	0.62	0.60	0.58	0.57	0.58	0.58
Input	0.74	0.67	0.53	0.72	0.71	0.65	0.67	0.69	0.67
Intellection	0.77	0.74	0.54	0.77	0.76	0.72	0.71	0.73	0.72
Learner	0.73	0.71	0.58	0.73	0.72	0.68	0.62	0.70	0.70
Maximizer	0.64	0.59	0.39	0.61	0.59	0.56	0.62	0.58	0.57
Positivity	0.79	0.75	0.49	0.76	0.75	0.71	0.73	0.73	0.72
Relator	0.64	0.56	0.54	0.60	0.59	0.56	0.59	0.59	0.59
Responsibility	0.69	0.64	0.57	0.64	0.65	0.60	0.60	0.63	0.63
Restorative	0.65	0.56	0.41	0.63	0.60	0.55	0.58	0.59	0.57
Self-Assurance	0.72	0.67	0.57	0.70	0.68	0.65	0.62	0.68	0.67
Significance	0.76	0.69	0.64	0.73	0.70	0.67	0.66	0.69	0.66
Strategic	0.71	0.68	0.55	0.68	0.68	0.65	0.64	0.67	0.66
Woo	0.83	0.79	0.50	0.81	0.80	0.77	0.80	0.79	0.77

Hypothesis 4

Test-retest reliabilities by gender, race/ethnicity, education and country are shown in Tables D1, D2, D3, D4 and D5. As with all other results in this study, it is important to note that the study population is composed of independent retesters and is not representative (unless accidental) of any subpopulation shown here. Also, these voluntary demographics include many more missing cases than the age data.

Table D1 shows results by gender. Four themes show small, measurable retest differences by gender:

- Retest reliability for the **Context** theme is nominally higher for males.
- Retest reliabilities for the **Empathy, Consistency** and **Ideation** themes are nominally higher for females.

The practical significance of these differences is likely trivial.

TABLE D1.

n =	28,898	19,819	293
	Female	Male	Decline
Full Profile	**0.71**	**0.69**	**0.72**
Achiever	0.69	0.69	0.71
Activator	0.67	0.66	0.65
Adaptability	0.66	0.66	0.67
Analytical	0.71	0.71	0.72
Arranger	0.62	0.62	0.62
Belief	0.65	0.67	0.70
Command	0.71	0.70	0.71
Communication	0.76	0.74	0.74
Competition	0.72	0.74	0.69
Connectedness	0.70	0.69	0.69
Consistency	0.65	0.61	0.65
Context	0.61	0.65	0.67
Deliberative	0.72	0.71	0.74
Developer	0.63	0.61	0.59
Discipline	0.76	0.74	0.74
Empathy	0.64	0.60	0.71
Focus	0.69	0.70	0.67
Futuristic	0.64	0.65	0.69
Harmony	0.63	0.62	0.61
Ideation	0.72	0.69	0.74
Includer	0.65	0.63	0.65
Individualization	0.59	0.59	0.59
Input	0.69	0.69	0.74
Intellection	0.74	0.74	0.76

Learner	0.71	0.70	0.72
Maximizer	0.59	0.57	0.54
Positivity	0.74	0.72	0.73
Relator	0.59	0.59	0.67
Responsibility	0.63	0.64	0.64
Restorative	0.59	0.57	0.64
Self-Assurance	0.67	0.66	0.63
Significance	0.68	0.69	0.66
Strategic	0.67	0.66	0.70
Woo	0.79	0.78	0.78

Table D2 shows results by race/ethnicity. Again, there are small measurable differences by group.

- While the practical significance of these differences is likely trivial, there is a slight tendency for white respondents' reliability to be marginally higher.

TABLE D2.

n =	3,806	2,787	1,705	3,722	1,190	34,031
Group =	Asian	African American	Decline	Hispanic/ Latino	Other	White
Full Profile	0.65	0.64	0.67	0.64	0.66	0.69
Achiever	0.69	0.69	0.70	0.65	0.67	0.70
Activator	0.66	0.64	0.68	0.63	0.63	0.68
Adaptability	0.63	0.60	0.64	0.64	0.61	0.67
Analytical	0.70	0.69	0.72	0.68	0.71	0.75
Arranger	0.61	0.59	0.64	0.60	0.64	0.63
Belief	0.65	0.61	0.68	0.62	0.65	0.68
Command	0.69	0.68	0.71	0.67	0.65	0.73
Communication	0.72	0.72	0.76	0.74	0.77	0.77
Competition	0.72	0.72	0.72	0.72	0.73	0.75
Connectedness	0.66	0.68	0.72	0.66	0.69	0.71
Consistency	0.62	0.60	0.65	0.61	0.60	0.66
Context	0.58	0.59	0.62	0.59	0.67	0.67
Deliberative	0.67	0.70	0.72	0.69	0.69	0.73
Developer	0.62	0.59	0.64	0.60	0.60	0.66
Discipline	0.73	0.73	0.74	0.74	0.73	0.78
Empathy	0.60	0.59	0.64	0.61	0.63	0.66
Focus	0.69	0.67	0.72	0.66	0.64	0.71
Futuristic	0.63	0.61	0.65	0.61	0.62	0.66
Harmony	0.63	0.58	0.64	0.60	0.62	0.65
Ideation	0.69	0.68	0.71	0.68	0.72	0.74
Includer	0.64	0.61	0.64	0.62	0.64	0.67

Individualization	0.55	0.56	0.60	0.57	0.59	0.60
Input	0.65	0.65	0.70	0.65	0.67	0.72
Intellection	0.70	0.69	0.73	0.70	0.73	0.76
Learner	0.68	0.66	0.71	0.68	0.69	0.73
Maximizer	0.60	0.55	0.59	0.53	0.56	0.59
Positivity	0.72	0.70	0.75	0.69	0.71	0.75
Relator	0.60	0.57	0.60	0.58	0.60	0.60
Responsibility	0.65	0.65	0.64	0.62	0.65	0.65
Restorative	0.58	0.54	0.61	0.57	0.56	0.59
Self-Assurance	0.69	0.63	0.65	0.66	0.64	0.69
Significance	0.67	0.65	0.67	0.65	0.64	0.70
Strategic	0.67	0.64	0.65	0.62	0.69	0.69
Woo	0.74	0.77	0.79	0.76	0.81	0.80

As with any univariate analysis like this, it is important to recall population differences that may not be shown. The median white respondent is several years older than the median Asian, African American or Hispanic/Latino respondent, with the typical Hispanic/Latino respondent being five years younger than the typical white respondent. In a previous section, we showed that reliability is higher among older respondents. We have also shown that testing conditions have an impact on reliability, and the forthcoming table on education shows some influence as well. After adjusting for the influences of these other factors, only four reliabilities show statistically significant differences by race/ethnicity:

- **Full profile:** reliability for white respondents is 0.03 higher
- **Adaptability:** Hispanic/Latino and Asian reliabilities are 0.02 higher
- **Arranger:** Hispanic/Latino and All Other reliabilities are 0.02 lower
- **Learner:** Hispanic/Latino reliability is 0.02 lower

The practical significance of these differences is likely trivial.

Table D3 shows results by education.

- Reliabilities are higher among those with additional schooling.

TABLE D3.

n =	796	4,109	10,254	914	15,281	15,779
Group =	< HS Grad	HS Grad	Some College	Voc./Tech.	College Grad	Postgrad
Full Profile	0.59	0.64	0.67	0.69	0.71	0.74
Achiever	0.66	0.65	0.67	0.65	0.69	0.72
Activator	0.49	0.62	0.65	0.64	0.67	0.69
Adaptability	0.59	0.60	0.63	0.63	0.66	0.69
Analytical	0.63	0.68	0.71	0.69	0.73	0.76
Arranger	0.51	0.57	0.59	0.58	0.63	0.65
Belief	0.58	0.63	0.65	0.68	0.66	0.69
Command	0.63	0.66	0.70	0.72	0.72	0.73
Communication	0.64	0.69	0.74	0.74	0.76	0.79
Competition	0.66	0.72	0.74	0.71	0.75	0.75
Connectedness	0.59	0.65	0.68	0.69	0.70	0.72
Consistency	0.47	0.57	0.61	0.59	0.65	0.67
Context	0.57	0.60	0.62	0.59	0.66	0.67
Deliberative	0.64	0.67	0.69	0.71	0.73	0.74
Developer	0.60	0.61	0.64	0.58	0.65	0.65
Discipline	0.68	0.71	0.75	0.70	0.76	0.80
Empathy	0.57	0.58	0.61	0.59	0.65	0.67
Focus	0.60	0.66	0.67	0.71	0.71	0.72
Futuristic	0.57	0.61	0.63	0.66	0.65	0.67
Harmony	0.55	0.56	0.60	0.63	0.63	0.67
Ideation	0.62	0.66	0.70	0.70	0.72	0.75
Includer	0.60	0.61	0.64	0.60	0.65	0.68
Individualization	0.45	0.54	0.57	0.56	0.60	0.61
Input	0.61	0.66	0.68	0.69	0.70	0.71
Intellection	0.65	0.69	0.71	0.75	0.75	0.76
Learner	0.61	0.65	0.67	0.67	0.71	0.72
Maximizer	0.46	0.49	0.54	0.56	0.58	0.62
Positivity	0.65	0.70	0.72	0.70	0.74	0.77
Relator	0.42	0.55	0.56	0.58	0.59	0.61
Responsibility	0.57	0.60	0.63	0.59	0.65	0.65
Restorative	0.45	0.52	0.56	0.60	0.58	0.61
Self-Assurance	0.61	0.64	0.65	0.65	0.68	0.69
Significance	0.59	0.63	0.68	0.68	0.70	0.71
Strategic	0.53	0.61	0.64	0.66	0.68	0.71
Woo	0.65	0.73	0.77	0.78	0.80	0.82

Table D4 shows results by country.

- Reliabilities are slightly lower in China than in the other countries shown.

TABLE D4.

n =	370	1,791	363	303	200	178	173	239	271	164	924	47,800
Country =	Australia	Canada	China	Germany	India	Japan	Nether-lands	New Zealand	Singapore	South Africa	U.K.	U.S.
Full Profile	**0.75**	**0.71**	**0.65**	**0.73**	**0.66**	**0.72**	**0.71**	**0.71**	**0.72**	**0.69**	**0.73**	**0.70**
Achiever	0.73	0.69	0.59	0.70	0.67	0.79	0.75	0.70	0.67	0.71	0.73	0.69
Activator	0.71	0.67	0.59	0.66	0.61	0.75	0.65	0.67	0.70	0.69	0.71	0.67
Adaptability	0.70	0.68	0.57	0.65	0.64	0.79	0.70	0.62	0.66	0.62	0.70	0.66
Analytical	0.72	0.74	0.60	0.70	0.64	0.69	0.73	0.75	0.72	0.67	0.75	0.73
Arranger	0.72	0.65	0.62	0.68	0.67	0.72	0.70	0.65	0.67	0.64	0.63	0.63
Belief	0.69	0.68	0.49	0.65	0.57	0.70	0.73	0.56	0.65	0.68	0.70	0.67
Command	0.70	0.71	0.61	0.72	0.66	0.75	0.71	0.72	0.73	0.69	0.72	0.71
Communication	0.79	0.77	0.65	0.72	0.69	0.75	0.74	0.78	0.75	0.76	0.77	0.76
Competition	0.74	0.73	0.58	0.71	0.65	0.78	0.68	0.68	0.75	0.66	0.77	0.75
Connectedness	0.74	0.72	0.53	0.71	0.62	0.67	0.64	0.71	0.64	0.57	0.72	0.70
Consistency	0.73	0.66	0.59	0.57	0.61	0.55	0.66	0.61	0.68	0.51	0.65	0.64
Context	0.64	0.64	0.53	0.62	0.62	0.69	0.50	0.60	0.59	0.69	0.70	0.65
Deliberative	0.69	0.74	0.65	0.72	0.68	0.70	0.74	0.76	0.69	0.73	0.74	0.72
Developer	0.67	0.66	0.51	0.56	0.58	0.65	0.62	0.59	0.54	0.60	0.64	0.65
Discipline	0.78	0.76	0.64	0.74	0.68	0.71	0.79	0.80	0.78	0.65	0.77	0.77
Empathy	0.67	0.66	0.49	0.66	0.58	0.59	0.64	0.67	0.63	0.60	0.65	0.65
Focus	0.71	0.70	0.64	0.76	0.69	0.76	0.63	0.68	0.77	0.71	0.74	0.69
Futuristic	0.71	0.66	0.54	0.69	0.67	0.73	0.69	0.66	0.68	0.62	0.72	0.65
Harmony	0.71	0.65	0.58	0.58	0.70	0.59	0.67	0.57	0.69	0.61	0.68	0.63
Ideation	0.73	0.73	0.58	0.61	0.63	0.72	0.72	0.67	0.69	0.68	0.78	0.72
Includer	0.71	0.66	0.38	0.56	0.67	0.67	0.66	0.70	0.63	0.64	0.68	0.66
Individualization	0.69	0.58	0.48	0.57	0.59	0.61	0.62	0.60	0.60	0.54	0.65	0.59
Input	0.76	0.70	0.58	0.67	0.67	0.57	0.58	0.66	0.64	0.69	0.74	0.70
Intellection	0.81	0.76	0.67	0.72	0.68	0.74	0.71	0.71	0.68	0.68	0.78	0.75
Learner	0.77	0.72	0.66	0.67	0.69	0.77	0.73	0.71	0.71	0.69	0.78	0.71
Maximizer	0.66	0.61	0.60	0.66	0.55	0.75	0.60	0.49	0.65	0.61	0.64	0.58
Positivity	0.77	0.75	0.61	0.75	0.73	0.75	0.66	0.79	0.75	0.76	0.78	0.74
Relator	0.64	0.60	0.48	0.56	0.60	0.61	0.57	0.62	0.60	0.49	0.60	0.59
Responsibility	0.67	0.64	0.53	0.60	0.65	0.73	0.62	0.64	0.63	0.60	0.68	0.64
Restorative	0.66	0.62	0.53	0.67	0.50	0.52	0.66	0.55	0.49	0.57	0.63	0.59
Self-Assurance	0.69	0.68	0.66	0.68	0.71	0.68	0.73	0.64	0.74	0.62	0.74	0.67
Significance	0.71	0.70	0.65	0.69	0.58	0.73	0.70	0.72	0.74	0.66	0.74	0.69
Strategic	0.70	0.69	0.63	0.73	0.64	0.75	0.67	0.65	0.74	0.70	0.70	0.68
Woo	0.84	0.80	0.66	0.75	0.78	0.79	0.74	0.81	0.74	0.81	0.84	0.80

It is important to note that language use varies significantly by country, with some countries' respondents being more likely to switch languages when retesting:

- In the **Netherlands**, 31% of respondents took their retest in a different language.
- In **Germany**, 20% of respondents took their retest in a different language.
- In **China** and **Japan**, 15% of respondents took their retest in a different language.

Reliabilities are higher among those respondents who used the same language for their original test and their retest, as shown in Table D5.

TABLE D5.

n =	283	122	53,941	242	156	118
Language =	Chinese	Dutch	English	German	Japanese	Spanish
Full Profile	0.67	0.73	0.70	0.73	0.72	0.69
Achiever	0.72	0.77	0.69	0.69	0.81	0.73
Activator	0.64	0.53	0.67	0.68	0.74	0.55
Adaptability	0.55	0.69	0.66	0.69	0.78	0.62
Analytical	0.72	0.68	0.73	0.73	0.57	0.67
Arranger	0.73	0.71	0.63	0.71	0.70	0.59
Belief	0.60	0.73	0.67	0.66	0.73	0.72
Command	0.70	0.64	0.71	0.74	0.81	0.43
Communication	0.74	0.79	0.76	0.73	0.75	0.62
Competition	0.76	0.72	0.74	0.77	0.77	0.60
Connectedness	0.54	0.75	0.70	0.74	0.62	0.59
Consistency	0.64	0.60	0.64	0.49	0.62	0.50
Context	0.58	0.44	0.65	0.53	0.70	0.54
Deliberative	0.69	0.71	0.72	0.68	0.67	0.60
Developer	0.67	0.66	0.64	0.56	0.60	0.61
Discipline	0.80	0.77	0.76	0.75	0.60	0.72
Empathy	0.53	0.74	0.65	0.65	0.58	0.61
Focus	0.79	0.65	0.69	0.76	0.75	0.63
Futuristic	0.67	0.65	0.65	0.68	0.80	0.53
Harmony	0.67	0.69	0.64	0.55	0.65	0.56
Ideation	0.72	0.72	0.72	0.57	0.75	0.56
Includer	0.60	0.68	0.65	0.55	0.71	0.58
Individualization	0.59	0.62	0.59	0.57	0.63	0.55
Input	0.63	0.75	0.70	0.64	0.60	0.68
Intellection	0.73	0.79	0.75	0.70	0.73	0.61
Learner	0.76	0.81	0.71	0.71	0.78	0.66
Maximizer	0.63	0.46	0.59	0.69	0.70	0.58
Positivity	0.70	0.64	0.74	0.75	0.74	0.73
Relator	0.63	0.66	0.59	0.59	0.57	0.68
Responsibility	0.65	0.60	0.64	0.60	0.69	0.53
Restorative	0.60	0.59	0.59	0.62	0.56	0.65

Self-Assurance	0.73	0.72	0.67	0.72	0.77	0.56
Significance	0.71	0.65	0.69	0.73	0.70	0.51
Strategic	0.73	0.66	0.68	0.69	0.76	0.65
Woo	0.73	0.73	0.79	0.78	0.78	0.61

Implications for Future Retakers

We have shown reliabilities for the 34 themes using the raw scores for each theme. For the full profile, we have shown the median correlation of the full 34-theme profile for the first assessment to the full 34-theme profile at the second assessment. Since results are presented to respondents as an ordered set of themes, this latter result is more relevant to the respondent experience. We, therefore, conducted an additional analysis on the theme rank data, to better represent the respondents' retest experiences.

We calculated a theme-rank change score for each theme and fit a multivariate general linear model using all available respondent demographics and testing data. In this model, no main effect was found for any of the demographic variables (except age). The race/education interaction and the three-way interaction of race, gender and education were significant, although of much lower importance than age, elapsed time and testing data.

The set of significant coefficients is a small fraction of the total population, given 34 themes, three gender categories, six education levels, six race/ethnicity categories, 72 two-way interaction values and 108 three-way interaction values. For more information see Appendix 1.

This study was intended to specify the reliability of CS themes and profiles. The results are consistent with those for other high-quality measures such as the Big Five (see Anusic & Schimmack, 2016). Reliabilities of the measured constructs increase with age and education as hypothesized, and other demographic variables exhibit negligible influence. Retest correlations are significantly affected by testing behavior, which suggests that overall reliabilities may be improved with better pretest instructions.

This study was also intended to help individual respondents decide whether to follow the path of the 57,888 respondents in this population and take the CliftonStrengths assessment again. As noted earlier, respondents have many reasons for wishing to repeat the assessment. Some of those reasons will not be informed by test-retest results, but many will. To those respondents, we wish to provide as much guidance as possible.

For most respondents, results are quite stable over time once they are corrected for age, elapsed time and testing conditions. Most respondents will not remember their approach regarding neutral response options or their average response times, so those are unrealistic details to consider when advising someone whether or not to retest.

Any respondent who is considering retaking the CS assessment should reflect on three factors:

1) How old was I when I took it the first time? In general, younger first-time respondents will find that their scores may have changed more, especially if they scored particularly high or low on certain themes. For example, younger respondents tend to score higher on Futuristic and lower on Responsibility.

2) How long has it been since I took it the first time? Reliabilities are generally attenuated over time.

3) How much effort and attention did I give that first attempt? This is a subjective evaluation, meant to account for possible deficits in attention or effort, which are likely to lower the quality of results.

Change Scores

This paper has focused on rank-order stability because that is how the results of the assessment are presented to the respondent. This rank-order stability has been shown to be quite high, even over multiple years, with uncorrected test-retest correlations declining with age, but remaining above 0.60 at the longest durations measured to date. This pattern of attenuation is similar to what is described in Costa, McCrae, & Löckenhoff (2019) for personality across an individual's life span.

As discussed in Damian, Spengler, Sutu, & Roberts (2019), this focus on rank-order stability is the hallmark of a "person-centered approach" to measuring the stability of traits over time. In addition to this "person-centered approach," researchers have also examined changes in individual trait scores to better understand the plasticity of these traits. For example, recent research has shown, that an individual's personality can be both changeable and stable over time; scores on individual traits can change while the overall pattern of the set of traits endures (Roberts & DelVecchio, 2000; Terracciano, Costa, & McCrae, 2006).

The talents measured in the CliftonStrengths assessment appear to be particularly enduring. As shown in Table 7, the mean scores for each theme changed only slightly from time 1 to time 2.

TABLE 7.

Theme	Cohen's d	Score Distribution Overlap, Time 1 vs. Time 2	Theme	Cohen's d	Score Distribution Overlap, Time 1 vs. Time 2
Achiever	0.03	98.7%	Focus	0.03	98.8%
Activator	0.06	97.4%	Futuristic	0.03	98.6%
Adaptability	-0.04	98.5%	Harmony	-0.02	99.1%
Analytical	0.07	97.4%	Ideation	0.04	98.2%
Arranger	0.07	97.4%	Includer	-0.07	97.0%
Belief	-0.02	99.3%	Individualization	0.12	95.3%
Command	0.05	98.0%	Input	-0.01	99.5%
Communication	-0.02	99.2%	Intellection	0.02	99.0%
Competition	0.02	99.4%	Learner	0.02	99.2%
Connectedness	0.05	98.0%	Maximizer	0.12	95.3%
Consistency	-0.03	98.7%	Positivity	-0.04	98.4%
Context	0.01	99.8%	Relator	0.09	96.3%
Deliberative	0.04	98.3%	Responsibility	0.01	99.6%
Developer	-0.01	99.7%	Restorative	-0.08	96.8%
Discipline	0.01	99.5%	Self-Assurance	0.07	97.1%
Empathy	-0.02	99.1%	Significance	0.03	98.8%

Theme	Cohen's d	Score Distribution Overlap, Time 1 vs. Time 2
Strategic	0.08	96.8%
Woo	-0.03	98.8%

The largest d-values of 0.12 are for the Individualization and Maximizer themes, and indicate only small increases over time. The median change score for every theme is zero. As a whole, these results indicate very little change in respondents' mean scores over time.

With so little change in mean theme scores, we can understand how the overall profile scores remain stable over time. The ordering of the 34 themes does add some noise to the rank-order correlations with trivial changes in rank reducing those correlations, even when the implications of those changes in rank are minimal. For example, Figure 1 shows the posterior distribution of theme ranks for all respondents who had Learner ranked first in their initial results. More than 91% of respondents who had Learner first on their original assessment still had Learner in their top 10 retest rank order and more than 65% still had Learner in their top three strengths. For both of these groups, feedback from a Gallup-Certified Strengths Coach would still focus on Learner as a dominant talent theme, indicating the meaningful practical stability of CS results.

FIGURE 1.

Posterior distribution of Learner ranks, given rank at time 1 = 1
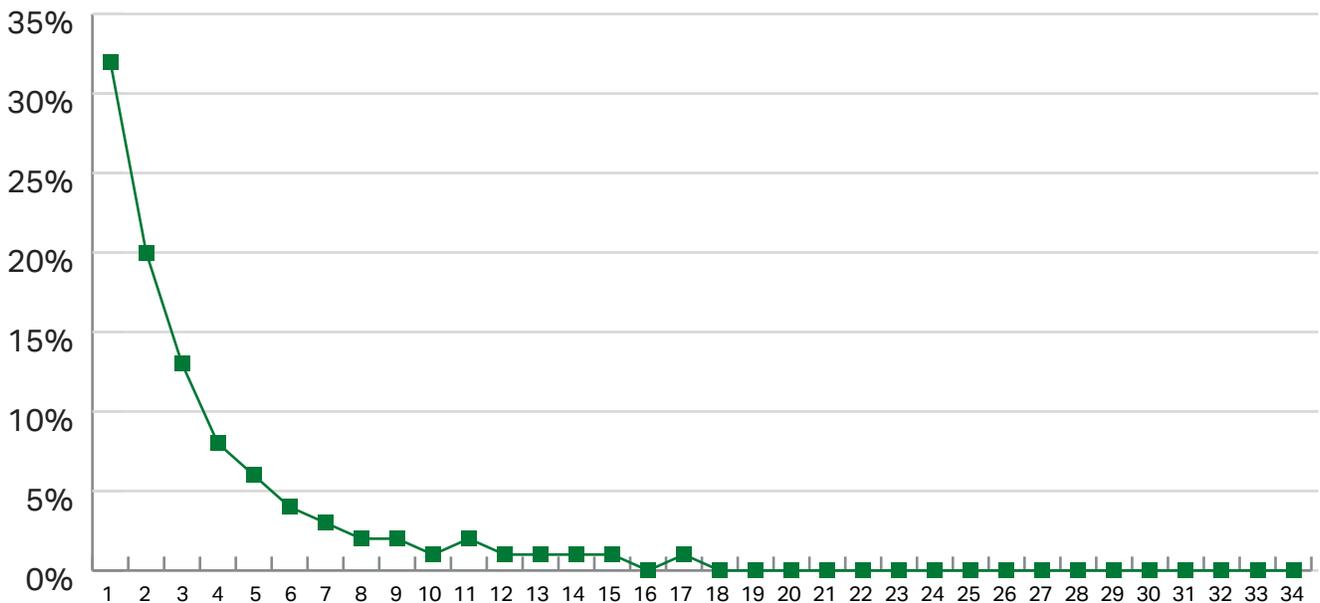
This study demonstrates that the talents measured by the CliftonStrengths assessment are enduring, and that the ordered set of talents presented to respondents remains quite stable over time. These findings are generally consistent with those of personality researchers (Roberts & Delvecchio, 2000; Gnambs, 2014; Ferguson, 2010; Damian et al., 2019; Costa et al., 2019), showing increased stability at older ages, decreasing stability over longer intervals, and a strong indication of a floor of 0.60 for uncorrected retest correlations. While some researchers, using other assessments (e.g., Roberts et al., 2006), find significant change in mean traits scores in middle and old age, we found no such changes in these results. Perhaps future studies with longer retest intervals will find similar changes in talent theme scores.

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Appendix 1

The set of significant coefficients is a small fraction of the total population, given 34 themes, three gender categories, six education levels, six race/ethnicity categories, 72 two-way interaction values and 108 three-way interaction values. The following are themes with some statistically significant subgroup differences.

1) Achiever:

   a) scoring higher on retest: Asian males (n=1,727)

   b) scoring lower on retest: Asian females who selected "some college" or "decline" for education (n=332)

2) Arranger: Respondents who declined to give race or education information (n=150) scored lower on retest.

3) Deliberative: Asians who declined to provide education data, and African-Americans with HS education (n=300) scored higher on retest.

4) Input:

   a) scoring higher on retest: Asian females (n=2,054)

   b) scoring lower on retest: Hispanic/Latina females and postgrad Hispanic/Latino males (n=2,620)

5) Maximizer:

   a) scoring higher on retest: respondents who selected "Other" for race/ethnicity and "some college" for education (n=354)

   b) scoring lower on retest: respondents who declined to provide education or race/ethnicity information (n=150)

6) Positivity:

   a) scoring higher on retest: Asian postgrads, and postgrads answering "Other" for race/ethnicity (n=1,644)

   b) scoring lower on retest: Hispanic/Latino postgrads, female Asian college graduates (n=1,672)

7) Relator: Hispanic/Latino respondents who answered "college," "some college" or "decline" for education (n=2,109) scored lower on retest.

8) Restorative:

   a) scoring higher on retest: male respondents with some college who declined to provide race/ethnicity information, and Hispanic/Latina females with some college (n=714)

   b) scoring lower on retest: Hispanic/Latino male HS graduates, and postgrad males who answered "other" for race/ethnicity (n=292)

9) Self-Assurance: Hispanic/Latina female HS graduates (n=312) scored higher on retest.

10) Woo:

    a) scoring higher on retest: respondents who declined to give race or education information (n=150)

    b) scoring lower on retest: Hispanic/Latino postgrads, African-American college graduates, and postgrad and college graduate females who selected "Other" for race/ethnicity (n=2,069)

Given the large set of possible multiple comparisons and the lack of generalizability across groups, this small set of differences is likely the result of random chance.

Appendix 2

TABLE 4.

n =	990	1,006	1,573	895	342	1,500	1,383	2,436	1,580	888	420
Group =	< 6 mos.	6 mos. -1 year	1-2 years	2-3 years	3-4 years	< 6 mos.	6 mos. -1 year	1-2 years	2-3 years	3-4 years	4-5 years
	< 24					24-30					
Full Profile	0.70	0.66	0.63	0.60	0.56	0.74	0.68	0.64	0.60	0.59	0.56
Achiever	0.74	0.71	0.64	0.64	0.55	0.75	0.70	0.67	0.60	0.59	0.58
Activator	0.68	0.65	0.59	0.50	0.49	0.71	0.66	0.62	0.57	0.54	0.53
Adaptability	0.69	0.64	0.60	0.52	0.53	0.72	0.69	0.63	0.58	0.53	0.54
Analytical	0.74	0.74	0.69	0.63	0.61	0.78	0.75	0.68	0.66	0.63	0.62
Arranger	0.62	0.59	0.55	0.49	0.41	0.69	0.58	0.56	0.47	0.44	0.54
Belief	0.69	0.65	0.60	0.60	0.52	0.74	0.69	0.62	0.63	0.54	0.49
Command	0.70	0.72	0.66	0.60	0.59	0.75	0.72	0.65	0.62	0.62	0.56
Communication	0.76	0.76	0.71	0.63	0.64	0.79	0.75	0.72	0.68	0.65	0.62
Competition	0.78	0.76	0.69	0.69	0.60	0.76	0.74	0.72	0.67	0.66	0.63
Connectedness	0.72	0.71	0.64	0.62	0.56	0.74	0.70	0.68	0.63	0.59	0.65
Consistency	0.62	0.61	0.53	0.55	0.45	0.69	0.64	0.55	0.53	0.51	0.55
Context	0.69	0.68	0.59	0.53	0.60	0.69	0.63	0.59	0.58	0.56	0.52
Deliberative	0.75	0.71	0.67	0.64	0.58	0.78	0.71	0.68	0.59	0.60	0.60
Developer	0.70	0.68	0.63	0.60	0.53	0.74	0.68	0.61	0.59	0.54	0.54
Discipline	0.79	0.78	0.73	0.67	0.66	0.83	0.78	0.73	0.71	0.63	0.68
Empathy	0.67	0.63	0.58	0.54	0.51	0.69	0.66	0.59	0.57	0.54	0.54
Focus	0.73	0.71	0.64	0.60	0.51	0.76	0.72	0.67	0.59	0.59	0.52
Futuristic	0.68	0.65	0.58	0.52	0.44	0.69	0.64	0.57	0.54	0.51	0.44
Harmony	0.62	0.60	0.56	0.55	0.51	0.68	0.63	0.56	0.51	0.52	0.50
Ideation	0.73	0.67	0.67	0.66	0.70	0.77	0.73	0.66	0.61	0.63	0.59
Includer	0.69	0.65	0.58	0.59	0.52	0.72	0.66	0.61	0.57	0.56	0.54
Individualization	0.62	0.57	0.54	0.46	0.45	0.62	0.58	0.55	0.48	0.50	0.46
Input	0.74	0.67	0.67	0.64	0.67	0.76	0.71	0.66	0.60	0.61	0.58
Intellection	0.76	0.72	0.69	0.64	0.64	0.82	0.77	0.72	0.66	0.68	0.66
Learner	0.72	0.72	0.61	0.60	0.55	0.75	0.72	0.63	0.57	0.62	0.50
Maximizer	0.56	0.50	0.50	0.41	0.38	0.63	0.52	0.48	0.44	0.42	0.49
Positivity	0.76	0.76	0.69	0.69	0.61	0.78	0.74	0.69	0.64	0.64	0.63
Relator	0.59	0.54	0.53	0.45	0.40	0.67	0.59	0.52	0.48	0.46	0.46
Responsibility	0.64	0.64	0.58	0.55	0.48	0.73	0.66	0.58	0.56	0.49	0.53
Restorative	0.61	0.59	0.52	0.50	0.45	0.68	0.59	0.53	0.46	0.45	0.43
Self-Assurance	0.68	0.66	0.60	0.54	0.52	0.73	0.68	0.60	0.55	0.58	0.53
Significance	0.69	0.68	0.62	0.57	0.55	0.74	0.70	0.65	0.57	0.56	0.53
Strategic	0.64	0.60	0.59	0.52	0.54	0.70	0.65	0.60	0.52	0.60	0.50
Woo	0.81	0.80	0.72	0.69	0.66	0.83	0.79	0.76	0.70	0.69	0.65

TABLE 4. *(continued)*

n =	2,526	1,486	2,713	2,106	1,370	949	616	379	334
Group =	< 6 mos.	6 mos. -1 year	1-2 years	2-3 years	3-4 years	4-5 years	5-6 years	6-7 years	7+ years
					30 -40				
Full Profile	**0.76**	**0.73**	**0.70**	**0.68**	**0.66**	**0.65**	**0.62**	**0.62**	**0.56**
Achiever	0.76	0.74	0.70	0.68	0.64	0.63	0.60	0.57	0.50
Activator	0.73	0.68	0.66	0.65	0.66	0.67	0.59	0.62	0.56
Adaptability	0.72	0.69	0.66	0.66	0.59	0.59	0.63	0.60	0.55
Analytical	0.78	0.75	0.74	0.71	0.70	0.68	0.68	0.63	0.62
Arranger	0.68	0.60	0.59	0.61	0.56	0.51	0.48	0.48	0.44
Belief	0.72	0.70	0.66	0.68	0.59	0.60	0.60	0.61	0.57
Command	0.78	0.72	0.71	0.70	0.68	0.69	0.61	0.63	0.64
Communication	0.79	0.79	0.78	0.74	0.76	0.73	0.68	0.71	0.59
Competition	0.79	0.78	0.75	0.72	0.70	0.66	0.64	0.70	0.64
Connectedness	0.74	0.73	0.69	0.68	0.69	0.60	0.65	0.62	0.58
Consistency	0.69	0.68	0.63	0.65	0.60	0.60	0.54	0.54	0.51
Context	0.70	0.69	0.68	0.64	0.63	0.57	0.60	0.57	0.59
Deliberative	0.76	0.76	0.72	0.69	0.68	0.62	0.62	0.62	0.55
Developer	0.69	0.67	0.62	0.62	0.61	0.58	0.54	0.54	0.44
Discipline	0.80	0.82	0.76	0.75	0.72	0.70	0.71	0.63	0.61
Empathy	0.71	0.67	0.64	0.65	0.64	0.61	0.58	0.57	0.51
Focus	0.76	0.76	0.71	0.68	0.65	0.65	0.65	0.58	0.57
Futuristic	0.70	0.69	0.65	0.60	0.57	0.59	0.52	0.52	0.49
Harmony	0.70	0.66	0.61	0.58	0.62	0.59	0.52	0.54	0.48
Ideation	0.76	0.75	0.71	0.68	0.68	0.66	0.61	0.60	0.58
Includer	0.71	0.69	0.67	0.64	0.58	0.59	0.51	0.58	0.45
Individualization	0.65	0.63	0.60	0.55	0.56	0.55	0.50	0.50	0.40
Input	0.74	0.71	0.70	0.67	0.65	0.63	0.61	0.58	0.58
Intellection	0.79	0.78	0.75	0.74	0.71	0.67	0.69	0.62	0.61
Learner	0.76	0.74	0.70	0.68	0.66	0.60	0.61	0.58	0.57
Maximizer	0.66	0.60	0.57	0.54	0.49	0.51	0.43	0.44	0.36
Positivity	0.78	0.76	0.75	0.72	0.69	0.67	0.62	0.64	0.59
Relator	0.66	0.62	0.58	0.58	0.54	0.53	0.46	0.49	0.36
Responsibility	0.70	0.66	0.62	0.61	0.61	0.55	0.51	0.50	0.47
Restorative	0.67	0.63	0.58	0.52	0.47	0.54	0.50	0.46	0.37
Self-Assurance	0.73	0.68	0.68	0.65	0.61	0.61	0.56	0.60	0.52
Significance	0.75	0.75	0.70	0.69	0.64	0.65	0.63	0.55	0.60
Strategic	0.74	0.69	0.67	0.64	0.61	0.60	0.57	0.57	0.51
Woo	0.82	0.83	0.81	0.78	0.77	0.76	0.70	0.74	0.63

TABLE 4. *(continued)*

n =	2,236	1,146	2,033	1,663	1,246	906	657	423	461
Group =	< 6 mos.	6 mos. -1 year	1-2 years	2-3 years	3-4 years	4-5 years	5-6 years	6-7 years	7+ years
	40-50								
Full Profile	**0.77**	**0.74**	**0.73**	**0.72**	**0.70**	**0.69**	**0.69**	**0.69**	**0.65**
Achiever	0.78	0.75	0.70	0.68	0.68	0.69	0.66	0.64	0.62
Activator	0.73	0.70	0.69	0.69	0.69	0.65	0.66	0.69	0.63
Adaptability	0.73	0.70	0.68	0.67	0.66	0.64	0.65	0.64	0.64
Analytical	0.78	0.80	0.76	0.73	0.70	0.75	0.72	0.71	0.61
Arranger	0.70	0.63	0.64	0.63	0.64	0.59	0.60	0.60	0.59
Belief	0.74	0.72	0.68	0.68	0.66	0.64	0.62	0.59	0.57
Command	0.77	0.76	0.75	0.74	0.70	0.69	0.70	0.68	0.66
Communication	0.81	0.79	0.79	0.79	0.77	0.74	0.75	0.76	0.74
Competition	0.77	0.80	0.74	0.75	0.70	0.67	0.67	0.70	0.71
Connectedness	0.75	0.72	0.69	0.72	0.67	0.67	0.69	0.64	0.64
Consistency	0.71	0.70	0.67	0.66	0.64	0.64	0.65	0.61	0.54
Context	0.66	0.68	0.69	0.67	0.66	0.61	0.62	0.66	0.62
Deliberative	0.79	0.79	0.77	0.74	0.71	0.71	0.68	0.66	0.67
Developer	0.68	0.68	0.64	0.64	0.63	0.58	0.64	0.60	0.53
Discipline	0.81	0.81	0.79	0.76	0.75	0.78	0.74	0.73	0.64
Empathy	0.69	0.67	0.66	0.67	0.63	0.59	0.62	0.61	0.58
Focus	0.76	0.74	0.70	0.70	0.66	0.68	0.70	0.67	0.60
Futuristic	0.73	0.65	0.68	0.67	0.62	0.60	0.66	0.66	0.54
Harmony	0.69	0.66	0.66	0.66	0.64	0.62	0.63	0.57	0.56
Ideation	0.77	0.75	0.75	0.75	0.71	0.68	0.68	0.67	0.62
Includer	0.70	0.70	0.67	0.67	0.69	0.65	0.62	0.64	0.50
Individualization	0.66	0.65	0.61	0.60	0.61	0.59	0.53	0.53	0.51
Input	0.74	0.75	0.71	0.70	0.67	0.68	0.68	0.68	0.64
Intellection	0.77	0.78	0.77	0.78	3.74	0.73	0.72	0.70	0.72
Learner	0.77	0.78	0.74	0.74	0.69	0.69	0.67	0.70	0.69
Maximizer	0.71	0.63	0.60	0.58	0.57	0.58	0.56	0.53	0.47
Positivity	0.79	0.79	0.75	0.77	0.76	0.72	0.75	0.71	0.67
Relator	0.67	0.65	0.63	0.61	0.56	0.55	0.57	0.55	0.48
Responsibility	0.71	0.67	0.64	0.64	0.60	0.56	0.59	0.61	0.55
Restorative	0.68	0.61	0.59	0.58	0.54	0.61	0.51	0.46	0.46
Self-Assurance	0.77	0.72	0.71	0.68	0.66	0.67	0.65	0.66	0.59
Significance	0.76	0.74	0.72	0.72	0.66	0.68	0.67	0.63	0.62
Strategic	0.76	0.71	0.71	0.69	0.67	0.67	0.66	0.66	0.59
Woo	0.84	0.84	0.82	0.82	0.81	0.80	0.79	0.83	0.75

TABLE 4. *(continued)*

n =	1,761	818	1.426	1,033	870	643	451	278	367
Group =	< 6 mos.	6 mos. -1 year	1-2 years	2-3 years	3-4 years	4-5 years	5-6 years	6-7 years	7+ years
	50-60								
Full Profile	**0.77**	**0.75**	**0.74**	**0.73**	**0.73**	**0.72**	**0.71**	**0.72**	**0.69**
Achiever	0.75	0.73	0.70	0.71	0.72	0.70	0.71	0.68	0.61
Activator	0.71	0.72	0.71	0.69	0.70	0.69	0.67	0.69	0.63
Adaptability	0.71	0.71	0.72	0.64	0.68	0.69	0.56	0.72	0.58
Analytical	0.75	0.78	0.76	0.76	0.74	0.74	0.66	0.71	0.70
Arranger	0.69	0.64	0.67	0.68	0.69	0.66	0.62	0.56	0.59
Belief	0.73	0.70	0.68	0.67	0.67	0.65	0.63	0.61	0.57
Command	0.76	0.74	0.74	0.73	0.73	0.72	0.63	0.73	0.65
Communication	0.80	0.79	0.78	0.77	0.79	0.75	0.76	0.76	0.73
Competition	0.76	0.78	0.73	0.73	0.73	0.67	0.66	0.75	0.70
Connectedness	0.74	0.75	0.75	0.68	0.69	0.68	0.66	0.71	0.64
Consistency	0.71	0.70	0.65	0.68	0.67	0.65	0.64	0.67	0.61
Context	0.68	0.68	0.65	0.67	0.61	0.58	0.67	0.67	0.62
Deliberative	0.78	0.77	0.75	0.75	0.75	0.72	0.69	0.71	0.70
Developer	0.67	0.69	0.68	0.65	0.63	0.61	0.55	0.58	0.63
Discipline	0.80	0.79	0.80	0.77	0.75	0.76	0.73	0.75	0.69
Empathy	0.66	0.70	0.67	0.63	0.65	0.68	0.59	0.63	0.64
Focus	0.74	0.74	0.71	0.73	0.66	0.71	0.68	0.67	0.67
Futuristic	0.71	0.69	0.69	0.68	0.66	0.62	0.62	0.67	0.60
Harmony	0.71	0.69	0.69	0.63	0.66	0.63	0.63	0.61	0.62
Ideation	0.76	0.77	0.77	0.74	0.76	0.72	0.66	0.75	0.67
Includer	0.70	0.70	0.67	0.63	0.65	0.66	0.62	0.65	0.58
Individualization	0.67	0.62	0.65	0.62	0.65	0.65	0.60	0.60	0.60
Input	0.74	0.76	0.76	0.72	0.75	0.72	0.73	0.75	0.67
Intellection	0.77	0.76	0.78	0.75	3.77	0.76	0.69	0.76	0.72
Learner	0.77	0.76	0.76	0.74	0.75	0.74	0.71	0.75	0.71
Maximizer	0.66	0.65	0.63	0.65	0.60	0.59	0.64	0.60	0.49
Positivity	0.79	0.78	0.77	0.77	0.74	0.74	0.72	0.69	0.71
Relator	0.65	0.60	0.62	0.64	0.62	0.55	0.62	0.54	0.55
Responsibility	0.70	0.67	0.67	0.66	0.66	0.66	0.63	0.59	0.63
Restorative	0.67	0.56	0.59	0.61	0.49	0.61	0.59	0.48	0.48
Self-Assurance	0.75	0.71	0.72	0.71	0.67	0.67	0.64	0.67	0.64
Significance	0.72	0.75	0.71	0.71	0.68	0.72	0.69	0.71	0.68
Strategic	0.75	0.73	0.74	0.71	0.73	0.70	0.64	0.72	0.63
Woo	0.85	0.82	0.82	0.84	0.81	0.79	0.78	0.76	0.73

TABLE 4. *(continued)*

n =	1072	409	715	543	411	307	213	204
Group =	< 6 mos.	6 mos. - 1 year	1-2 years	2-3 years	3-4 years	4-5 years	5-6 years	6+ years
					> 60			
Full Profile	**0.77**	**0.76**	**0.77**	**0.75**	**0.75**	**0.74**	**0.75**	**0.74**
Achiever	0.72	0.68	0.71	0.74	0.69	0.71	0.72	0.71
Activator	0.67	0.65	0.71	0.71	0.72	0.71	0.71	0.68
Adaptability	0.71	0.69	0.75	0.62	0.69	0.61	0.66	0.60
Analytical	0.75	0.75	0.75	0.78	0.70	0.76	0.76	0.75
Arranger	0.69	0.64	0.69	0.66	0.67	0.67	0.75	0.63
Belief	0.69	0.73	0.71	0.71	0.65	0.69	0.67	0.68
Command	0.75	0.63	0.79	0.70	0.71	0.70	0.69	0.66
Communication	0.77	0.78	0.79	0.78	0.75	0.76	0.80	0.79
Competition	0.74	0.69	0.70	0.72	0.70	0.67	0.65	0.67
Connectedness	0.71	0.72	0.72	0.69	0.70	0.70	0.73	0.70
Consistency	0.69	0.71	0.75	0.64	0.70	0.65	0.76	0.69
Context	0.65	0.71	0.68	0.67	0.59	0.65	0.67	0.60
Deliberative	0.77	0.77	0.74	0.78	0.75	0.75	0.77	0.71
Developer	0.62	0.68	0.65	0.68	0.60	0.62	0.70	0.64
Discipline	0.77	0.81	0.83	0.78	0.76	0.80	0.80	0.79
Empathy	0.63	0.70	0.69	0.71	0.66	0.65	0.66	0.59
Focus	0.70	0.69	0.74	0.72	0.68	0.67	0.76	0.62
Futuristic	0.72	0.67	0.74	0.66	0.71	0.69	0.69	0.64
Harmony	0.72	0.73	0.74	0.68	0.70	0.70	0.76	0.60
Ideation	0.77	0.79	0.80	0.73	0.73	0.73	0.81	0.71
Includer	0.63	0.71	0.73	0.68	0.67	0.65	0.69	0.70
Individualization	0.62	0.59	0.65	0.65	0.64	0.59	0.68	0.56
Input	0.73	0.70	0.76	0.71	0.72	0.71	0.67	0.69
Intellection	0.73	0.78	0.78	0.77	0.77	0.75	0.77	0.70
Learner	0.76	0.75	0.77	0.76	0.73	0.74	0.76	0.74
Maximizer	0.62	0.62	0.67	0.61	0.61	0.54	0.63	0.55
Positivity	0.77	0.75	0.81	0.80	0.75	0.74	0.80	0.78
Relator	0.63	0.62	0.67	0.60	0.58	0.58	0.58	0.59
Responsibility	0.67	0.61	0.70	0.65	0.62	0.65	0.63	0.65
Restorative	0.62	0.59	0.62	0.61	0.58	0.61	0.60	0.56
Self-Assurance	0.73	0.71	0.75	0.72	0.68	0.62	0.71	0.66
Significance	0.68	0.72	0.71	0.68	0.69	0.71	0.68	0.66
Strategic	0.74	0.77	0.77	0.70	0.72	0.71	0.73	0.71
Woo	0.82	0.83	0.86	0.82	0.82	0.81	0.87	0.82