President to President

By Matisha Montgomery, 2018 IPAC President
And Marty Albers, 2019 IPAC President

“Dare Mighty Things”

Final Message as 2018 IPAC President, Matisha Montgomery

“Far better it is to dare mighty things, to win glorious triumphs, even though checkered by failure, than to take rank with those poor spirits who neither enjoy much nor suffer much, because they live in the gray twilight that knows not victory nor defeat.”

– Theodore Roosevelt

To me, this line from Theodore Roosevelt is a much more eloquent version of “go big or go home” which is how I tackle most things that come my way, including 2018 and my tenure as IPAC President. While working under the tutelage of 2017 President Mary Ann Haskins prepared me well, I earned a healthy dose of reality for this role and just how big the shoes of my predecessors were. Whether my time is judged as a success or failure, I treasure the amazing experience that it has been. Throughout 2018, I have:

• Gained a deeper respect for our community and the unique culture we have created for one another;

• Added to my growing group of IPAC “friend-ollegeues” blurring lines between colleague, advisor, friend, and confidant;

• Garnered a real sense of accomplishment and pride for what can be achieved with a group of volunteers that care;

• And let’s face it – less sleep, but some pretty big dreams for the future of IPAC too.

We’ve accomplished so much together over the course of this year.

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2018 Conference
As with every year, the conference planning committee pulled off another amazing conference! Old Town Alexandria was a fantastic host city and I took away so many professional nuggets to explore until next year’s conference. In addition to the successful conference, we also started planning significantly earlier so that we could get information into your hands faster. Never in the past had we announced the city, dates, and conference hotel before ending the conference. This year we also brought in some professional event management support in the pre-event planning phase, saw a record number of session submissions, invited international keynote speakers, and strengthened the management and evaluation criteria for some of our conference awards.

ACN
With Frank Igou at the helm, we’ve brought you a series of high-quality and hefty Assessment Council News publications throughout 2018.

Budget
Due in large part to the success of our conference and some growth in our membership, IPAC ended 2018 with a significant surplus that can be invested in future initiatives to Foster Member Growth, Increase Member Value and Engagement, and Maximize Operational Efficiencies. Be on the lookout for Financial Officer Natasha Riley’s 2018 year-end report.

2018-2020 Strategic Plan Actions
The IPAC Board and Committees have made significant progress on seven of our eleven strategic plan goals. Below is a status update.

1. Establish and monitor member performance metrics.
   **Status:** Members and lapsed members will receive surveys in 2019 to help us better understand retention, growth, satisfaction, and engagement.

2. Establish partnerships with relevant organizations to increase IPAC’s visibility and impact.
   **Status:** For the first time since the separation of IPAC and IPMA-HR, IPAC will sponsor an IPMA-HR event. In April 2019, IPAC will be a sponsor of the IPMA-HR Southwest Regional Conference in Oklahoma City.

3. Conduct outreach or reengage academic institutions to increase student participation in IPAC activities.
   **Status:** We now have student liaisons advising on our membership committee and assisting with outreach to student programs and academic advisors.

4. Identify target regions for growth, applying the GLEAN model to new Chapters.
   **Status:** As I have previously reported, the Board officially approved the Southwest Assessment Group (SWAG) as an IPAC Chapter. In 2019 we will be working to establish a chapter in the New York/New Jersey area.

5. Optimize and ensure consistency of member and lapsed member messaging campaigns, including onboarding and renewal messages.
   **Status:** The Marketing Committee has created a new member Onboarding package which will introduce new members to the benefits associated with their membership, how they can engage with other members and get involved in the IPAC community.

6. Complete, maintain, and execute key internal process plans, including policies and procedures manuals, website content, data storage plan, and annual operations plan.
   **Status:** The IPAC Policies and Procedures and Living History have been updated and posted to the Members section of the website.

7. Research and develop proposal for the support services needed to implement ongoing operations.
   **Status:** IPAC issued a request for proposals through the Association Management Companies Institute. The Board evaluated the proposals, conducted interviews and reference checks. Ultimately, the Board selected
Impact Virtual Services for our association management needs in January 2019.

All this work could not have been accomplished without a dedicated group of volunteers. I owe my sincerest thanks to each one of you. I’d like to say thanks to our departing Board members: Melissa Haudek, Frank Igou, and Mary Ann Haskins. Your time, ideas, energy, and enthusiasm will be missed. Though thankfully, Mary Ann has taken up the post of Membership Chair and Melissa will serve on the membership committee so neither will be too far away.

I always strive to leave things better than I found them – I think I can say we did that this year. Thank you for your support of this amazing organization.

As much as I have loved leading IPAC, I’m really excited to hand the reins over to Marty for 2019 and to support her on the Board - continuing the work we’ve started and daring mightier things for 2019! #daremightier #IPAC2019

Opening Message

Marty Albers, 2019 IPAC President

I am very excited and extremely honored to be the 2019 incoming President for IPAC. Matisha has made tremendous strides in establishing strategic goals for our organization, and I have my work cut out for me to sustain the progress. I am also grateful for the opportunity to work with the 2018 IPAC Board. Everyone’s guidance and advice has been invaluable. One of the great strengths and things I love about IPAC is that it has fostered many lasting professional and personal relationships, due in part to the small size and more intimate nature of the annual conference. Nonetheless, in order to be a cutting-edge and sustainable organization, IPAC needs to attract a larger and more diverse group of professionals, both in practitioner and academic roles, to full participation and engagement. The 2019 annual conference will serve as a practitioner-focused, best practices forum where ideas and programs are shared and discussed by human resources and industrial-organizational psychology professionals, working largely in the public sector. In order to continue to provide professional growth and development opportunities for its members, and to maintain a cycle of continuous improvement in the assessment field, it is imperative that IPAC broaden its membership and the diversity of ideas presented at the annual conference.

As President of IPAC, my purpose will be to grow the organization, not only in numbers, but also in the breadth of innovations and practices that can aid the various organizations in which our members work. Using the existing network of professionals already affiliated with the conference, I plan to reach out to federal, state and local governments engaged in assessment activities to encourage their participation in IPAC and to demonstrate the incredible impact and benefit this will have on their success. Bringing in more private sector professionals is also essential, so that we can share our best practices and learn from one another. Given the strength of our current ties through IPAC, I firmly believe that all our members can serve as ambassadors for our organization, allowing us to build new relationships and truly lead the field in innovative and effective assessments.

I am always open to hearing your comments, reviews, ideas, and feedback and I strongly encourage everyone to contact me at president@ipacweb.org. I look forward to the annual conference in Minneapolis, Minnesota, July 14-17, 2019 and I hope to see you there.
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This article outlines an approach to integrating situational and contextual factors of the target job and organization into simulation design. By emphasizing needs-assessment methodology, stakeholder input, and tools from the film industry, developers are likely to enhance the realism and fidelity of the simulation stimuli.

C-level leaders agree that the biggest challenge facing their organizations is not slower economic growth, pressure to innovate, or new competitors entering the marketplace, but rather identifying and deploying the next generation of leadership capable of executing their company strategy (Conference Board, 2017). Although both HR professionals and executives recognize that this a critical priority, they may concede that many leadership assessment and development programs are unlikely to deliver expected results (Development Dimensions International, 2018). Without addressing this significant gap, companies are unlikely to have a pool of ready and available leaders to fill critical open positions or have the skills necessary to meet the unpredictable challenges facing leaders today. Regardless of whether we are talking about developing next-generation leaders from within the organization or attracting leaders from outside the organization, what is needed is a coherent, integrated assessment strategy that can help identify the future superstars at all organizational levels.

Leadership assessment is a critical component of top-performing talent management programs, and simulations stand as one of the best predictors of performance and potential (Arthur, Day, McNelly, & Edens, 2003; Church & Rotolo, 2013). Much of the interrelated, complex skills required of today’s leaders are difficult to predict without observing behavior in realistic situations. In fact, to accurately predict leadership success in today’s dynamic work environment, we must look beyond leadership competencies and consider a variety of contextual factors that will impact a leader’s success. The consideration of these factors, which include the organization’s business environment, structure, culture and strategic objectives, will allow us to expand our assessment tools and more accurately predict the full range of leadership performance in the 21st century work environment (Cascio & Aguinis, 2008).

The most direct route for incorporating context into leadership assessments is to create custom simulations that present organizationally relevant, future-focused business challenges. Simulations can be designed to present multifaceted stimuli that mirror organizational reality and require individuals to display job-relevant leadership behaviors. As job complexity and performance demands increase, so will the impact of context on leaders’ and organizations’ performance (Scott, Church, & McLellan, 2017). Well-developed simulations can be designed to account for these factors and evaluate leadership performance against contextually rich business challenges.

By constructing business challenges based on the strategic direction and leadership requirements of the organization, and then integrating those business challenges into simulation design, assessment programs can be more precise in evaluating current and future capabilities. These contextualized business challenges, combined with the use of technology enhancements such as multi-media, can create a highly relevant, immersive experience for the participant. In addition to providing a complex set of realistic stimuli to elicit targeted leadership behaviors, the credibility of the assessment results and feedback discussion is also enhanced.

The remaining sections of this article outline the process for designing contextually rich simulations.

**Learn the Business**

The first step is to conduct a future-facing needs assessment. In collaboration with HR and executive stakeholders, the simulation’s purpose should be identified, and expected outcomes clarified. These outcomes, which need to align with the organization’s strategic objectives, typically include delivering evidence-based (continued on page 6)
assessment data to support talent planning and the accelerated development of individuals; ensuring that the simulation allows participants to demonstrate behavior and decisions consistent with the targeted competency model; and creating a positive and engaging participant experience. This step in the simulation design can take place concurrently with job analysis or competency modeling activities or can be a separate set of actions. Regardless, the goal here is to generate a detailed understanding of organizational strategy, business model, operational capabilities and culture. Simulation developers should address key questions such as:

• What are the significant trends impacting the future of the industry?
• What is the company strategy?
• How does this company generate profit?
• What is the customer perspective?
• What is it like to work in this environment?
• What behaviors are necessary to be a successful leader in this culture now and in the future?

A comprehensive background review should be completed in which the organization shares detailed information related to future aspirations, strategic scenarios and lead predictors, the industry and market outlook, growth opportunities, likely leadership challenges in the next five to seven years, as well as current gaps in leadership capability. Next, simulation developers need to define the simulation specifications, including attributes to be assessed, the difficulty level of the simulation, the setting in which the simulation occurs, the type of stimuli to include and the required technology.

Create Sample Business Scenarios
Leveraging this information, multiple focus groups and interviews should be facilitated with stakeholders (e.g., senior leaders, strategy professionals) to outline the new and emerging challenges that future leaders will need to be prepared to address and the capabilities that leaders will need to possess to succeed. This is an incremental learning process and, depending on the readiness and operational constraints of the organization, a series of interviews or focus groups may be the best approach to data collection. Regardless of the specific method, topics to address should include identifying and describing key business objectives, challenges and changes that will impact the company in the next five to ten years. Once clarified, the discussion should shift to identifying and clarifying real-world business situations that represent one type of challenge or problem that the organization will have to address in the future (e.g., shareholder activists, natural disasters, new competitors, product failures, technology shifts). Data should be collected about the types of decisions leaders need to make in the specific scenario, what information is required to make those decisions, who is involved in the decision-making process, and how these types of decisions differ than other decisions made by leadership. This information not only supports implementing situational and contextual factors into a simulation and stakeholder buy-in, but also serves as the foundation for evaluation standards used within the scoring rubric.

Build the Simulation Content Narrative
After collecting and identifying critical experiences and challenges, the next step is to construct detailed, relevant business challenges that are embedded within the simulation. These manifest as specific scenarios written to entail the broader storyline experienced by the participant. Typically, the participant is immersed in a fictitious organization and asked to overcome the various business challenges. The structured story development process is critical to ensure a simulation is compelling, engaging, and leaves participants with a sense of accomplishment and resolution. Several design and production tools can be leveraged that are typically associated with the film and television industry, including story arcs, beat sheets or short, bulleted descriptions of each section in the story, character and scene breakdowns, collaboration with professional script writers, and other assets that help to ensure an optimal simulation experience for each participant. The use of well-placed “cliff-hangers” designed at the end of assessment sessions can encourage the participant to continue the simulation. Once a draft narrative is complete, it is important that key stakeholders and senior leaders have input into the simulation story and content details. This serves to ensure that contextual factors are included and represented accurately, and to continue to build buy-in and credibility to the

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simulation and the eventual assessment data produced from the solution. Stakeholder input and feedback is necessary to replicate the present and future organizational reality in the simulation.

Creating Simulation Stimuli

Once the simulation narrative and business challenges have been finalized, industrial-organizational psychologists and other business professionals can develop stimuli designed to give participants opportunities to elicit the leadership behaviors identified in the job analysis or competency model. Within the context of a fictitious organization, stimuli can include emails, voice mails, videos, role-play scripts, and briefing materials (e.g., financial reports, organizational charts, operational plans, talent-review documentation, marketing materials, press releases, Website articles, and HR reports). Effort should be made to ensure that these materials’ look, and feel is as realistic as any material found in the target organization.

Additional interviews and focus groups with senior leaders should take place to ensure: that the challenges, content and stimuli were aligned the competency model, culture and strategy of the organization; that the evaluation standards are finalized for various simulation components; and that content-validity evidence is collected for operational use.

When possible, a pilot session should be conducted before the simulation is administered to the broader-participant segment. The pilot should involve key stakeholders and representatives of the target-participant population. Evaluation criteria should be selected before any pilot activity. After completing the entire simulation, a structured debrief session should take place and any changes to process and simulation design can be determined based on pilot data and input.

A Note About Technology

The use of simulations has become more accessible due to the integration of technology into the design, delivery and scoring of simulations. As such, the use of technology can greatly enhance the incorporation of contextual factors within a simulation. Music and sound design can be leveraged to reflect emotional sentiment and support actors in their role-play performances. In addition, special effects like green-screens, communication technology (e.g., mobile phone-based stimulus, tablet use), engaging locations, and the creative use of the first-person perspective can be included. This allows for a highly engaging and believable environment that allows for a “wow” factor and a positive participant experience.

By incorporating insights derived from reviewing background materials, interviews and focus groups with stakeholders, and a collaborative development process, the simulation can capture unique situational similarities to the organization to heighten realism and ensure contextual relevance. The challenges embedded within the simulation can be designed to allow participants to elicit the leadership behaviors previously identified as necessary for the future execution of the company strategy. This is likely to lead to greater criterion and face validity (Levins, De Corte, & Westerveld, 2012). In addition to a positive participant experience, the assessment data, resulting conclusions and follow-up actions (e.g., feedback delivery, talent slating, development activities) will more likely be viewed as credible and impactful.

References


IPAC is the leading organization of applied HR selection and assessment professionals with members actively engaged in practice, research, and training to meet the needs of both public and private-sector organizations.

Visit [http://www.ipacweb.org/2019IPAC](http://www.ipacweb.org/2019IPAC) to view the Call for Proposals — open through February 3, 2019. Session formats include symposia, panel discussions, debates, roundtables, tutorials, paper presentations, and student posters. Please be sure to submit some of the great work you are doing!

Registration details will be announced soon. We look forward to seeing you at the 2019 IPAC Conference!

If you have questions, please contact the Conference Program Committee at program@ipacweb.org.

**MAX ASSESSMENTS IN MINNEAPOLIS**

**2019 IPAC Conference**
July 14 - 17, 2018
Embassy Suites Hotel
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James C. Johnson Student Paper Award

IPAC will offer the James C. Johnson Student Paper Award again to recognize the achievements of students in the field of personnel management.

Graduate, undergraduate, and former students are invited to submit research papers to be judged on the basis of their contribution to the field. The award winner will present the winning paper at the 2019 Annual Conference in Minneapolis, MN, July 14-17, 2019.

Papers that are submitted for presentation or as a poster at the annual conference can also be submitted for the award. Award submissions and conference presentations will be evaluated separately but the award winner will only present the paper once during the conference.

The winner will receive up to $600 in conference related travel expenses, free conference registration, a one-year membership in IPAC, and recognition in the IPAC newsletter. In addition, the University Department where the student’s research was completed will receive a plaque commemorating the student’s IPAC award achievement.

Papers must be theses, dissertations, or other student papers that describe original research conducted by the author while a student. Papers submitted must have been written within two years of the entry deadline, may not have been previously submitted to this competition, and must have been written as a student. Papers should address either substantive or methodological issues in areas such as the following:

• Personnel Selection
• Employment Tests
• Job Analysis
• Employee Performance Evaluation
• Assessment of Productivity or Organizational Effectiveness
• Assessment of Training Outcomes
• Other Related Topics

All submissions for the Student Paper Competition must be emailed no later than Monday, March 18, 2019 to Dr. Christopher Nye at nyechris@msu.edu. For submission details, please visit the IPAC Student Paper Competition webpage.

We look forward to receiving your submissions!
How to Build a Cognitive Ability Test with Reduced Mean Group Differences

Michael McDaniel, Ph.D., Work Skills First, Inc.

Editors Note: This is special invited feature for this issue. This paper was originally presented as a poster at the 33rd Annual Conference of the Society for Industrial and Organizational Psychology.

ABSTRACT
Guided by psychometric principles, one can build cognitive ability tests with lower mean group differences by using items with low $g$-saturation and by reducing the reliability of the test. Such a diminished $g$ test predicts $g$-related criteria worse than a $g$-test with high $g$-saturation and high reliability. Assertions about specific item types causing reduced mean differences are likely incorrect.

General cognitive ability ($g$) tests typically show large mean White-Black score differences. Given this bleak situation, some researchers have sought to develop measures of general cognitive ability that have high validity for predicting job performance but result in low mean group differences. We refer to such measures as "alternative $g$ tests."

The newest effort in alternative $g$ tests is the Siena Reasoning Test (Goldstein, 2008). Although no publications or a test manual could be located, the measure has been offered as a $g$ test that shows smaller mean racial differences than previous measures of $g$. Yusko, Goldstein, Oliver, and Hanges (2010) argued that the Siena Reasoning Test shows reduced mean racial differences because it seeks to reduce reliance on prior knowledge, reduce the use of language, and incorporates graphical stimuli. We are not aware of these authors providing any empirical support for their assertions concerning item characteristics and their influence on mean group differences.

Some research findings are contrary to the assertions concerning the Siena Reasoning Test. Other tests have also reduced the use of language. For example, the Davis-Eells games asked children to interpret events depicted in a series of cartoons. Jensen’s (1980) review concluded that the test was "remarkably unsuccessful" (p. 643) at reducing White-Black mean score differences. Like the Siena Reasoning Test, other efforts have used graphical items. The Raven’s Progressive Matrices test (Raven, Court & Raven, 1994) typically shows large White-Black mean differences even though the items do not rely on prior knowledge or language and are entirely graphical. These results are counter to the assertions about item characteristics in the Siena Reasoning Test being the cause of reductions in mean group differences.

In contrast to assertions about smaller mean group differences being due to special types of items, we argue that alternative $g$ tests show smaller mean racial differences than traditional psychometric $g$ tests because they have lower $g$ saturation. That is, the tests have lower mean group differences because they measure $g$ less well. We also argue that reliability of the test influences mean group differences. As an extreme example, a test score obtained by generating random numbers for each respondent will have a reliability of zero and no mean group differences, on average. Likewise, a cognitive ability test with a reliability of .70 will show lower mean group differences than a test with a reliability of .80, on average. Finally, $g$-tests with lower group differences should have lower predictive value for criteria that $g$ predicts such as job performance and educational attainment. Lacking a job performance measure in the collected data set, we offer that $g$ tests with lower magnitude mean group differences will have lower correlations with educational criteria. Thus, formal hypotheses are:

Hyp 1: Cognitive ability tests with lower $g$-saturation will have lower mean group differences than cognitive ability tests with higher $g$-saturation.
Hyp 2: Cognitive ability tests with lower reliability will have lower mean group differences than cognitive ability tests with higher reliability.
Hyp 3: Cognitive ability tests with lower $g$-saturation will have lower correlations with educational attainment than cognitive ability tests with higher $g$-saturation.

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Method

Sample
Data were collected using Amazon Mechanical Turk. After data screening for inattentive responders, the analysis file consisted of 927 respondents. Of these, 209 were Asian (non-Hispanic), 236 were Black (non-Hispanic) and 246 were White (non-Hispanic). The remaining 236 respondents were Hispanic.

Measures
We developed or obtained 194 items grouped into 12 scales. As recommended by Major, Johnson, and Bouchard (2011), we used more than seven indicators to derive a $g$ factor. Based on recommendations from Carroll (1993), we used a diverse set of item types. Also, following Ashton and Lee (2005) and Kvist and Gustafsson (2008), we used several types of fluid items because fluid items often have narrower bandwidth than measures of crystallized ability. Consistent with recommendations, we conducted a principal factor analysis (Major et al., 2011) of the 12 scales to derive a $g$ factor.

After deletion of items showing differential item functioning (DIF), 159 items remained. The $g$-loading of an item was defined as the correlation of the item with the $g$ factor. The items were divided into two sets based on the mean $g$-loading of the items. The set of items consisting of low-$g$ items (items with $g$-loading below the mean) contained 79 items and the set of items consisting of high-$g$ items (items with $g$-loading at or above the mean) consisted of 80 items.

One hundred low-$g$ 30-item tests were created. Each test was created by randomly selecting 30 items from the low-$g$ item set. One hundred low-$g$ 40-item scales were then created by drawing 40 items for each test randomly from the low-$g$ items set. The same process was used to create 100 30-item high-$g$ tests which draw their items from the high-$g$ item set and to create 100 40-item high-$g$ tests. Finally, we created one more low-$g$ test using all 79 items in the low-$g$ item set and one more high-$g$ test using all 80 items in the high-$g$ item set. For each of these 402 tests, we calculated White-minority mean score differences expressed as a standardized mean difference. We also calculated the internal consistency reliability (alpha) of each of the 402 tests and the correlation of each test with educational attainment.

Results
Table 1 shows the 12 scales and the number of items in each (after removal of DIF items). Table 2 presents scale intercorrelations. The GATB Object matching scale is best classified as perceptual speed. The GATB Three-dimensional space scale measures spatial ability. Two logic-based measurement scales were developed to be comparable in logical structure of the items except one used all real words and one used some fake words (see Figures 1 and 2). These two scales are best classified as fluid $g$ measures. Items with fake words have been offered as items less tied to culture and may be classified by some as alternative $g$ items. Given that the items in these scales were built to have the same logical structure, one can compare the scale scores to determine if the distinction between real versus fake words have an impact on mean group differences.

Each item in the sentence revision scale presented a sentence and the respondent decided whether the sentence was grammatically and stylistically the best; or, they picked from alternative rephrasings of the sentence (see Figure 3). This scale is best classified as a crystallized $g$ scale. With permission of Robert Sternberg, we include three scales from his Sternberg Triarchic Abilities Test (January 2001 version). One required respondents to infer the meaning of fake words from their context in a sentence (see Figure 4). The second presented respondents with new mathematical operators and the respondents attempted to solve mathematical arguments using mathematical operators (see Figure 5). The third is a traditional number series test. All three of the scales are likely best classified as fluid reasoning. Some might call the first two of the three scales alternative $g$ measures given the use of fake words or novel items. The next scale presented eight objects that vary by size, shape and shading (see Figure 6) and respondents answered questions such as “Which three objects match exactly in size and shape, but differ in shading?”. These items are best classified as fluid intelligence. Because of the graphics, some might classify these as alternative $g$ items. The next scale (see Figure 7) presented a table and asked respondents questions about the table contents. This scale might be classified as following directions. The last two scales provided information that compares four entities (e.g., cats, objects) and asks respondents questions. These items are best classified as fluid
intelligence. The first set presented the entities as pictures (see Figure 8) and the second set presented the entities in words (see Figure 9). The items in each scale were designed to have the same logical structure. One can compare the scale scores to determine if the distinction between graphics versus words have an impact on mean group differences.

For the 159 items, the mean item g-loading was .30. To examine the effect of g-loading on mean group differences, we correlated the g-loading of the item with the mean group differences of the item. The mean group differences are expressed as standardized mean differences in which a positive d indicates that the White group had a larger mean score on an item than the minority group. The correlation of g-loading with mean White-Asian d was -.01. For White-Black d, the correlation was .60, and the correlation with White-Hispanic d was .35. Thus, on average, as item g-loading increases so does the magnitude of White-minority item score differences.

One can use the item g-loading data to generate different g tests that vary in White-minority group differences. To demonstrate this, the 159 items were split at the mean of g-loading into a low-g group of 79 items and a high-g group of 80 items. From the low-g item group, we randomly selected 30 items and determined the mean White-minority differences, the internal consistency reliability (alpha) of the test, and the correlation of the test with educational attainment. We replicated this 30-item test construction process 100 times so that one can observe the range of possible group differences, reliabilities, and correlations with educational attainment for 30-item low-g scales. We repeated this process to obtain 100 40-item scales and their relevant statistics. Finally, we created a low-g scale with all 79 low-g items and a high-g scale with all 80 high-g items. Results are shown in Table 3 and support all three hypotheses.

We detail the results for the White-Asian analyses for the 30-item scales to explain the presented statistics. Mean score differences for Whites and Asians were expressed as standardized mean differences with a positive d indicating a score advantage for Whites and a negative d indicating a score advantage for Asians. Across the 100 low-g tests, each with 30 items, the mean White-Asian difference was 0.04. This is the mean d across 100 tests. For these 100 tests, the minimum d was -.09 and the maximum d was .16. The d of 0.04 indicates a very small score advantage for Whites over Asians. Now consider the 30 item scales derived from the high-g item set. The mean White-Asian d across the 100 tests, each with 30 items was -.01. This indicates a very small mean score advantage for Asians over Whites. Across the 100 tests, the minimum White-Asian d was -.09 and the maximum was .08. For both the low-g tests and the high g tests, we concluded that the White-Asian mean score differences were very small. Now consider the reliability statistics. The 30-item low-g tests have a mean reliability of .60, with a minimum reliability of .54 and a maximum reliability of .68. The 100 high-g 30-item tests had a mean reliability of .84. The minimum reliability was .83 and the maximum reliability was .85. The mean correlations between the low-g scales and educational attainment was .08 (minimum = .01, maximum = .14), but the high-g scale was correlated .13 (minimum = .09, maximum = .17).

The reliability differences between the low-g and the high-g tests is due to the correlation between item g-loading and item variance (r = .56). Low-g items have less variance (mean variance of 79 items = .14) than high-g items (mean variance of 80 items = .18). Internal consistency reliability is a function, in part, of the intercorrelation among the items. Because a correlation is an indicator of shared variance, items with smaller variance will have smaller correlations with each other than items with larger variance, on average. This harms the reliability of low-g tests. Thus, for a test drawn from low-g items to have the same reliability as a test drawn from high-g items, it will need to have more items than the high-g test. Whereas many scholars consider a reliability of .80 to be the minimum reliability of a test to be used for making decisions (i.e., hiring) that affect people’s lives, one should expect the need to make tests drawn from low g-item pools to be longer than high-g tests. As seen in the last section of the table, the reliability was .80 for the low-g test with 79 items. In contrast, the average reliability of the test formed from all 80 high-g items was .93.

Now consider the White-Black comparisons on 30-item tests. For low-g tests, the mean White-Black d was .45 compared to the d of .57 for the high-g tests. One could alter the criterion for low-g items such that the tests have an even lower g saturation than in this analysis. This would result in even lower mean White-Black differences, on average, but would require many more items to achieve a reliability of .80.

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For 30-item tests, the mean White-Hispanic $d$ is .18 for the low-$g$ tests and .25 for the high-$g$ tests. Consistent with other U.S. samples, mean group differences for Hispanics are smaller than group White-Black mean differences and larger than White-Asian mean differences.

Mean group difference results for the 40-item tests are not much different than the 30-item tests. White-Asian differences continue to be very small. White-Black and White-Hispanic differences increase slightly. This result is best attributed to the increased reliability of 40-item tests relative to the 30-item tests. Moving from 30 to 40 items improves the reliability of the low-$g$ tests from .60 to .66 and for the high-$g$ tests from .84 to .88. In the last section of Table 3, we show the low and high-$g$ tests composed of all available items. The magnitude of the group difference increase is due to the increase in reliability.

The correlation between the $g$ scales and educational attainment covaries with $g$-loading and scale reliability. For example, the correlation is .09 for the low-$g$ scale with 79 items and .14 for the high-$g$ scale with 80 items. Thus, the correlation is 36% lower in the low-$g$ scale than in the high-$g$ scale.

**Group difference comparisons for paired scales**

We compared mean group differences for the two logic-based measurement scales with the same logical structure—one with real words and one with some fake words (see Figures 1 and 2). We also compared mean group differences for the comparison item scales with the same logical structure (see Figures 8 and 9). We used the mean of scored items as the scale scores.

Results for the paired scales are shown in Table 4. The statistical significance of the $d$ between the two measures was determined by confidence interval overlap. The difference between the $d$ of the real word version and the fake word version of the logic-based measurement scales was not statistically significant. Thus, using fake words in a logic-based measurement scale did not reduce mean group differences. The difference between the $d$ for pictures (graphic comparison scale) versus words (written comparison scale) comparisons, was also not statistically significant. Thus, there appears to be no benefit in presenting items as pictures rather than words when comparing stimuli.

In summary, mean group differences in cognitive ability scales are driven by the $g$-saturation of the test and the reliability of the test. Reducing the $g$-saturation and reliability of a test also results in lower correlations with an external $g$-relevant criterion. Using fake words vs. real words had no significant effect on mean group differences in logic-based measurement scales. In the analysis of scales that compare stimuli using graphics vs. words, mean group differences were not significantly different. Thus, this study casts additional doubt on the assertions concerning item types offered to explain why the Siena Reasoning Test has reduced mean group differences. We offer the alternative explanation that the test has lower mean group differences simply because the test has lower $g$-saturation. Consistent with this alternative explanation is the finding of Yusko, Goldstein, Scherbaum, and Hanges (2012) that the Siena Reasoning Test is correlated only .42, on average, with traditional cognitive ability tests. In conclusion, anyone with a pool of cognitive ability items can easily build a test with lower than typical mean group differences by using items that measure $g$ less well. Such a test can be expected to have lower correlations with $g$-related criteria, such as job performance, than a test with high-$g$ saturation.

**References**


(continued on page 14)
Table 1 Items by Scale

<table>
<thead>
<tr>
<th>Scales</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>GATB Object matching</td>
<td>39</td>
</tr>
<tr>
<td>GATB Three-dimensional space</td>
<td>12</td>
</tr>
<tr>
<td>Logic-based measurement (real words)</td>
<td>20</td>
</tr>
<tr>
<td>Logic-based measurement (fake words)</td>
<td>21</td>
</tr>
<tr>
<td>Sentence revision</td>
<td>11</td>
</tr>
<tr>
<td>STAT: Fake words</td>
<td>6</td>
</tr>
<tr>
<td>STAT: Unusual mathematical operators</td>
<td>5</td>
</tr>
<tr>
<td>STAT: Number series</td>
<td>5</td>
</tr>
<tr>
<td>Size, shape &amp; shading</td>
<td>9</td>
</tr>
<tr>
<td>Table coding</td>
<td>6</td>
</tr>
<tr>
<td>Graphic comparison</td>
<td>13</td>
</tr>
<tr>
<td>Written comparison</td>
<td>12</td>
</tr>
</tbody>
</table>

Table 2 Scale Correlation Matrix

<table>
<thead>
<tr>
<th>Scales</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
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</thead>
<tbody>
<tr>
<td>1. GATB Object matching</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. GATB Three-dimensional space</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Logic-based measurement (real words)</td>
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<td>.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Logic-based measurement (fake words)</td>
<td></td>
<td>.21</td>
<td>.37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Sentence revision</td>
<td></td>
<td>.23</td>
<td>.32</td>
<td>.48</td>
<td>.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. STAT: Fake words</td>
<td></td>
<td>.27</td>
<td>.22</td>
<td>.39</td>
<td>.41</td>
<td>.48</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>7. STAT: Unusual mathematical operators</td>
<td></td>
<td>.37</td>
<td>.37</td>
<td>.47</td>
<td>.44</td>
<td>.39</td>
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<td>8. STAT: Number series</td>
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<td>.34</td>
<td>.20</td>
<td>.56</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>9. Size, shape &amp; shading</td>
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<td>.38</td>
<td>.42</td>
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<td>.38</td>
<td>.36</td>
<td>.39</td>
<td>.33</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Table coding</td>
<td></td>
<td>.26</td>
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<td>.38</td>
<td>.37</td>
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<td>.31</td>
<td>.26</td>
<td>.31</td>
<td></td>
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<td>11. Graphic comparison</td>
<td></td>
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<td>.32</td>
<td>.41</td>
<td>.37</td>
<td>.28</td>
<td>.30</td>
<td>.41</td>
<td>.33</td>
<td>.43</td>
<td>.23</td>
<td></td>
</tr>
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<td>12. Written comparison</td>
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<td>.34</td>
<td>.47</td>
<td>.44</td>
<td>.44</td>
<td>.40</td>
<td>.46</td>
<td>.39</td>
<td>.44</td>
<td>.34</td>
<td>.52</td>
</tr>
</tbody>
</table>

(continued on page 15)
**Table 3:** Demonstration of how item $g$-loading and test length can be used to manipulate mean group differences, reliability, and correlations with an external variable (educational attainment)

<table>
<thead>
<tr>
<th></th>
<th>Low $g$</th>
<th>High $g$</th>
<th>Low $g$ Reliability</th>
<th>High $g$ Reliability</th>
<th>Low $g$ Correlation with Education</th>
<th>High $g$ Correlation with Education</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>30 item Scales</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White - Asian $d$</td>
<td>0.04</td>
<td>-0.01</td>
<td>-0.09, 0.16</td>
<td>-0.09, 0.08</td>
<td>.60 (.54, .68)</td>
<td>.84 (.83, .85)</td>
</tr>
<tr>
<td>(Min Max)</td>
<td>(0.35, 0.58)</td>
<td>(0.52, 0.64)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White - Black $d$</td>
<td>0.45</td>
<td>0.57</td>
<td>.66 (.62, .70)</td>
<td>.88 (.86, .89)</td>
<td>.09 (.05, .14)</td>
<td>.13 (.09, .16)</td>
</tr>
<tr>
<td>(Min, Max)</td>
<td>(0.08, 0.28)</td>
<td>(0.17, 0.33)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White - Hispanic $d$</td>
<td>0.18</td>
<td>0.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Min, Max)</td>
<td>(0.08, 0.28)</td>
<td>(0.17, 0.33)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **40 items scales**  |         |          |                      |                       |                                   |                                    |
| White - Asian $d$    | 0.04    | 0.00     |                      |                       |                                   |                                    |
| (Min Max)            | (-0.06, 0.14) | (0.07, 0.07) |                      |                       |                                   |                                    |
| White - Black $d$    | 0.47    | 0.58     | .66 (.62, .70)       | .88 (.86, .89)        | .09 (.05, .14)                   | .13 (.09, .16)                    |
| (Min, Max)           | (0.37, 0.58) | (0.52, 0.64) |                      |                       |                                   |                                    |
| White - Hispanic $d$ | 0.19    | 0.26     |                      |                       |                                   |                                    |
| (Min, Max)           | (0.12, 0.29) | (0.20, 0.33) |                      |                       |                                   |                                    |

| All Items (79 items for Low $g$ and 80 items for High $g$) |         |          |                      |                       |                                   |                                    |
| White - Asian $d$    | 0.05    | -0.01    |                      |                       |                                   |                                    |
| White - Black $d$    | 0.52    | 0.60     |                      |                       |                                   |                                    |
| White - Hispanic $d$ | 0.21    | 0.27     |                      |                       |                                   |                                    |
### Table 4: Comparison of scales designed to have the same logical structure

<table>
<thead>
<tr>
<th></th>
<th>Logic-based measurement (real words)</th>
<th>Logic-based measurement (fake words)</th>
<th>$d$ difference significant?</th>
</tr>
</thead>
<tbody>
<tr>
<td>White-Asian $d$</td>
<td>0.11 (-0.08, 0.29)</td>
<td>0.03 (-0.15, 0.22)</td>
<td>No</td>
</tr>
<tr>
<td>(confidence interval)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White-Black $d$</td>
<td>0.37 (0.19, 0.55)</td>
<td>0.38 (0.20, 0.56)</td>
<td>No</td>
</tr>
<tr>
<td>(confidence interval)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White-Hispanic $d$</td>
<td>0.19 (0.01, 0.36)</td>
<td>0.11 (-0.07, 0.29)</td>
<td>No</td>
</tr>
<tr>
<td>(confidence interval)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Picture (Graphic Comparison)</td>
<td>Words (Written Comparison)</td>
<td>$d$ difference significant?</td>
</tr>
<tr>
<td>White-Asian $d$</td>
<td>0.06 (-0.12, 0.25)</td>
<td>-0.11 (-0.29, 0.08)</td>
<td>No</td>
</tr>
<tr>
<td>(confidence interval)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White-Black $d$</td>
<td>0.42 (0.24, 0.60)</td>
<td>0.34 (0.16, 0.52)</td>
<td>No</td>
</tr>
<tr>
<td>(confidence interval)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White-Hispanic $d$</td>
<td>0.29 (0.03, 0.39)</td>
<td>0.33 (0.15, 0.51)</td>
<td>No</td>
</tr>
<tr>
<td>(confidence interval)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 1. Instruction items from the logic-based measure scale using real words

**LBM Verbal Reasoning Instructions**

The following passage describes a set of facts. The passage is followed by several conclusions. Read the passage and then decide whether each conclusion is:

**True**, which means that the conclusion has to be true from the facts given; or

**False**, which means that the conclusion has to be false because it is contrary to the facts given;

Or, whether there is **Insufficient information to decide**, which means that there is insufficient information for you to determine whether the facts mean that the conclusion is true or is false.

Base your evaluation of the conclusions **SOLELY** on the information in the passage. **Do NOT** use any outside factual information to reach your conclusion. Work exclusively with the information provided.

Example:

John likes all dogs and most cats. Mary likes all cats and most dogs. John owns a dog and Mary owns a dog.

<table>
<thead>
<tr>
<th></th>
<th>True</th>
<th>False</th>
<th>Insufficient Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>John likes all dogs and most cats.</td>
<td>○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mary likes John’s dog.</td>
<td></td>
<td>○</td>
<td></td>
</tr>
<tr>
<td>John likes cats that are black.</td>
<td>○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mary dislikes all dogs.</td>
<td></td>
<td>○</td>
<td></td>
</tr>
</tbody>
</table>

(continued on page 17)
Explanation:
1) True. The first fact states that John likes all dogs. Thus, conclusion 1 is true.

2) Insufficient information to decide. The third fact indicates that John owns a dog. The second fact indicates that Mary likes most dogs. The facts do not indicate whether Mary likes John’s dog. Thus, there is insufficient information to determine whether conclusion 2 is true or false.

3) Insufficient information to decide. The first fact indicates that John likes most cats. One does not know if the cats that John likes include black cats. Thus, there is insufficient information to determine whether conclusion 2 is true or false.

4) False. The second fact indicates that Mary likes most dogs. Thus, the conclusion that Mary dislikes all dogs must be false.

Figure 2. Instruction items from the logic-based measure scale using fake words

LBM Verbal Reasoning With Unusual Words

Instructions

The following passage describes a set of facts. The passage contains some unusual words (e.g., dosf) that are presented in italics. You do not need to know the meaning of the words to answer the questions. The passage is followed by several conclusions. Read the passage and then decide whether each conclusion is:

True, which means that the conclusion has to be true from the facts given; or

False, which means that the conclusion has to be false because it is contrary to the facts given;

Or, whether there is Insufficient information to decide, which means that there is insufficient information for you to determine whether the facts mean that the conclusion is true or is false.

Base your evaluation of the conclusions SOLELY on the information in the passage. Do NOT use any outside factual information to reach your conclusion. Work exclusively with the information provided.

Example:

John likes all *doferts* and most *kabers*. Mary likes all *kabers* and most *doferts*. John owns a *dofert* and Mary owns a *dofert*.

<table>
<thead>
<tr>
<th>True</th>
<th>False</th>
<th>Insufficient Information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
**Explanation:**

1) **True.** The first fact states that John likes all doferts. Thus, conclusion 1 is true.

2) **Insufficient information to decide.** The third fact indicates that John owns a dofert. The second fact indicates that Mary likes most doferts. The facts do not indicate whether Mary likes John's dofert. Thus, there is insufficient information to determine whether conclusion 2 is true or false.

3) **Insufficient information to decide.** The first fact indicates that John likes most kabers. One does not know if the kabers that John likes include black kabers. Thus, there is insufficient information to determine whether conclusion 3 is true or false.

4) **False.** The second fact indicates that Mary likes most doferts. Thus, the conclusion that Mary dislikes all doferts must be false.

Figure 3. Instruction item from the sentence revision scale

**Sentence Revision Instructions**

Each item in this section presents one sentence. Part of the sentence or the entire sentence is underlined and may need to be revised. If the underlined section seems correct, choose the first response but read the other choices to make sure that the first response is the best choice. If the underlined section seems incorrect, choose the response from the remaining responses that makes the sentence correct. If none of the responses seem to make the sentence correct, pick the response that presents the sentence most clearly.

Example:

John red the book but like mostly the pictures.

- John red the book but like mostly the pictures
- John red the book but mostly liked the pictures
- John mostly liked the pictures but red the words also
- John read the book but mostly liked the pictures
- John, read the book, but mostly liked the pictures

The best sentence was the fourth option: John read the book but mostly liked the pictures. Pick that as the answer.
Figure 4. Instruction item from the Sternberg Triarchic Abilities Test (January 2001 version) scale that uses fake words.


**Unknown Words**

**Instructions**

Each passage contains an unknown word that is underlined. Read each passage and choose the word that has the same meaning as the unknown word as it is used in the question.

---

**Sample Question 1**

The *vip* was green, so I started to cross the street.

**Vip most likely means**

- car
- sign
- light
- tree

---

Figure 5. Instruction item from the Sternberg Triarchic Abilities Test (January 2001 version) scale that uses new mathematical operators.


### Mathematical Operations

**Instructions**

In each problem below, you will employ unusual mathematical operations in order to reach the solution. There are three unusual operations: graf, flix, and trup. First, read how the operations are defined. Then, decide what is the correct answer to the question.

There is a new mathematical operation called graf. It is defined as follows:

\[ x \text{ graf } y = \begin{cases} x + y, & \text{if } x < y \\ x - y, & \text{otherwise} \end{cases} \]

(\textit{the instructions then continue, defining the operators flix and trup})

---

**Sample Question A**

How much is 4 graf 7?

-3 3 11 -11
Figure 6. Instructions for the size, shape and shading items

**Size, Shape, and Shading Instructions**

The next type of question presents 8 boxes, labelled A through H. The boxes can differ from each other with respect to the shape inside the box, whether the shape is small or large, and the shading inside the box.

Below are boxes showing the four types of shading.

![Shading examples](image)

Below are the types of shapes. Note that some are large and some are small.

![Shape examples](image)

In the example question that follows, look at the boxes and answer the question about the boxes.

![Box examples](image)

Which three match exactly in shape and size, but differ in shading? Enter the letters of the three boxes below.

![Answer space](image)
Table Questions
Instructions

In this section, a table is presented and then you are asked questions based on information in the table. Look at the table below.

A band is being formed. The table below shows information on musicians who might join the band. The first column shows person codes assigned to each musician. The last three columns indicate whether the musician can play the piano, the guitar, and drums. Some musicians can play one instrument, some can play two instruments and some can play three instruments.

<table>
<thead>
<tr>
<th>Musician Code</th>
<th>Plays Piano</th>
<th>Plays Guitar</th>
<th>Plays Drums</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>B</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>C</td>
<td>Yes</td>
<td>No</td>
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</tr>
<tr>
<td>D</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>E</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>F</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>G</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>H</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Here is an example question:

Enter the musician code for every musician who can play the drums.

Which cat is the most friendly?
Muffin is a less friendly cat than Fuzzy.
Muffin is a more friendly cat than Felix.
Tiger is a less friendly cat than Felix.

Which cat is the most friendly?

- Muffin
- Tiger
- Felix
- Fuzzy
What’s Under Their CAPS? Assessing How Feds Think About the Future

John M. Ford
Felecia Harris McCray

U.S. Merit Systems Protection Board

This article presents preliminary results of ongoing Merit System Protection Board (MSPB) research using an assessment of Federal employees’ Confidence in Ability to Perform Successfully (CAPS). The CAPS measure is a composite of responses to questions about task and career planning. CAPS influences what engages employees, how they describe work tasks, what performance ratings they expect, and where they plan to go next in their careers. Understanding CAPS can help supervisors manage and develop employees more effectively.

Federal employees who have confidence in their ability to perform successfully are more likely to make plans and carry them out. Employees who believe there is little relationship between what they do and what happens afterward are less likely to set or work toward goals. This is supported by research on topics like self-efficacy, internal locus of control, and learned optimism which have been shown to be related to increased job performance, greater job satisfaction, more discretionary effort, and other positive work outcomes.

CAPS is worth considering because of what it tells us about the Federal workforce. There is a stereotype of Federal employees as sluggish and unmotivated—the very profile of a Low CAPS employee. To the extent that this stereotype is false, it provides a way to illustrate this and support those in the Federal workforce who are not only engaged, but personally oriented toward making a difference. To the extent that this stereotype is true—every workforce contains some sluggishly disengaged employees—low CAPS provides a way to understand and address the root of the problem. Research suggests strategies managers can use to do so.

MSPB’s Merit Principles Survey (MPS) 2016 included the CAPS index which was used to divide survey participants into low (9.4%), medium (38.4%), and high (52.2%) CAPS groups. These CAPS groups did not differ demographically. The negative skew suggests that Federal employees as a whole may be more positively future-oriented than often credited. Over half of the Federal workforce surveyed have high confidence in their ability to perform their work tasks effectively and make a difference to those they serve.

However, there were CAPS group differences in level of engagement, the factors that contribute most to engagement, performance evaluation, and career planning. High CAPS respondents were more engaged by mission accomplishment and skill development whereas low CAPS employees were engaged by recognition, pay, and organizational culture. The low CAPS group was more likely to claim their performance rating was lower than deserved, whereas the high CAPS group was more likely to indicate they had been evaluated correctly. When considering their next career step, high CAPS employees say they are more likely to pursue new challenges, increase technical responsibility, and seek leadership roles. Low CAPS employees are more likely to seek a limited or reduced scope of responsibility, and to say they intend to leave Federal employment.

High and low CAPS employees also think differently about their work tasks. High CAPS workers value the outcomes “Getting a high-quality result” and “Finding a better way.” Low CAPS workers prefer “Following the correct procedure.” When asked the importance of eight general abilities to performing their jobs,
high CAPS respondents were more likely than low CAPS respondents to indicate that all eight of the abilities were important. The high CAPS group most strongly emphasized Leadership, Creativity and Ambition.

MPS 2016 participants were asked to describe their most important work task. Responses were classified as pertaining to: 1) the cognitive process used (for example, “Make decisions”); 2) the other people involved (“Help our customers”); or 3) a standard being met (“Ensure the data is accurate”). High CAPS respondents were more likely to describe meeting standards and interacting with other people than were low CAPS respondents. These language differences may represent different priorities even when high and low CAPS employees have similar jobs.

These results suggest that CAPS is associated with productivity in the present and proactive planning for the future. How can low employee CAPS be increased? First, we should consider that low CAPS may result from employee reactions to a rigid or toxic work environment. In such cases, an organization-level intervention is appropriate. But when low CAPS is clearly an individual characteristic, employee development may help. Successful strategies include training that emphasizes situational awareness, assertiveness, positive social comparison, and recognizing links between actions and outcomes. Strategies for managing high and low CAPS employees should be included in the supervisory toolkit for managing the future Federal workforce.

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6. Oddly, there were too few who believed they received higher ratings than deserved for meaningful subgroup comparisons.
7. The other abilities were Cooperation, Influencing, Analysis, Organization and Adaptability.
Upcoming Conferences and Events

Feb 1 Human Resources Leadership Forum. Breakfast Meeting. Jeff Akin, Ernst & Young. (Registration and networking breakfast 8-8:30am, Program 8:30-10am, Networking 10-10:30am). “Business Disruptors & Evolving Organizations.” Vienna, VA. Website: www.hrleadershipforum.org

Feb 6-10 APA Division 13 Society of Consulting Psychology, Society of Psychologists in Management. Joint SPIM/SCP Conference. Fort Worth, TX. Website: www.spim.org

Feb 11 New York Metro Association of Applied Psychology. Details TBA. John C Scott. Website: www.metroapppsych.com


Mar 8-12 American Society for Public Administration. Annual Conference. Washington, DC. Website: www.aspanet.org

Mar 11-14 Institute for Corporate Productivity (i4cp). Annual Conference. Scottsdale, AZ. Website: www.i4cp.com


Apr 4-6 Society for Industrial and Organizational Psychology. Annual Conference & Workshops. National Harbor, MD. Website: www.siop.org


(continued on page 26)
Post-Truth Era: Multimodal Narratives to Democratize Evidence”. Toronto, Canada. Website: [www.aera.net](http://www.aera.net)

**Apr 7-10** HR People & Strategy. Annual Conference. “Courageous Leaders + Bold Culture”. Adventura, FL. Website: [www.hrps.org](http://www.hrps.org)

**Apr 11-15** International Society for Performance Improvement. Annual Conference. New Orleans, LA. Website: [www.ispi.org](http://www.ispi.org)

**May 2-4** American Statistical Association & SIAM Activity Group. International Conference. “SIAM International Conference on Data Mining (SDM19).” Website: [www.siam.org/conferences/CM/Main/sdm19](http://www.siam.org/conferences/CM/Main/sdm19)


**May 15** New York Metro Association of Applied Psychology. Speakers to be announced. New York, NY. Website: [www.metroapppsych.com](http://www.metroapppsych.com)


**May 23-26** Association for Psychological Science. Annual Convention. Washington, D.C. Website: [www.psychologicalscience.org/conventions/annual](http://www.psychologicalscience.org/conventions/annual)


**May 31-June 2** Canadian Psychological Association. Annual Convention. Halifax, Nova Scotia, Canada. Website: [www.cpa.ca](http://www.cpa.ca)


About the ACN

The ACN is the official newsletter of the International Personnel Assessment Council, an association of individuals actively engaged in or contributing to the professional, academic, and practical field of personnel research and assessment. It serves as a source of information about significant activities of the Council, a medium of dialogue and information exchange among members, a method for dissemination of research findings and a forum for the publication of letters and articles of general interest. The Council has approximately 300 members.

The next ACN will be published in April. The submission closing date for the April publication is March 16, 2019. Prospective authors are invited to send in their articles, research reports, reviews, reactions, discussion papers, conference reports, etc., pertaining to the field of personnel research and assessment. Topics for submission include, but are not limited to:

- Technical
- Practical – lessons learned, best practices
- Legal
- Technology/Tools
- Statistics/Measurement
- Book reviews

Articles and information for inclusion should be submitted directly to the Editor Pro-Tem via e-mail at John.Ford@mspb.gov. Articles will be accepted only by electronic submission (Word compatible). Submissions should be written according to the Publication Manual of the American Psychological Association, 6th edition. The editor has the prerogative to make minor changes (typographical/grammatical errors, format, etc.); substantial changes will be discussed with the author. Submissions more than 1,500 words should include an abstract of maximum 100 words, preferably with three keywords. If you have questions or need further information, please contact the editor.

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