Early Identification of Outstanding Performers

Herman Aguinis
Avram Tucker Distinguished Scholar and Professor of Management
George Washington Univ. School of Business
email: haguinis@email.gwu.edu information: http://hermanaguinis.com/

In many reference groups of interest to national security, only a few people are responsible for a disproportionate impact, either positive or negative. We use novel analytic techniques to identify those few individuals who will emerge from a reference group as a star performer. We expect to use similar methods to predict, at an early stage, other types of rare behaviors, such as self-radicalized individuals likely to create a disproportionate amount of damage. The techniques could be used to identify future leaders in politics, business, and other fields, offering the opportunity to track and shape the development of these individuals along favorable paths.

This research has been funded by the National Science Foundation and is reported in the following articles. (Full text is available at: http://hermanaguinis.com/pubs.html.)

- Aguinis, H., O'Boyle, E., Gonzalez-Mulé, E., & Joo, H. 2016. Cumulative advantage: Conductors and insulators of heavy-tailed productivity distributions and productivity stars. Personnel Psychology, 69: 3-66.
- Aguinis, H., & O'Boyle, E. 2014. Star performers in twenty-first-century organizations. Personnel Psychology, 67: 313-350.
- O'Boyle, E., & Aguinis, H. 2012. The best and the rest: Revisiting the norm of normality of individual performance. Personnel Psychology, 65: 79-119.

An excerpt from the first citation follows, p 57-8:

Cumulative advantage is a general process by which small initial differences compound to yield large differences over time. Moreover, cumulative advantage may unfold over long periods of time. For example, although market analysts such as Warren Buffett are synonymous with the word "star," it took many years of accumulated wealth and knowledge in the investment business before he possessed the star power to shift markets and bail out entire corporations such as

Goldman Sachs and Mars/Wrigley (Das, 2013). Within our own data, we see examples such as movie actors, directors, and producers who operate in an industry with a heavy-tailed productivity distribution. This is because, referring back to our own results, the movie business is high on monopolistic production, multiplicity of productivity, job autonomy, and job complexity—and has little ceiling to productivity. For example, Tom Hanks produces (i.e., funds) many of his own movies. He is able to do so because his past performance has generated personal wealth, and he has demonstrated an ability to do a job with high complexity quite well. His star power also allows him to work as much as he likes and dictate terms such as time spent on set and number of takes, thus allowing both more opportunities to act (multiplicity of performance and high productivity ceiling) and greater discretion in what movies he will act in and how the character will be portrayed (job autonomy). Note that the cumulative advantage that Tom Hanks has was not present until the last 10 to 15 years. For more than a decade, Tom Hanks worked primarily in television and made-for-TV movies.

We pause to note that although Warren Buffett and Tom Hanks are unquestionably at the far tail of the productivity distribution, our results show that they are not alone. The number of academics, collegiate and professional athletes, movie directors and producers, writers, musicians, politicians, retail and call center employees, electricians, and grocery checkers who can be classified as productivity stars far exceeds the frequency predicted using a Gaussian curve. But, our research design did not capture the process of cumulative advantage as it unfolded over time. However, what our data show is the end result of the cumulative advantage process: distributions in which a small minority of individuals accounts for a disproportionate amount of the output.