Where is ambition in factor models of personality?

Ashley Bell Jones [a,*], Ryne A. Sherman [a], Robert T. Hogan [b]

[a] Florida Atlantic University, United States
[b] Hogan Assessment Systems, United States

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ABSTRACT

Ambition is a personality construct with important implications for individual differences in educational and career success and status attainment. Although the best-known factor models of personality—the Five Factor Model (FFM) and the HEXACO—are widely regarded as comprehensive, they seem not to include ambition. The current study concerns whether ambition can be found in the HEXACO and FFM. Using data from the Eugene-Springfield Community Sample, our results indicate that ambition can be partially captured with a combination of HEXACO (or FFM) facets, especially Social Boldness and Liveliness (eXtraversion) and Diligence and Prudence (Conscientiousness), none of which, however, concern competitiveness, a key component of ambition. Overall, these findings suggest that important personality constructs are not found in conventional factor models of personality.

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Ambition:
1. Merriam Webster Dictionary (Ambition, 2015): *a desire to be successful, powerful, or famous.*
2. American Psychological Association Dictionary (2015): *no entry.*

Personality predicts individual differences in every behavioral outcome of consequence (Ozer & Benet-Martinez, 2006; Roberts, Kuncel, Shiner, Caspi, & Goldberg, 2007). Ambition is the personality characteristic most closely linked with career success (Hogan & Holland, 2003; Hogan & Chamorro-Premuzic, 2015; Judge & Kammeyer-Mueller, 2012). Ambitious people seem competitive, assertive, achievement oriented, confident, and upwardly mobile (Hansson, Hogan, Johnson, & Schroeder, 1983). They pursue enterprising vocations, compete in athletics and participate in extracurricular activities (Johnson, 1997), perform well in school (Driskell, Hogan, Salas, & Hoskin, 1994), and learn quickly (Burris, 1976). In addition, ambitious people are more successful in life: they achieve higher levels of education, work in more prestigious occupations, and have higher net incomes (Judge & Kammeyer-Mueller, 2012; Kern, Friedman, Martin, Reynolds, & Luong, 2009; Van der Heijde & Van der Heijden, 2006).

Despite the importance of ambition for career success, it has been largely ignored and even stigmatized by academic psychology (see Judge & Kammeyer-Mueller, 2012).[1] The psychoanalytic tradition seems to have started the process. According to Freud, ambitious people are necessarily neurotic and potentially father murderers (Freud & Freud, 2001). From the Jungian perspective, ambitious people suffer from a regressive restoration of the persona which blocks their potential for personal growth (Jung, 1953). According to Adler, ambition is a neurotic defense against low self-esteem (Lundin, 1989).

Ambition has also been stigmatized in popular culture—King (2013) provides an excellent historical review. For example, from the 17th through the 19th centuries, people outside the United States regarded Americans as dangerous because of their territorial ambitions (Eggert, 1974). Today, many people mistrust politicians because of what they may do once they have the power they so eagerly seek (Fiske, Milberg, Destefano, & Maffett, 1980). Ambition can also be a problem for incumbents in jobs that lack opportunities for advancement (Rybicki & Hogan, 1997) or if they have too much ambition in the first place (McCall & Lombardo, 1983).

In the same way, and perhaps for the same reasons, personality psychologists have ignored ambition. Two important structural models of personality – the Big 5 (McCrae & Costa, 1992; McCrae & John, 1992) and the Big 6 HEXACO (Ashton & Lee, 2007; Ashton, Lee, & De Vries, 2014; Lee & Ashton, 2008) – do not assess ambition as a construct at the facet or the factor level. Nonetheless, their advocates claim these models are comprehensive, by which they mean the models cover the assessment space defined by ambition. We evaluate this claim empirically by investigating whether ambition can be found in these two models of personality. Before doing so, however, we describe some of the consequences of ignoring ambition.

1. The consequences of ignoring ambition

If mainstream practitioners in any field are unwilling to provide something that people want, the people will find it elsewhere. Consider the Myers-Briggs Type Indicator (MBTI: Myers & McCauley, 1985).

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* Corresponding author at: Department of Psychology, Florida Atlantic University, 777 Glades Road, Boca Raton, FL 33431, United States.
E-mail address: ajone112@fau.edu (A.B. Jones).

[1] The exception here is Industrial / Organizational Psychology, which has historically focused on more applied outcomes.

Although academics consistently denounce the MBTI as psychometric fluff (e.g., Gardner & Martinko, 1996; McCrae & Costa, 1989; Pittenger, 1993), it is widely popular in business and modern culture. What accounts for the success of the MBTI? First, many people want to understand themselves and find the MBTI feedback interesting; second, when the MBTI first appeared on the commercial market, no academically credible alternatives were available. When needs exist, someone will fill them (for better or worse).

In the case of ambition, because academics have avoided the concept, applied researchers interested in human performance have created several parallel constructs. Consider for example "proactive personality" – a disposition to take proactive action to change one's environment (Bateman & Crant, 1993). Proactive people search for opportunities, take initiative to seize the opportunity, and persevere until they bring about change. Proactive behavior predicts transformational leadership, conscientiousness, extraversion, need for achievement and dominance, extracurricular and civic activities, and personal achievement. Proactive personality is related to subjective career outcomes such as career and job satisfaction (Erdogan & Bauer, 2005; Seibert, Crant, & Kraimer, 1999), and objective career outcomes (Byrne, Dik, & Chiaburu, 2008; Fuller & Marler, 2009). In terms of how it is defined and what it predicts, the concept of proactive personality closely resembles ambition.

Consider also the concept of grit – a persistent striving for long-term goals (Duckworth, Peterson, Matthews, & Kelly, 2007). People with high scores on a measure of grit set long term goals and persevere until they are attained, despite lack of encouragement. Grit predicts academic achievement and fewer career changes. Like gritty people, those with high scores on a measure of ambition also have long-term goals and pursue them until they are achieved (at which point they tend to find new goals). Our point is not to criticize the measures of proactive personality and grit. Rather we believe that these constructs (a) reflect the importance of ambition for predicting career success and (b) show that when there are important gaps in the way mainstream personality psychology predicts performance, other researchers will fill them. Ambition predicts too many important outcomes, for better or worse, to be ignored.

2. Ambition and factor models of personality

As noted earlier, modern personality psychology favors two structural models of personality: the Five Factor Model (FFM: McCrae & Costa, 1992) and the HEXACO (Ashton & Lee, 2009; Ashton et al., 2014). Both models include the concepts of Agreeableness, Conscientiousness, Emotional Stability (Neuroticism), Extraversion, and Openness to Experience; the HEXACO model adds Honesty-Humility. Both are regarded as higher-order models of personality (Ashton, Lee, Goldberg, & De Vries, 2009) and, with their component facets, they are considered to provide a comprehensive mapping of the personality domain.

Thus, it is important to ask whether these models can predict the same outcomes as a well validated measure of ambition. Some writers suggest that ambition is part of Extraversion (Hogan, 1986; Hogan & Hogan, 2007; Nettle, 2005). Others suggest that ambition is a combination of Conscientiousness and Extraversion (Roberts, Bogg, Walton, Chernyshenko, & Stark, 2004). The only empirical effort to answer this question—to our knowledge—examined data from the Terman study, and found that ambition was a combination of Emotional Stability, Extraversion, and Conscientiousness (Judge & Kammeyer-Mueller, 2012). Unfortunately, the nature of the Terman data required ambition to be assessed in an ad-hoc manner using a handful of reports from various sources over different time periods. Moreover, the personality measures in the Terman study were not those used by modern researchers, making it hard to evaluate the relationship between ambition and factor models of personality. The current study concerns whether the FFM and HEXACO models of personality adequately map ambition. The study uses data from the Eugene-Springfield Community Sample

(Goldberg, 2008) and goes beyond prior research by examining both factor and facet level correlates of ambition.

3. Method

3.1. Participants

Lewis R. Goldberg from the Oregon Research Institute recruited the Eugene-Springfield Community Sample (Goldberg, 2008) by mail from lists of homeowners who then completed questionnaires through the mail for pay. The full sample contains data from more than 1100 participants. Among these participants, 170 completed the Hogan Personality Inventory (HPI: Hogan & Hogan, 1995), which directly assesses ambition. Data provided by these 170 participants were used for all analyses conducted here (62 Male, 108 Female; 168 Caucasian, 1 Asian, 1 Other; age ranged from 29 to 72, $M = 49.13$, $SD = 9.35$). Among these participants, 152 also completed the NEO-PI-R (McCrae & Costa, 1992) and all 170 completed the HEXACO-PI (Lee & Ashton, 2004).

3.2. Measures

3.2.1. Ambition

We assessed ambition with the Ambition scale from the HPI. The Ambition scale predicts the degree to which people seem competitive, leader-like, confident, and upwardly mobile. The scale contains 28 true/false items organized in terms of six subscales: competitive, self-confident, accomplishment, leadership, identity, and no social anxiety. The descriptive statistics for Ambition are shown in Tables 1 and 2.

3.2.2. NEO-PI-R

The NEO-PI-R is a 240-item measure of normal personality measuring 30 facets, six for each of the five domains of personality, and the five domain scores. The descriptive statistics for the NEO-PI-R facets and their bivariate correlations with Ambition are shown in Table 1.

3.2.3. HEXACO-PI

The HEXACO-PI is a 192-item measure that consists of 6 factors (Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness) and 24 facets of personality. The descriptive statistics for the HEXACO facets and their bivariate correlations with Ambition are shown in Table 2.

4. Results

4.1. NEO-PI-R

Starting with the NEO-PI-R, we asked whether the NEO factors or facets, in any combination, could reproduce Ambition scores on the HPI. We first examined the associations between HPI Ambition and the NEO-PI-R at the factor level. Table 1 contains the bivariate associations, and Table 3a presents the results from a simultaneous multiple regression predicting ambition from the NEO factors. As the results in Table 3a indicate, the adjusted multiple R between the NEO factors and HPI Ambition is $R = 0.74$. Moreover, this association is largely driven by the NEO neuroticism, extraversion, and conscientiousness factors. This is consistent with the findings of Judge and Kammeyer-Mueller (2012) showing that ambition can be modeled with a combination of these three factors, with Neuroticism scores reversed.

Using facet level data, we dug deeper into these associations. The NEO extraversion factor, for example, includes warmth, gregariousness, assertiveness, activity, excitement seeking, and positive emotions as facets. Are these facets all equally relevant to ambition?

To answer the question, we used a genetic algorithm to build predictive models of ambition from the NEO facets using the 'GA' package (Scrucca, 2013) in R (R Core Team, 2015). Genetic algorithms use