

Conscientiousness as Human Capital: Perspectives from Research on Health and Life
Span Development

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Conscientiousness is a spectrum of constructs that describe individual differences in the propensity to be self-controlled, responsible to others, hardworking, orderly, and rule following (Roberts, Jackson, Fayard, Edmonds, & Meints, 2009). Many researchers are familiar with the term conscientiousness because of its inclusion in the Big Five Taxonomy of personality traits: Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness/Intellect (Goldberg, 1993). Conscientiousness is most often thought of as a personality trait, which reflects the relatively enduring, automatic patterns of thoughts, feelings, and behaviors that differentiate people from one another and which are elicited in trait evoking situations (Roberts & Jackson, 2008; Roberts, 2009).

Speaking in historical terms, traits associated with the domain of conscientiousness have some of the longest histories in psychology. Beginning with Freud's idea of the superego and the subsidiary concepts of the ego ideal and conscience, dispositions related to conscientiousness, such as achievement motivation and impulse control have been studied for over 100 years. In the interim between Freud and the Big Five, related constructs were studied under terms such as impulsivity, norm-favoring, social conformity, and even judging versus perceiving. Numerous alternative descriptors have been used for the domain of conscientiousness, such as constraint, work, and superego strength (see John, Nauman, & Soto, 2008 for a review).

Conscientiousness, like all other personality traits, is a hierarchically structured system. In terms of the hierarchy, traits can be ordered from broad to narrow. When conceptualized at the level of the broad conscientiousness domain, the trait eliciting contexts are multifaceted because they aggregate across the component parts of the broader conscientiousness spectrum. When narrow facets of conscientiousness are examined, the contextual aspects of the specific elements of the broader domain become apparent. Self-control necessitates the presence of something tempting. Industriousness implies the opportunity to work.

What then is the composition of the family of traits within the conscientiousness domain? A number of studies have examined personality descriptors and produced information on the lower-order structure of the conscientiousness domain (See Roberts et al, under review). Table 1 contains a list of relevant studies and the resulting facets of the domain of conscientiousness that were revealed in these studies. It should be said that not all of these studies set out to identify all of the lower-order facets of conscientiousness, therefore we see the aggregate set of dimensions identified as an overly inclusive start to the identification of the key aspects of the domain. The two most common domains are orderliness and industriousness. Orderliness encompasses the overarching tendency to be "prepared," which includes tendencies toward neatness, cleanliness, and planfulness on the positive side, or disorderliness, disorganization, and messiness on the negative end of the spectrum. Industriousness captures the tendencies to work hard, aspire to perfection, and persist in the face of challenge. Several studies have identified a separate persistence factor (de Raad & Peabody, 2005; MacCann, et al., 2009), which can be thought of as a construct that bridges conscientiousness and ambition, a facet of extraversion. Given that the facet of industriousness also correlates with components of extraversion (Roberts et al.,

2004), it might be appropriate to categorize persistence as a form of industriousness.

The next two most common domains identified are self-control and responsibility. Self-control represents the propensity to control impulses, or in the terminology of cognitive researchers, the ability to inhibit a pre-potent response. On the negative end of this facet one finds the tendency to be reckless, impulsive, and out of control. Similarly, responsibility was identified in most of the studies listed on Table 1. On the high end of the spectrum, responsibility reflects the tendency to follow through with promises to others, and follow rules that make social groups work more smoothly. On the low end, it reflects the tendency to be an unreliable partner in achievement settings and to break one's promises. Although identified as a conscientiousness facet in most of the listed studies, responsibility measures also tend to correlate quite highly with agreeableness; therefore, its placement may shift depending on the content of the measures used to tap this facet.

Most of the remaining facets of conscientiousness have been found at least twice. Conventionality reflects a tendency to endorse and uphold rules and conventions found in society. Decisiveness subsumes the propensity to act firmly and consistently. Formalness reflects a tendency to follow rules of decorum, such as keeping one's appearance neat and clean, holding doors for others, and shaking hands. Punctuality reflects the simple tendency to show up on time to previously scheduled activities. Originally thought to be too narrow to constitute a separate facet (e.g., Roberts et al., 2004), more recent work has pointed to an intriguing feature of punctuality. Of all of the potential facets of conscientiousness, punctuality appears to be most strongly correlated with all the remaining facets of conscientiousness (Jackson et al., 2010). That is to say, being punctual appears important when considering one's ability to plan (orderliness), work hard to get somewhere (industrious), avoid temptations that might lead one to be late (self-control), care enough to meet other people on time (responsibility), and understand the rules and conventions surrounding one's social group (conventionality).