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### Sub-dimensions of Conscientiousness

The Five-Factor Model of personality consists of agreeableness, conscientiousness, emotional adjustment, extroversion, and inquisitiveness. These constructs unlike other personality constructs are work-related, and have been identified as good predictors of employee effectiveness. Of the five constructs, conscientiousness has been shown to be a particularly valuable predictor of work place effectiveness.

Conscientiousness has been a widely studied construct as part of the Five-Factor Model of personality. Over the years, many researchers have studied the intricacies of conscientiousness and its various dimensions. To fully understand the sub-dimensions of conscientiousness, however, it is first important to define conscientiousness itself. As defined by The American Heritage Dictionary, to be conscientious is to be “guided by or in accordance with the dictates of conscience; principled; thorough and assiduous”. This definition is indicative of the sub-dimensions of conscientiousness that will be discussed throughout this review; the sub-dimensions of conscientiousness are complex and often multi-faceted.

Although conscientiousness is able to predict work place productivity, not all situations are created equal and not all research has supported this statement. It has been shown that it may be a better predictor in jobs that are autonomous. The purpose, therefore, of one study was to look at the moderating effect of the situation on conscientiousness rather than just the level of autonomy on the job (Robie & Ryan, 1999). The study predicted that not only would conscientiousness be positively related to task performance, but there would be a greater relation to task performance in a non-

monitored situation rather than a monitored situation. Results from this study did not support these hypotheses, in fact those high in conscientiousness worked better in monitored situations, and when not monitored, either conscientiousness did not have an effect, or it had a slight negative effect on performance. This is just one piece of the research, and as you will see, there is quite a bit of evidence that not only shows the benefits to measuring overall conscientiousness, but many different sub-dimensions that supplement these overall measures.

Given the potential benefits of measuring conscientiousness, researchers have been attempting to clearly define its constructs for many years. Among the researched sub-dimensions are dependability, responsibility, achievement striving, competence, self-discipline, organization, as well as many others (Lepine, Colquitt, & Erez, 2000; Moon, 2001; Paunonen & Jackson, 1996).

The debate over which constructs are sub-dimensions and how they should be treated in an overall measure of conscientiousness is illustrated by the research of Paunonen and Jackson (1996). This research says that there are three distinct facets of conscientiousness, and that they can not always be included in an overall conscientiousness measure. Through an analysis of personality adjectives, it appears that the three facets are: methodical and orderly, dependable and reliable, and ambitious and driven to succeed. Analyses showed that these facets, although share some of the same information, do not necessarily share enough to be included in an overall conscientiousness measure. Although there is clear evidence of these sub-dimensions of conscientiousness, throughout the literature there are discrepancies as to how these facets should be applied in various situations.

As mentioned earlier, one benefit to measuring conscientiousness is that it is particularly helpful in predicting productivity levels for current and potential employees. For example, when job applicants go through the selection process, a measure of conscientiousness may help determine who will be most productive on the job, which in turn leads to better selection.

More specifically, the research of Fallon et al. (2000) hypothesized that several individual constructs of conscientiousness would predict productivity better than an overall conscientiousness measure, much like the research of Paunonen and Jackson (1996). Using multiple measures of conscientiousness, it was found that hard work, orderliness, and self-control are the underlying constructs of conscientiousness. Despite smaller effect sizes for the individual subscales used, hard work and orderliness were still positively and significantly correlated to overall performance or productivity. This suggests that when an overall conscientiousness measure is not available, it is still possible to predict productivity using conscientiousness subscales.

Given that conscientiousness has been shown to predict productivity, it follows that it should be able to predict self-handicapping behaviors, which can hinder productivity. Self-handicapping as defined by Jones and Berglas (1978), is a strategy to protect or enhance one's self-esteem in situations in which self-esteem may be threatened. Additionally, it is a way to lessen the importance of one's performance as seen by others. It was suggested in Ross, Canada, and Rausch (2000), that several sub-dimensions of conscientiousness: competence, dutifulness, and self-discipline, are strongly related to self-handicapping. Of these sub-dimensions, self-discipline was found to be the most strongly related to self-handicapping from the administration of the NEO-

PI-R and a self-handicapping scale. It was also found that self-handicapping acted as a mediator for the negative relationship between neuroticism and conscientiousness. This simply means that with low levels of conscientiousness, which is demonstrated here by levels of self-discipline, competence, and dutifulness, neuroticism has a higher occurrence than when a person has a high level of conscientiousness.

Although the evidence just presented focuses on the sub-dimensions of competence and self-discipline, these are not the only sub-dimensions that create an effect in daily life. Another benefit to measuring conscientiousness, other than predicting productivity, was found by Lepine et al. (2000). This research suggests that people with low conscientiousness levels are able to make better decisions following an unexpected change that required adaptability. These findings make intuitive sense given that conscientiousness is often described in terms of cautiousness, orderliness, and reliability. More specifically, this effect was due to low scores on the sub-dimensions of dependability (orderliness, reliability, and cautiousness) rather than low scores on the sub-dimensions of volition (competence, achievement striving, and self-discipline). These findings were contradictory to the research hypothesis, but as mentioned, make intuitive sense. When a person is very cautious, they will not be able to quickly and effectively implement a new decision path, and therefore conscientiousness can hinder decision-making ability that requires adaptation.

Another vein of research suggests a different path in looking at the sub-dimensions of conscientiousness by suggesting that there is a self-centered (achievement striving) and other-centered (duty) construct to conscientiousness (Moon, 2001). To test the validity of this hypothesis, participants completed both an escalation task and

personality measures. The escalation task consisted of deciding whether or not to continue investing in a project that was described in writing and then answering questions related to this dilemma. Results from this exercise and the personality measures showed that participants high in the duty construct of conscientiousness had high concern for others even at their own expense, whereas, high levels of achievement striving resulted in acting in one's own self-interest. Therefore, achievement striving related positively to commitment level and duty related negatively to commitment level.

The evidence presented by Moon (2001) can lead to the belief that people will either look out for one another, or act in self-interest. The research of Neuman and Kickul (1998) provides contradictory evidence. In this study, it was found that conscientiousness is significantly related to the 5 types of organizational citizenship behaviors (altruism, civic virtue, conscientiousness, courtesy, and sportsmanship). This relationship was true both through direct and indirect covenantal relationships which are based on trust, mutuality, and shared values between the organization and employees. Given this information, it becomes clear that based on the situation, a person could potentially be highly duty oriented in one situation and high in achievement striving in another situation. This information shows that a person's conscientiousness direction can change based on the situation.

Another study by Ross, Rausch, and Canada (2003), looked at the five dimensions of the Five-Factor Model in relation to attitudes toward competition and achievement striving. Results showed that the achievement striving sub-dimension of conscientiousness not only has a positive and significant relationship to hypercompetitive attitudes, but also to personal development competition. Personal development

competition is the view that competition facilitates personal growth, and hypercompetition is the need to win at all costs. The sub-dimensions of competence and dutifulness also related positively and significantly to personal development competition and to cooperative, competitive strategy. Finally, self-discipline related positively and significantly to personal development competition. This evidence again shows that there are various sub-dimensions and depending on what you are measuring and the situation, you may find different facets that are important.

As you can see, the research on the sub-dimensions of conscientiousness is not able to provide a clear and distinct list of the facets. From the literature available, therefore, it appears that situational variables heighten the relevance of particular sub-dimensions and discards others, while other situational variables may do the complete opposite. Given the information that is currently available on conscientiousness, it would be nearly impossible to select only two or three sub-dimensions that are the most important, since the importance is relevant to the situation.

In order to maximize the benefits of measuring conscientiousness in the work place, future research will need to focus on determining the situations when an overall measure of conscientiousness is not appropriate, and how to determine what sub-dimensions should be measured in the absence of an overall measure. Due to the complexity of this type of research, however, it may not be possible for that information to be available in a succinct format, especially given the constantly changing workplace.

Although conscientiousness research has produced many usable findings, the field still needs to be pursued to maximize the benefits of conscientiousness measures in the work place.

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