Chapter XLVI
The Impact of Personality on Virtual Team Creativity and Quality

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INTRODUCTION

A series of experiments investigated creativity and quality of work-product solutions in virtual teams (Ocker, 2007, 2005; Ocker & Fjermestad, 1998; Ocker, Hiltz, & Johnson, 1998; Ocker, Hiltz, Turoff, & Fjermestad, 1996). Across experiments, small teams with about five graduate students interacted for approximately two weeks to determine the high-level requirements and design for a computerized post office (Goel, 1989; Olson, Olson, Storrosten, & Carter, 1993). The means of interaction was manipulated in these experiments such that teams interacted via one of the following treatments: (1) asynchronous computer-mediated communication (CMC), (2) synchronous CMC, (3) asynchronous CMC interspersed with face-to-face (FtF) meetings, or (4) a series of traditional FtF meetings without any electronic communication.

A repeated finding across experiments was that teams interacting only using asynchronous CMC—that is, teams without any FtF or synchronous communication—produced significantly more creative results than teams in the other treatments. Additionally, asynchronous virtual teams rated high in creativity were generally not the same teams that were judged high in terms of the quality of their deliverable.

To further examine these findings, this article presents results of an exploratory study designed to investigate the impact of individual personality facets on team outcomes. The objective of this study is to determine whether differences in team outcomes—in terms of the level of creativity versus the quality of the team deliverable—can be predicted by individual member personality. Specifically, two research questions are investigated:

Do individual member personalities predict virtual team creativity?

Do individual member personalities predict virtual team quality?

BACKGROUND

Personality traits, which are persistent across situations and time, distinguish an individual from others. In the domain of psychology, it is
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readily accepted that there are five broad factors or dimensions of personality traits (Costa & McCrae, 1992; Goldberg, 1993). An individual falls somewhere along the continuum of a given dimension.

Extraversion, openness, agreeableness, conscientiousness, and negative emotionalism (also known as neuroticism) comprise the five dimensions. Extraversion encompasses an individual’s tendency for sociability and interactivity as opposed to solitude and seclusion. Openness encompasses an individual’s tendency for abstract or original ideas versus tangible facts. Agreeableness encompasses an individual’s tendency for coop-