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Hawaiian Identity and Collectivism Predict the "Ideal Virtual Team Personality"

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Abstract

Previous studies have linked trust with virtual team performance. In turn, trust is predicted by high levels of extraversion, agreeableness, and conscientiousness. Previous research indicates that individuals high in these three traits are ideal virtual team members due to the higher levels of trust and consequent performance they display in virtual teams. In the present study we set out to determine predictors of this "ideal virtual team personality" in a multicultural setting, the University of Hawaii at Hilo. Our results show that the higher an individual is in Collectivism and Hawaiian Identity, the more likely they will possess the "ideal virtual team personality" profile that leads to better trust and performance in virtual teams.

Keywords: Virtual teams, trust, collectivism, Hawaiian identity, personality

1. Introduction

With the increasing availability of technology, it has become easier to make use of virtual teams. Virtual teams, composed of members who are geographically dispersed, interact primarily via information and telecommunications technologies. Virtual team members are expected to share information, brainstorm and negotiate alternative solutions to problems, and produce output which may be in the form of a report or a delivered product.

Previous studies have identified the importance of trust in virtual teams as well as characteristics that impact trust. Team members who score higher in extraversion, agreeableness, and conscientiousness report higher levels of trust in virtual teams and are more successful. In this study, we take a look at the impact of Hawaiian identity and the role of collectivism in a culture on Big Five personality dimensions that impact trust in virtual teams.

2. Literature Review

Trust has been identified as an important component in virtual team success [28] [51]. It is defined as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" [34]. A lack of trust exists when one party does not have faith in the competencies of another or questions the motivation of the other to take the promised action as seriously [50]. So, trust can be seen as a relationship between two or more individuals in which one perceives that the others are involved, are competent, will complete their fair share of the work, and will make an honest effort to meet commitments.

Trust is important in teams because it lowers transaction costs [52]. Those who do not trust fellow team members are more likely to monitor or double check one another's work to insure the quality of the team's output. This self-protective activity increases the amount of time and resources needed to complete a project. While trust is important in all teams, it is crucial in virtual teams where members generally do not meet face-to-face.

In virtual teams, trust becomes an important component in preventing psychological distance [42] and it increases confidence in relationships by promoting open information exchange [27]. Previous studies have suggested that trust in virtual teams is influenced by communication [19], level of conflict [15], and personality characteristics [20] of individual team members. While the human personality is complex, studies over the past 75 years have attempted to categorize the elements of personality.

2.1 The Big Five Personality Framework

McDougall [38] launched the systematic effort to organize a taxonomy of personality. He analyzed various personality dimensions and came up with five factors that he titled intellect, character, temperament,

disposition, and temper [38]. For the next 40 years, researchers continued efforts to expand on McDougall's work, finding that their data fit well with minor modification of the five dimension model [4, 6-9, 17, 23, 40, 48, 49]. Two of these studies stand out as important. First, Borgatta's [4] study identified five stable personality factors even when several different methods were used to gather the data. Second, Norman [40] formally labeled the dimensions as extraversion, emotional stability, agreeableness, conscientiousness, and culture and from that point forward, they have been referred to as "Norman's Big Five", the "Big Five", or simply the "Five Factor Model".

Since the 1980s, research has identified compelling evidence for the robustness of the five personality dimensions across different occupational categories [1, 2], theoretical frameworks [21], using different instruments [11-13, 35-37], and with different cultures [39].

2.2 The "Ideal Virtual Team Personality"

Three of the Big Five personality dimensions, extraversion and agreeableness and conscientiousness, have been identified as indicators of trust in virtual teams [20]. Extraversion refers to the quantity and intensity of an individual's interpersonal activity [5]. Individuals with high levels of extraversion are sociable, gregarious, assertive, talkative, energetic, and optimistic while individuals with low extraversion are more reserved, independent, and quiet [1]. Extraversion has been found to be positively correlated with levels of participation in computer-mediated teams [3, 43] even though it did not impact satisfaction with the group's process [44].

Agreeableness can be defined as the degree to which an individual is helpful, cooperative, good-natured, sympathetic and tolerant of others. Individuals low in agreeableness are characterized as egocentric, competitive, irritable, and skeptical of other's intentions [5].

Conscientiousness encompasses individual differences in planning, organizing, and executing tasks. Individuals high in conscientiousness are purposeful, determined, reliable, organized, and strong-willed. Individuals low in conscientiousness are more lackadaisical in working toward goals, careless, aimless, and unreliable. Conscientiousness is positively related to the careful and thorough accomplishing of tasks on the job [1]. Individuals high in conscientiousness have been found to have a strong sense of purpose, obligation and persistence which helped them to perform better than those who were low in conscientiousness. These individuals showed enhanced performance in vigilance tasks [32].

In summary, previous research has shown that trust impacts virtual team performance and that the personality dimensions of extraversion, agreeableness and conscientiousness impact trust in virtual teams [20].

2.3 Context of the Present Study

In the present study, we investigated predictors of the ideal virtual team personality traits, extraversion, agreeableness, and conscientiousness, among business students at the University of Hawaii. Hawai'i, which became the 50th state in 1959, is geographically separated from the Continental United States by thousands of miles, and is largely dependent on tourism. Policymakers are seeking ways to broaden Hawaii's economic base and improve employment prospects for its residents. Because of Hawaii's remote location, it is of paramount importance for Hawaii workers to function productively in a virtual environment in order to participate in the global economy.

Since initial contact with Europeans in the 18th century, Hawaii's population has been augmented by immigrants from other areas including China, Korea, Japan, Portugal, the Philippine Islands, and the United States, and there is no one majority racial or ethnic group [10]. While only 19.8% of Hawai'i residents claim descent from the original inhabitants of the Hawaiian islands [16], the Hawaiian culture is acknowledged as the host culture [33]. This culture holds distinct values, which have diffused and become part of the local culture in Hawaii, even among those without Hawaiian ancestry. These include family solidarity, industrious productivity, respect for and spiritual connection with the land, an appreciation for tradition, mindfulness of the effect of one's actions upon the community, and respect for the natural environment [18, 31].

Compared to the culture of the Continental United States, Hawaiian culture is more group-oriented. This is not surprising; high individualism / low collectivism is characteristic of the culture of the Continental United States. In Hofstede's classic study of dimensions of national culture, the United States ranked first in the world in level of individualism, with Australia a close second [25].

Individualism and collectivism are conceived as opposites on a single continuum. Those high in individualism conceive of the self as autonomous and independent, while those with a high level of collectivism define the self in relation to others. In general, individualists prioritize personal interests, and have a low level of concern for others. Collectivists prioritize group goals and sacrifice opportunities for personal gain to the good of the group [46, 47].

3. Hypotheses

We propose that the type of collectivism characteristic of Hawaiian culture is positively related to functioning productively in virtual teams.

> H1: We propose collectivism positively predicts the Ideal Virtual Team Member personality, which we operationalize as the average of extraversion, agreeableness, and conscientiousness.

> H2: We propose that group orientation has diffused with Hawaiian culture, and that identification with Hawaiian culture will therefore act as an indicator of suitability for group work, specifically virtual teams. Hawaiian Identity, the degree to which individuals identify with Hawaiian ethnic identity independent of ancestry, will predict the Ideal Virtual Team Member personality.

4. Methodology

4.1 Experimental Design

Participants in the study were college students enrolled in a business course at a small university in Hawaii. Participants were asked to complete a series of surveys designed to measure their level of extraversion, agreeableness, conscientiousness, and collectivism. Participants were also asked to identify their ethnic background.

4.2 Data Collection Instruments

A variety of measures have been used to measure the Big Five personality dimensions [14, 22, 29, 41, 45]. We selected a 44-item Likert-scale instrument to measure the Big Five personality dimensions [30], in order to balance validity with brevity. To assess collectivism, we used a previously validated measure of psychological collectivism [26]. The six-item Hawaiian Identity Scale is the extent to which individuals identified with Hawaiian ethnic identity, and is based on the Hawaiian Culture Scale ("HCS") [24].

4.3 Scale Validation

The Big Five personality scale is comprised of five subscales: extraversion ($\alpha = .832$); agreeableness ($\alpha = .816$); neuroticism ($\alpha = .805$); openness to experience ($\alpha = .805$); and conscientiousness ($\alpha = .761$). A composite score for extraversion, agreeableness, and conscientiousness was calculated by averaging scores for these three traits. The Hawaiian Identity scale had $\alpha = .850$, while the collectivism measure [26] had $\alpha = .879$.

5. Results

Linear regression results indicate that the Ideal Virtual Team Member personality is significantly and independently predicted by collectivism and Hawaiian Identity. Age, sex and grade point average were not predictors.

Table 1. Regression Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	2.110	.693		3.044	.003
	GPA	.078	.128	.072	.610	.544

Sex	-.012	.133	-.011	-.090	.929
age	-.007	.009	-.091	-.762	.449
Collectivism	.211	.104	.256	2.029	.047
Hawaiian Identity	.171	.081	.279	2.111	.039

6. Discussion and Conclusions

Previous studies have linked trust with virtual team performance. At the same time, trust in virtual teams has been linked with extraversion, agreeableness, and conscientiousness. In this study, we examined the relationship among between collectivism, Hawaiian Identity, and personality characteristics that impact trust in virtual teams. Our results show that the higher an individual is in Collectivism and Hawaiian Identity, the more likely they will possess the personality dimensions that lead to better trust and performance in virtual teams.

Acknowledgement

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