Is the Face of Space Changing? Comparing Personality of Space Professionals Across Time

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Disclosure Information

2015 Houston Human Factors & Ergonomics

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I have no financial relationships to disclose.

I will not discuss off-label use and/or investigational use in my presentation.
International Space University
2000-2008

Gender

- Males: 115 (40%)
- Females: 175 (60%)

PARTICIPANTS

- 2000: 12 males, 3 females
- 2001: 18 males, 36 females
- 2002: 19 males, 50 females
- 2003: 15 males, 26 females
- 2004: 31 males, 32 females
- 2005: 7 males, 12 females
- 2006: 8 males, 11 females
- 2008: 4 males, 6 females

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NEO-PI

- Neuroticism measuring characteristics like anxiety, hostility, depression, self-consciousness, impulsiveness and vulnerability.
- Extraversion measuring warmth, gregariousness, assertiveness, activity, excitement seeking, and positive emotions.
- Openness to Experience, which assesses fantasy, aesthetics, feelings, actions, ideas and values.
- And Agreeableness and Conscientiousness.
N=Neuroticism; E=Extraversion; O=Openness to Experience; A=Agreeableness; C=Conscientiousness
NEO-Personality Inventory
Year Groups

T scores: N=Neuroticism; E=Extraversion; O=Openness to Experience;
A=Agreeableness; C=Conscientiousness
Year Groups x NEO mean ranks

Neuroticism

Extraversion

Openness

Conscientiousness

Agreeableness
Year X Gender on Extraversion

T scores

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Year X Gender on Agreeableness

Mean t scores

T scores

Males

Females

2001 2002 2003 2004
2005 2006 2008

2001 2002 2003 2004
2005 2006 2008

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Year X Gender on Conscientiousness

![Bar chart showing mean t scores for males and females across different years.]

- **Year X Gender on Conscientiousness**

- **Bar chart**
  - X-axis: Years 2001 to 2008
  - Y-axis: Mean t scores
  - Bars for Males and Females
  - Different colors for each year

- **Legend**

- **Data**
  - T scores for different years and genders.
A battery of personality tests were administered:

- **Achievement Motivation** assessing
  - Mastery - the desire to be in challenging situations;
  - Work – the willingness to apply oneself diligently;
  - Competitiveness – the desire to best others (need to compete).

- **the Personal Characteristics Inventory**
  - Instrumentality - self-assertive, instrumental or agentic traits that focus on the self and autonomy (self-assertion, aggressive, not passive, competitive)
  - Expressivity - interpersonally oriented expressive traits (emotionally sensitive, helpful, devotional)
  - Negative Instrumentality - agentic attributes carried to an extreme and can be thought of as reflecting arrogance and hostility (Arrogant, boastful, egotistical)
  - Negative Expressivity - verbal passive-aggressive qualities (complains constantly, constantly criticizes).
  - Negative Communion - self-subordinating qualities and submissiveness and individual concern for others carried so far that concern for self suffers (gullible, weak-willed)
Achievement Orientation by Year Group

(means)

Mast=Mastery, Comp=Competitiveness; highest and lowest values are rated differently due to different number of items on each scale.
Interpersonal Orientation by Year Group (means)

I=Instrumentality; E=Expressiveness; -I=Neg. Instru.(Hostility); NegFVA=Verbal Aggressiveness; NEGFC=Neg. Communion
Year X Gender on Competitiveness

Means

- 2000
- 2001
- 2002
- 2003
- 2004
- 2005
- 2006
- 2008

Males

Females

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Summary

• So is the face of space changing?
  o Decrease in extraversion plus a rise in task orientation = a trend to more focused, pragmatic professionals.
  o The larger increases for females = more focused on performance and outcomes.
  o Decreases in agreeableness for males and increases in competitiveness for females = generational shifts in response to workplace pressures?
  o Space professionals are still highly educated, highly motivated and driven to succeed.

• Caveats
  o An international sample from 32 different countries.
  o Some years, small samples.
Acknowledgements

- International Space University

- The University of Texas Medical Branch at Galveston

Health
And the 290 ISU participants who wanted to know if they had ‘the right stuff’
Questions?