Principled Support: Value Dimensions and Innovation at the National Level

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Values: A definition

- Bit of confusion in the literature, so...
  - Human values: Principles that guide behaviour
- Variety of models
  - often very specific to the domain of interest
    - e.g., business, the environment.
Values and innovation

• Most research has focused on single-nation, private businesses or similar organisations
  • atheoretical: values identified were often tied closely to the type of business under study, and were never replicated
Values and innovation

• Two studies reported by Shane (1992, 1993), using multinational samples:
  • Hofstede’s (1980) data on four-dimensional model of cultural values
    • Individualism
    • Masculinity
  • Power Distance
  • Uncertainty Avoidance
• innovation measure: number of patents and trademarks issued
Values and innovation

- Two studies reported by Shane (1992, 1993):
  - Results
Values and innovation

- Rinne et al. (in press)
  - Hofstede’s data and a more comprehensive measure of national innovation (Global Innovation Index)
  - similar results regarding Power Distance and Individualism
Other models of values

- Other models have arisen recently that also provide data that are
  - multinational and
  - based on “global” human values (not domain-specific)

- Self-direction
- Universalism
- Benevolence
- Conformity
- Tradition
- Security
- Power
- Achievement
- Hedonism
- Stimulation
- Self-transcendence

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- Hedonism
- Stimulation
- Conservation
- Self-transcendence

Self-direction
Universalism
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Hedonism
Self-transcendence
Conservation
Self-enhancement

- Openness to change
- Self-direction
- Universalism
- Benevolence
- Conformity
- Tradition
- Security
- Power
- Achievement
- Hedonism
- Stimulation
- Self-enhancement
- Conservation
- Self-transcendence

Self-direction

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Tradition

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Power

Achievement

Hedonism

Stimulation

Self-enhancement

Openness to change

Self-transcendence

Conservation
Values – personality - innovation

• Steel et al. (in press) have shown

• and Olver and Mooradian (2003) have shown

• therefore, we would expect that

Openness to Experience  \[\uparrow\]  Innovation

Openness to Experience  \[\uparrow\]  Openness to Change

Conservation
Inglehart & Welzel (2005)

- Premise: Socioeconomic development leads to ‘human development’
  - increased autonomy and self-expression
- Analysis of the World Values Survey data showed two basic value dimensions
  - Traditional/Religious versus Rational/Secular
    - increasing autonomy
  - Survival versus Self-expression
Inglehart & Welzel (2005): National scores

(refer to: www.worldvaluessurvey.org)
Inglehart & Welzel (2005)

- Because inventiveness
  - requires independent thinking
  - and is integral to innovation
- we would expect that a culture that places higher value on autonomy and self-expression would show higher levels of innovation
  - therefore...

![Diagram showing the relationship between Secular/Rational, Self-Expression, and Innovation](image)
The data

• Data for Openness to Change and Conservation were taken from Ralston (in press)
  • SVS value dimension scores for 50 countries
  • “members of the business community”

• Data for Inglehart and Welzel’s dimensions can be found on the World Values Survey website
  • fifth “wave” of the WVS (2005)
  • dimension data for 47 countries
  • mainly randomly selected from the general population
The data

• Global Innovation Index (GII)(2010) scores
  • GII total score represents a combination of seven “pillars”
    • Institutions
    • Human Capacity
    • ICT and Uptake of Infrastructure
    • Market Sophistication
  • data for 133 countries
    • scores based on document analysis and ratings from business experts
The data

• Merged the data sets into two matrices
  • GII and Schwartz value dimensions
    • complete data for 47 countries
      • under-represented in Africa (2 countries)
  • GII and Inglehart and Welzel value dimensions
    • complete data for 46 countries
      • under-represented in Africa (5 countries)
Analyses

• Two multiple linear regressions
  • Openness to Change + Conservation = GII score
  • Secular/Rational + Self-expression = GII score
Results

• Both regression analyses were significant
  • for the SVS dimensions:
    • adjusted $R^2 = .244$, $F(2,44)=8.40$, $p<.001$
    • but only Conservation predicted the GII score
      • $\beta = -.551$, $t = -3.78$, $p<.001$
  • for the I&W dimensions:
    • adjusted $R^2 = .697$, $F(2,43)=52.74$, $p<.001$ [note error]
    • both dimensions were reliably related to the GII score
      • TRvRS: $\beta = .609$, $t=7.34$, $p<.001$
      • SvSe: $\beta = .499$, $t=6.02$, $p<.001$
Discussion

• No relationship for Openness to Change
  • perhaps a culture can be open to change without necessarily creating change...

• Conservation may act like a brake on innovation
  • or a complete veto
Discussion

• Similarly, tradition and conformity also showed up in the I & W analysis
  • it would seem that encouraging autonomy is beneficial for innovation
    • as is self-expression

• However, the model is based on socioeconomic development, so we may be looking at a circular effect