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# Comparison of Cross-Cultural Learning Styles in Professional Engineering Education

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# The New Sociology of Professional Engineering Education



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"On Facebook, 273 people know I'm a dog.  
The rest can only see my limited profile."



# The New Sociology of Professional Engineering Education

There is a new sociology being born in the world of work as organizations find themselves increasingly in global economic enterprises that are cross-cultural in nature and that interact in virtual, technology-driven environments.

Organizations that seek to be competitive in the global marketplace must factor an ability to succeed in these environments into their core capabilities.

# Why Does This Really Matter to Professional Engineering?

- Do we know how to work effectively in these settings?
- Are companies and universities preparing people to work in these environments?
- Are faculty/teaching assistants and staff being supported in addressing the reality of today's students?



# Why is this Important?

**“It is estimated that over 70% of international joint ventures fail due to cultural misunderstanding. This costs global firms billions of dollars annually.”**

Center for Intercultural Communications,  
University of British Columbia

**A 2012 study of employees of multi-nationals who work virtually indicates less than 16% had any preparation**  
RW3 CultureWizard

**Today, non-Hispanic whites make up about 68% of the United States population. This is expected to fall to 46% by 2050**

2008 US Census Bureau Report

**“By 2020, 80% of the world’s consumer base will reside outside US boundaries**

US Business Review, April-May 2009

**Toyota's Culture Faulted in Recall Crisis**  
**Experts say automaker must loosen control, trust non-Japanese execs**

Auto News, March 2010 Issue

**Enrollment Of Chinese Students Has Soared At Michigan Universities.**

Detroit Free Press March 2012

# Our Roadmap Today

- A story to start with
- What lies beneath
- Why do we do what we do
- Four different cultures
- Case Studies on adaptation

Let's Begin with a Story.....





# The Reality

- Gradual increase in international students especially in distributed learning
- International partnerships among universities
- Internationalization of face-to-face professional education
- Corporate globalization

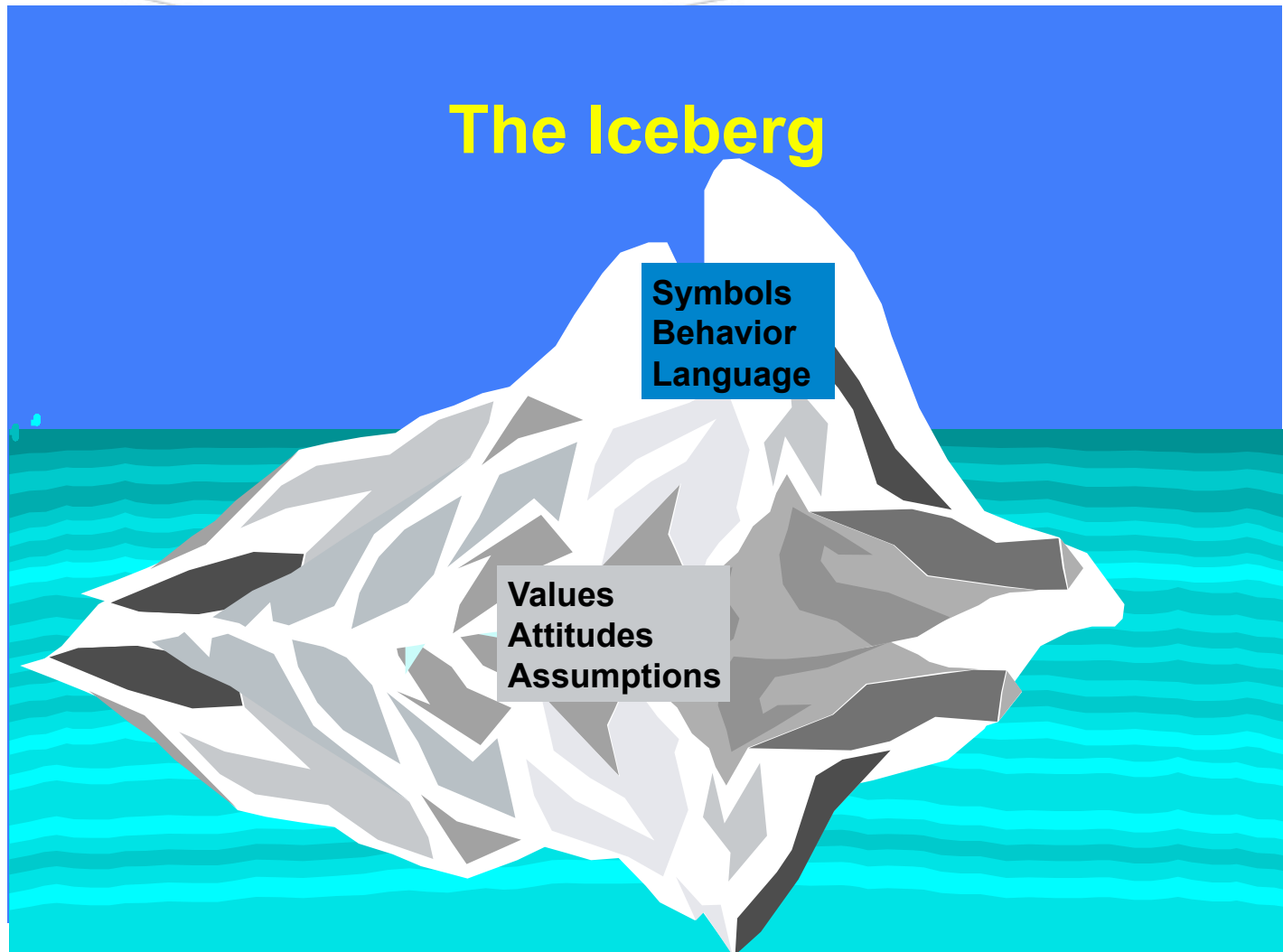
# Disclaimer

The cultural guidelines that we discuss here are merely generalizations, as learning cultures can vary depending on age, gender, and ethnicity.

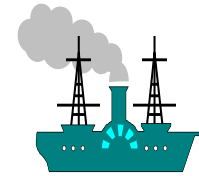
Let's get back to our story.

Why we do what we do

# Looking Beyond the Surface of the Story



# Iceberg Theory

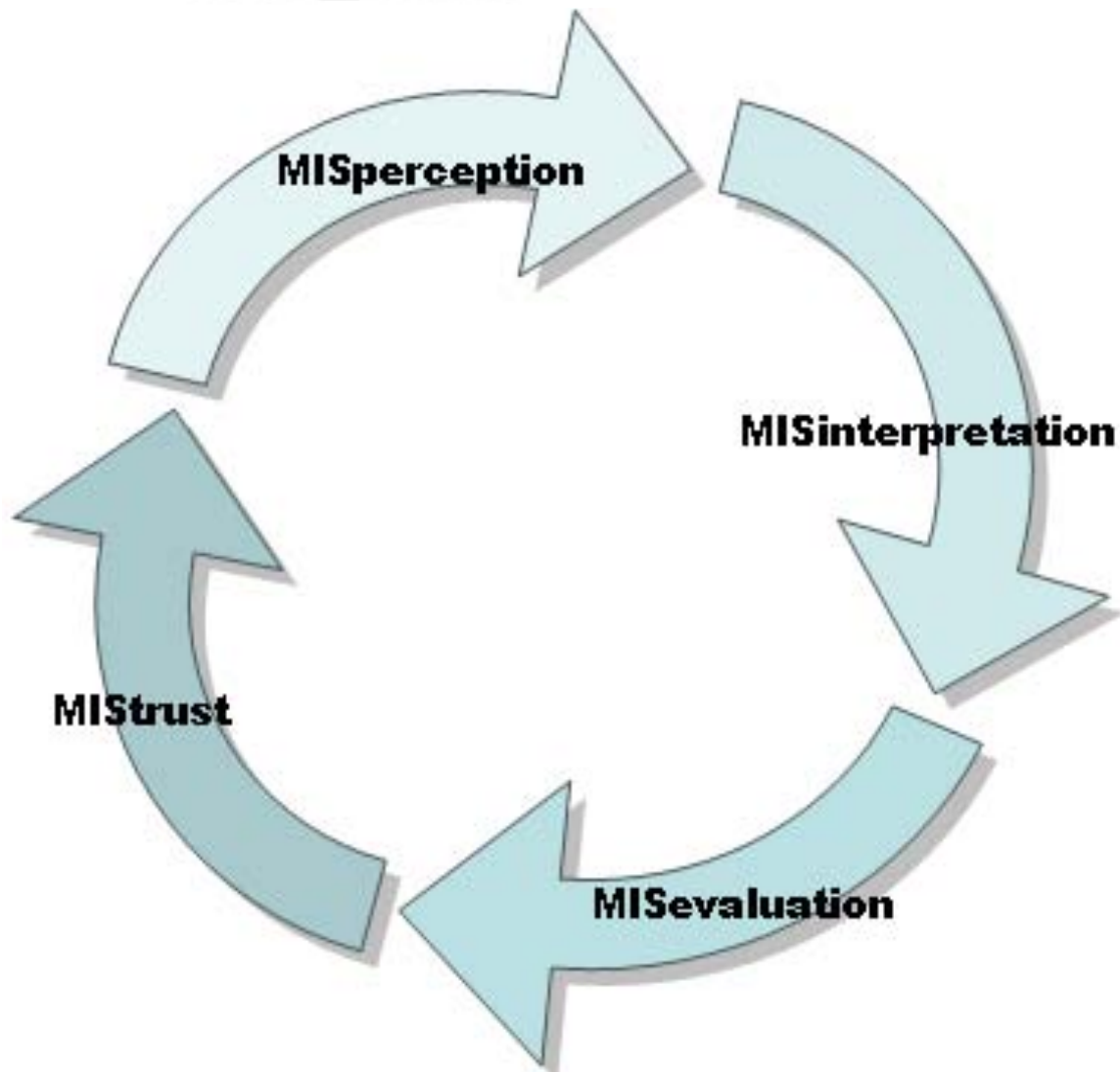


**B = Behavior (what you do and say)**

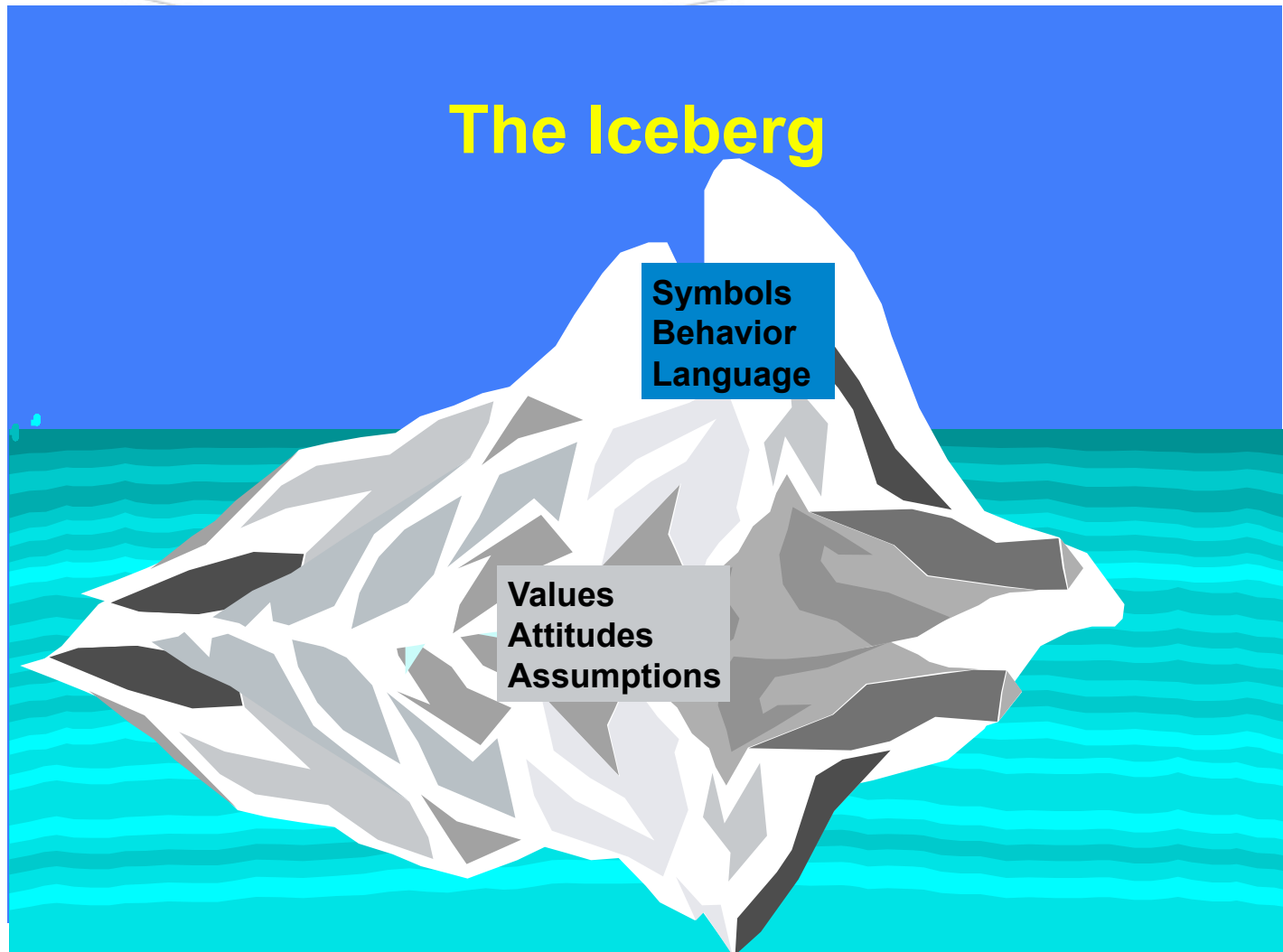
**V = Values (beliefs about what is right to do and say)**



# The “MIS” Factor



# Looking Beyond the Surface of the Story



# GLOBE Cultural Clusters

Global Leadership and Organizational Behavior Effectiveness

- Defines generalized and regional cultural norms
- 10 Cultural groupings
- 62 Societies
- Offers a framework for understanding different regions



# Major Cultural Orientations: A Framework for Understanding Difference



“The voyage of discovery lies not  
in finding new landscapes, but in  
having new eyes.”

Marcel Proust

# How / Why Asians and Westerners Think Differently

## ANCIENT GREEKS

- We are individual agents in charge of our own lives
- Strong sense of individual identity
- Control of others and the environment
- Free exercise of individual rights
- Debate is a sport; highly prized
- World is a line
- Strong interest in categorizing, naming, classifying; see objects in isolation

## ANCIENT CHINESE

- Harmony is more important than individuality
- Individual not nearly as important as the collectives they are part of: family, clan, village
- Self-control to minimize friction
- Satisfaction in a harmonious social network
- Debate and confrontation discouraged
- World is a circle
- Context is important; how do objects fit into the whole



# Question

How would this play out in a professional engineering education setting?

# A World of Difference

**High Context**

**Mexico**



**Japan, Indonesia**

**The Middle East**

**Philippines**

**Africa (all)**

**China**

**Brazil**

**Malaysia**

**India**

**Singapore**

**Spain**

**Greece**

**Italy**

**France**

**Costa Rica**

**England**

**Austria**

**Australia**

**Scandinavia**

**USA**

**Israel**

**Germany**

**Swiss Germans**



**The Netherlands**

**Low Context**



# Major Cultural Orientations

## Effective Communication

Impact on....	High Context	Low Context
Concept of “effective” communication	<ul style="list-style-type: none"><li>•Communication should be indirect</li><li>•Key messages should be implicit</li><li>•We start with relationships (leading to effective tasks)</li><li>•Spoken agreements based on personal trust and loyalty</li><li>•Work life fusion (fluid interchange between social and business)</li></ul>	<ul style="list-style-type: none"><li>•Communication should be direct</li><li>•Key messages should be explicit</li><li>•We focus on task (leading to good relationships)</li><li>•Written agreements based on clarity and specificity</li><li>•Work/life balance (business clearly separate from personal communication)</li></ul>
Mutual Perceptions	How do you imagine people who value a high context approach would evaluate colleagues with a low context preference?	How do you imagine people who value a low context approach would evaluate colleagues with a high context preference?

# Question

How would this play out in a professional engineering education setting?



# Major Cultural Orientations

## Boss Subordinate Relationships

Impact on....	High Power Distance	Low Power Distance
Boss / Subordinate Relationships	<ul style="list-style-type: none"><li>•Healthy to be aware of your place in the organizational hierarchy. Respect for position key to stability. Deference to superiors is appropriate.</li></ul>	<ul style="list-style-type: none"><li>•A “superior” does not have automatic right to more power and privileges. Organizational stability comes more from mutually agreed goals than personal authority.</li></ul>
Boss/ Subordinate communications style	<ul style="list-style-type: none"><li>•When communicating with superiors, titles should be used and status deferred to show respect</li><li>•Avoid upward feedback -especially negative or public</li><li>•Centralization is popular</li></ul>	<ul style="list-style-type: none"><li>•No special deference needed when communicating with superiors. Few titles and references to status.</li><li>•Expect constructive disagreement</li><li>•Centralization is unpopular</li></ul>
Mutual Perceptions	How do you imagine people with a high power distance orientation would evaluate colleagues with a low power distance orientation ?	How do you imagine people with a low power distance orientation would evaluate colleagues with a high power distance orientation?





# 6 Major Cultural Orientations

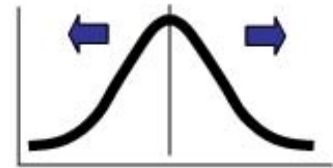
## The Individual and the Group

Impact on....	Collectivism	Individualism
The relative priority of the individual and the group	<ul style="list-style-type: none"><li>• Cohesiveness and harmony of the group make a company effective. Individual freedom may need to be reduced to improve quality of life for all</li><li>• Do not distinguish your own opinions and priorities from others in the group</li><li>• Conflict must be avoided as it disturbs harmony</li><li>• Employer-employee relationship is like a family tie</li></ul>	<ul style="list-style-type: none"><li>• The skill and motivation of the individual make a company effective. Individuals need freedom to develop themselves.</li><li>• Distinguish own priorities and opinions from others in the group</li><li>• Accept that some conflict is inevitable. Channel it for good</li><li>• Employer-employee relationship is a contract</li></ul>
Mutual Perceptions	How do you imagine people who prefer a Collectivist orientation would evaluate colleagues with an Individualist orientation?	How do you imagine people who prefer an Individualist orientation would evaluate colleagues with a Collectivist orientation?

# Generalizing vs. Stereotyping

## Generalization:

*A statement about a tendency of a majority of people in a cultural group to hold certain values and beliefs, and to engage in certain patterns of behavior.*



## Stereotyping:

*The application of a generalization to every person in a cultural group or generalizing from only a few people in a group to all.*



# North America US & Canada



<http://skibalaw.com/wp-content/uploads/2011/07/gorgeous-sedona-arizona-sunset.jpg>

# North America

## US & Canada

- Team-Oriented
- Participative
- Experience
- Concepts
- Reflection/Observation
- Experimentation



# Kolb/McCarthy Learning Style

## Myers-Briggs Personality Type

- Faculty – Introverted (54% v 46%)
- Students – Extroverted (70% v 30%)
- Faculty – Intuitive (64% v 36%)
- Students – Sensing (70% v 30%)



# China



[http://www.scribesoftheorient.com/blog/wp-content/uploads/2012/11/Shanghai\\_Skyline\\_2009.jpg](http://www.scribesoftheorient.com/blog/wp-content/uploads/2012/11/Shanghai_Skyline_2009.jpg)

# Five Aspects of Chinese Communication

- *Hanxu* – Implicit
- *Tinghua* – Listening-Centered
- *Keqi* – Polite
- *Zijiren* – Insider-Communication
- *Mianzi* – Face-Directed Communication

# Cross Cultural Communication

## North America

- Task-oriented
- Linear thinking
- Low-context
- Direct communication

## Eastern Asia -- China

- Relationship-oriented
- Systemic-thinking
- High-context
- Indirect communication

# A Collaboration Case Study



# Chinese Learning Environment

- Group Harmony
- Keeping Face
- Less Interaction
- Avoidance of Direct Inquiries
- Less Assertiveness

# Lessons Learned from KU Classes

- Communication open with insiders, but reserved with outsiders
- Interaction opens up with time and familiarity
- Instructors seen as authority figures
- Plan for less interaction and fewer questions

# Western Europe

High Context

Japan, Indonesia

Mexico ▲

The Middle East  
Philippines

Africa (all)  
China

Brazil

Malaysia

India  
Singapore  
**Greece**  
**France**  
**Austria**

**Spain**  
**Italy**  
Costa Rica  
**England**

Australia

**Scandinavia**

USA

Israel

**Germany**

**Swiss Germans** ▼

**The Netherlands**

Low Context



# Students from Four Countries in a Professional Engineering class



What did we learn  
in this class?  
What experiences do  
you have?





# India

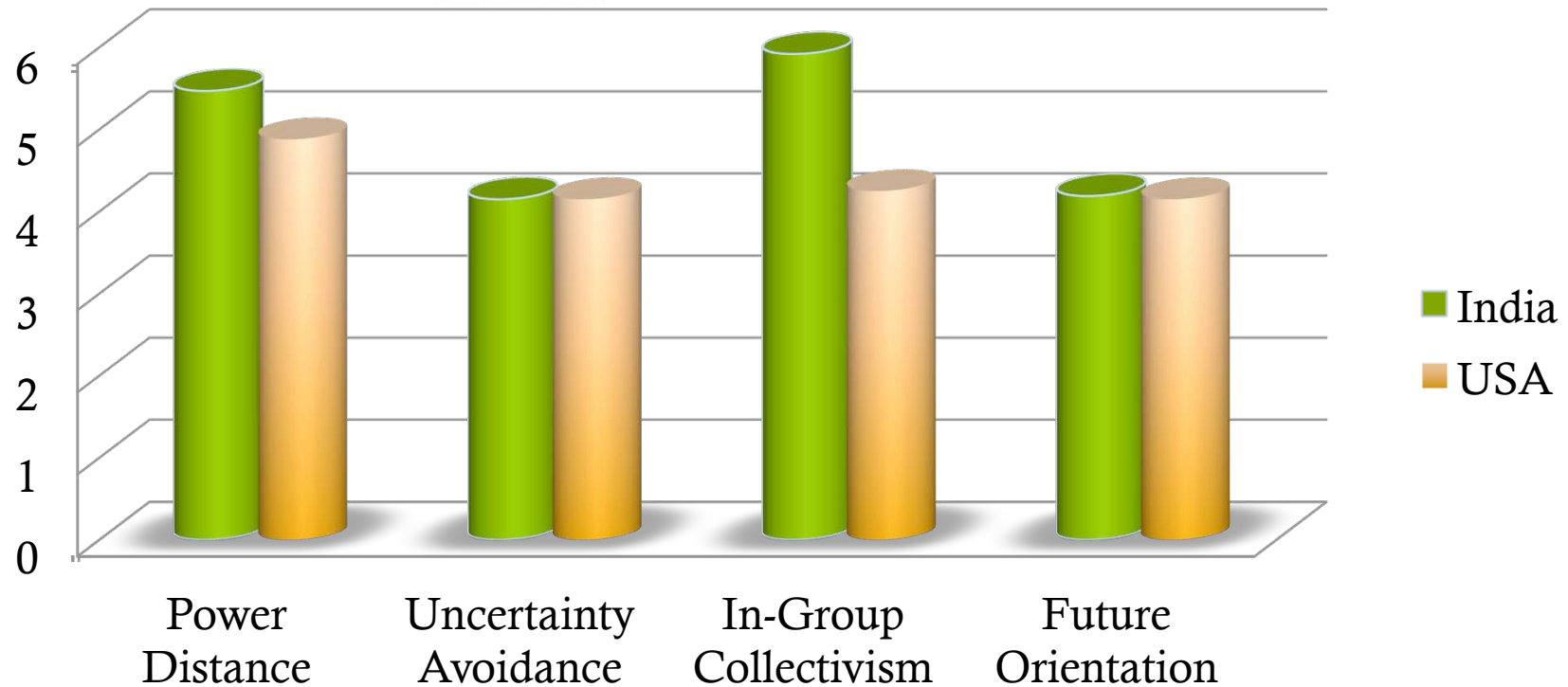


<http://qshine.org/2013/media/carousel-images/Bahais-Monument-The-Lotus-Temple-Delhi.jpg>

# GLOBE Determinations of India

- Team-Oriented – High
- Participative – Average
- Individualism – Average
- Autonomous – Below Average

# India's Four Aspects of Culture



Source: Chhokar, J., Brodbeck, F., & House, R (Eds) (2007). Culture and Leadership Across the World. The GLOBE book of In-depth studies of 25 societies. Lawrence Erlbaum Associates. Mahwah, New Jersey.



# India's Four Aspects of Culture

- Power Distance
- Uncertainty Avoidance
- In-Group Collectivism
- Future Orientation

# Closing Thoughts on India

- Training and development seen as a “finishing school” upon initial hiring.
- Training classrooms should have structure and rules, as well as a subject matter experts
- Use synchronous e-learning methods.



# It's about them: Who and Where



THANK YOU!

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