Human Boundary Conditions:
Cultural Issues in Software Testing

Patricia Ensworth
Harborlight Management Services

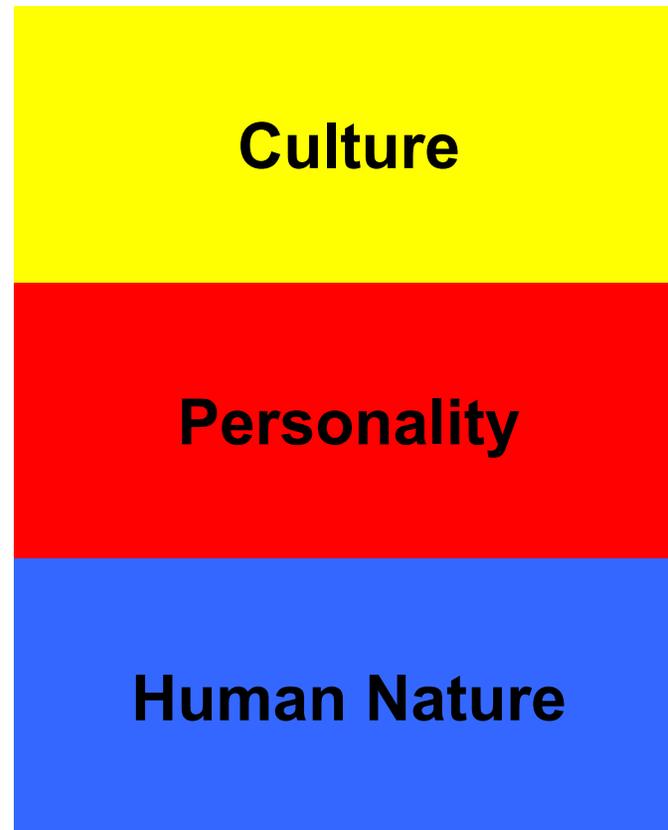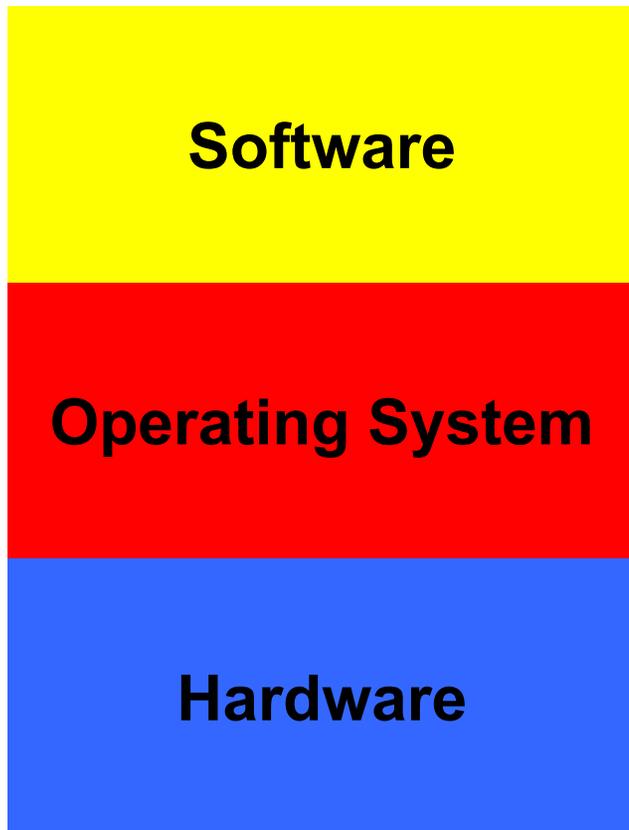# Agenda

- Concepts of culture

- Behavioral techniques to improve cross-cultural communication

- Action plan for teams and organizations

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Concepts of Culture

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Software of the Mind

EuroSTAR 2004

Software	Culture
Operating System	Personality
Hardware	Human Nature

Visible and Invisible

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Cultural Dimensions of a Person

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Stereotype Curve

My assumptions

Your assumptions

Reality

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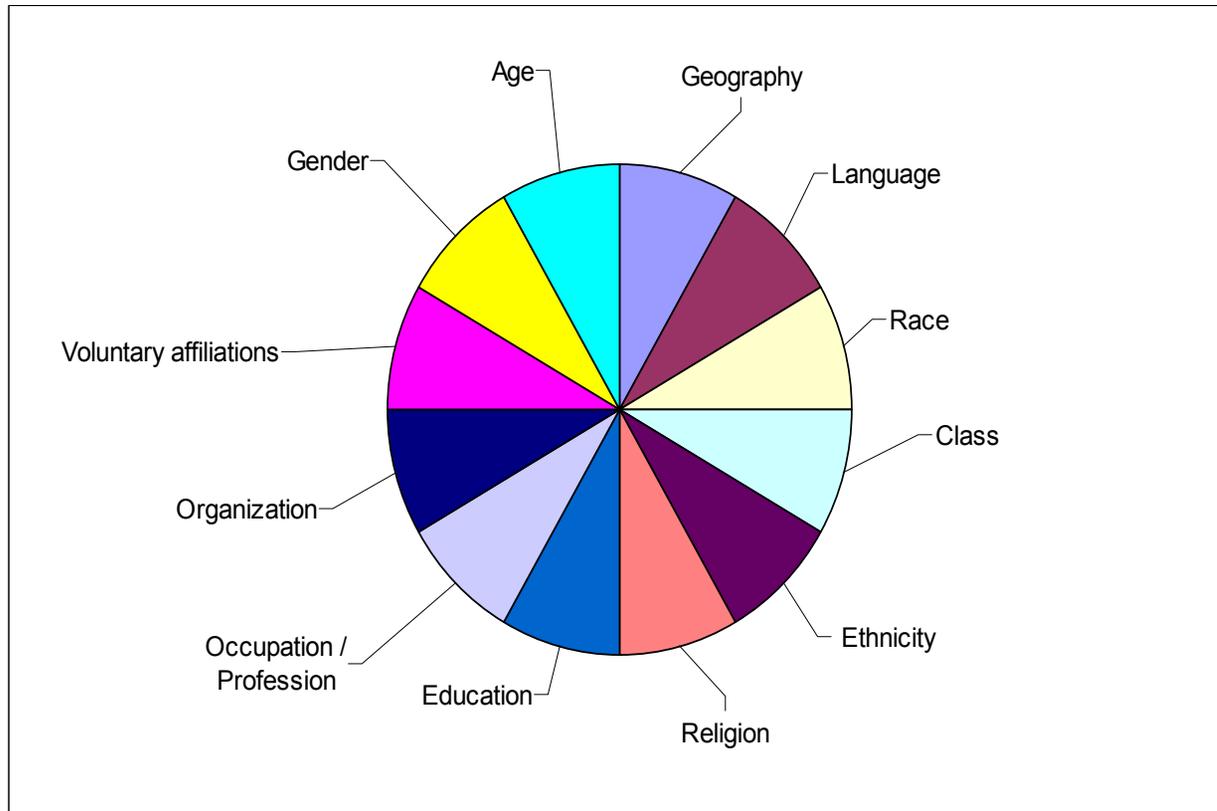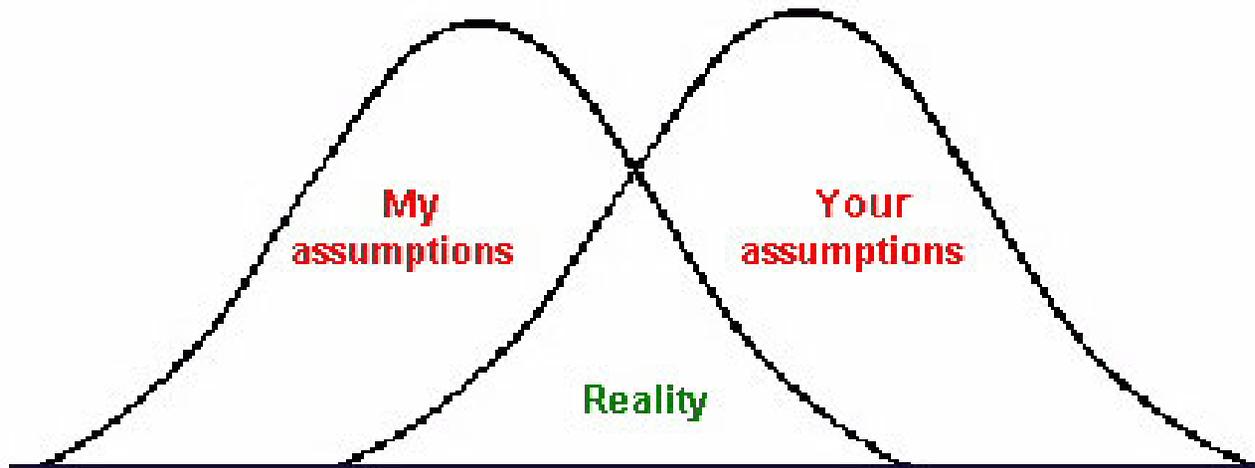
Cultural Variables: Work

- – Relationship-oriented / Task-oriented

- – Individualist / Collectivist

- – Competitive / Collaborative

- – Egalitarian / Hierarchical

- – Monochronic / Polychronic behavior

- – Risk as opportunity / threat

Cultural Variables: Social Relations

- Status by achievement / by ascription
- Gender equality / hierarchy
- Gender inclusivity / exclusivity
- Respect for elders / Admiration of youth
- Trust in others / Mistrust of others

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Cultural Variables: Communication

EuroSTAR 2004

- – Informal / Formal

- – Direct / Indirect

- – Explicit / Implicit

- – Information sharing / hoarding

- – Tolerance for / Aversion to open conflict

Cultural Variables: Worldview

– Universalist / Particularist

– Sense of abundance / scarcity

– Fatalistic / Deterministic

– Work to live / Live to work

– Focus upon past / present / future

– Time as quantifiable resource / natural force

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Organizational Cultures

- ***Models***
  - Military
  - Family
  - Market
  - Academy

- ***Orientations***
  - Process
  - Relationships
  - Growth
  - Ideas

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Behavioral Strategies

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Boundary Crossings

- Identify cultural variable at crossed boundary

- Acknowledge cultural issue

- Focus on shared values

- Employ 6-step feedback model

- Present to management as a cultural issue

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6-Step Feedback Model

- "When you…"
- "I feel…"
- "The consequences are…"

  Pause for reaction

- "I would like…"
- "The result would be…"
- "What do you think?"

  Discussion

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Management Support

- Appropriate manager
  - Team lead
  - Project manager
  - HR manager
- Process vs. personality issue
- 6-step feedback model for situation
- Realistic expectations

Action Plans

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Team Assessment

- Survey on cultural variables

- Tabulation of statistical results

- Identification of potential issues

Communication Plan

- Protocols
  - Meetings
  - Status reports
  - Procedures
  - Etiquette
  - Conflict resolution

- Tools
  - Workflow
  - Messaging
  - Discussion
  - Documentation
  - Archive

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Quality Plan

- Standards
  - Requirements
  - Change management
  - Documentation
  - Configuration management
  - Source code control
  - Version control
  - Peer review
  - Coding
  - Builds
  - Releases

- Environment
  - Development environment
  - Test environment
  - Production environment

- Tools
  - Development tools
  - Testing tools

- Control
  - Auditing practices
  - Maintenance activities

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Ombudsperson

- Confidentiality

- Neutrality

- Process orientation

- Cross-cultural experience

- Diplomat

- Parliamentarian

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Informal Exchanges

- Bulletin board
- Social events
- Games
- Team-building activities

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Training Options

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- Management skills
- Team development
- Cultural orientation
- Internal study groups
- Personal boundary crossings

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Conclusion

- Headwinds

- Tailwinds

- Resources

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Headwinds

- Culture of fear
- Staff ranking
- Unstable organization
- Evangelist leadership

Tailwinds

- Tolerance for trial and error
- Investment in staff development
- Long-range planning
- Pragmatic leadership

Resources

Riding the Waves of Culture by Charles Hampden-Turner and Fons Trompenaars, McGraw-Hill, 1997

GlobalWork by Mary O'Hara-Devereaux and Robert Johansen, Jossey-Bass, 1994

Cultures and Organizations: Software of the Mind by Geert Hofstede, McGraw-Hill, 1996

Cultural Dimensions of International Business by Gary P. Ferraro, Prentice Hall, 1993

Difficult Conversations by Douglas Stone et al., Penguin Putnam, 2000

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