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Macro level influences on health and health behavior: culture
Outline

• Framework of beliefs, symbols, values
• Shared arbitrary practices
• Shapes/interacts with biology
• Cultural constructions of illness
• Exploring culture
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“Classic” anthropologic definition of culture

• “A framework of beliefs, symbols, and values used to define one's world, express feelings, and make judgments.”

[Clifford Geertz, The Interpretation of Cultures]
Symbols and judgments
Why cultures differ

• Cultures differ when groups of people evolve in isolation from each other
  – Isolation may be physical or voluntary

• Differences preserved by:
  – “Behavioral identity badges”
  – High cost for individuals to make change
Behavioral identity badges

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Awareness of culture

• Cultural knowledge is “overlearned”
  – Accepted as objective reality, “the way things are”
  – Thus highly resistant to change
  – Goes beyond inertia; alternatives either believed not to exist or seen as wrong or unnatural
Culture or cultures?

• Individuals take part in multiple cultural streams at the same time
• The dangers of cultural “essentialism”
  – Much variation among individuals within a culture
  – Cultural “instructions” often contradictory
A sociobiologic view of culture

• Humans are a knowledge-using, cooperative species

• Our brains are “wired” to
  – Infer other people’s goals and understand the behavior relative to those goals
  – Learn and copy behaviors that will allow us to function in collaboration with others

• We need this shared knowledge to get along
A sociobiologic view of culture

• Culture as an “epidemiology of mental representations” (Sperber)
  – “a pool of technological and social innovations that people accumulate to help them live their lives” [together] (Pinker)
  – A group of “shared arbitrary practices” that help guide daily behavior and serve to regulate interpersonal behavior (ie, make the intentions of others more predictable)
Shared arbitrary practices?

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Culture-brain interaction

• Over the course of development, shaping of brain mechanisms that are responsible for:
  – What we perceive
  – How we process what we perceive
  – Social behavior
  – Emotional responses
Culture and biology

• Can variation in culture create distinct diseases?
  – Culture may determine variation in risk and protective factors in ways that potentiate underlying vulnerabilities not otherwise expressed
  – Examples
    • Social role of use of alcohol
    • Sleep patterns
Culture defining (and partially shaping) what is considered normal biology

Adapted by CTLT from http://faculty.washington.edu/chudler/sleep.html.
Language and attention

Differential grouping by speakers of language with and without verb tense – which pictures “go together”

From Lera Boroditsky
Language an attention

• Egocentric (R/L) versus universal (N/S) spatial orientation
  – Is the bed in the “identical” hotel room across the hall in the same place or not?
Does language completely or only partially define color categories? (Whorf hypothesis)

Some *focal color* categories seem innate though brain basis unclear (red, yellow, green, blue)

But languages vary in the number of focal colors they recognize and where they draw boundaries (lexical categories)
Experiment

• Hypothesis: if language makes a difference, then it should be easier (faster) to recognize the difference in colors from different lexical categories than the difference of two colors that are within the same category
• The results should be different across languages

[Click here](#) to see Figure 1 from Siok WT, et al. Language regions of the brain are operative in color perception. Proc Natl Acad Sci U S A 2009;106:8140-5.
• Easier (faster) to detect differences between lexical categories
• But even faster when image goes to RVF (left brain) with language center
• Conclusion: language seems to change the activation level of the visual cortex – *speeds up* what might have been seen as an innate process
• *Opposite of idea that cortical processing slows down innate responses*

Language and cognition

• Representation of time
  – Languages can be written
    • Right to left (Arabic, Hebrew)
    • Left to right (English, etc.)
    • Top to bottom (Chinese, Korean, Japanese) (and also horizontally)
  – Direction of writing corresponds to intuitive sense of order of objects
    • Demonstrable with tests of processing speed
Language and cognition

- **Representation of intent in common usage**
  - You unintentionally knock a cup from a table and it breaks

- **Spanish distinguishes**
  - “The cup broke [itself].” from “Larry broke the cup.” (which would imply intention)

- **English usage generally does not**
  - “Larry broke the cup.” (Intention irrelevant)

From Lera Boritsky
Cultural construction of illness

• Disease: abnormality of structure or function of body organs and systems (Kleinman)
• Illness: individual's experience of disvalued bodily abnormalities or changes in social function
  – Experienced: abnormality may be real or presumed
  – Disvalued: real abnormalities may or may not be seen as problematic
The interaction of illness and culture

- ...the subjective experience of illness is culture-bound...
- ...the cognitive and linguistic categories of illnesses characteristic of any culture constrain the interpretive and behavioral options available in response to symptoms
  - Angel
<table>
<thead>
<tr>
<th>Event</th>
<th>Cognitive Process</th>
<th>Culture</th>
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<tr>
<td>A “change”</td>
<td>Is it noticed?</td>
<td>• Degree of attention to internal states</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Available labels</td>
</tr>
<tr>
<td>Interpretation</td>
<td>Is it a symptom?</td>
<td>• Prevalence/past experience</td>
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<td></td>
<td>Is the person ill?</td>
<td>• Knowledge</td>
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<td>Action</td>
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<td>• Hierarchy of Helpers</td>
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<td>• Community-specific barriers</td>
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<tr>
<td>Relabeling</td>
<td>Adaptation?</td>
<td>• Experience of illness</td>
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Simple example of social construction of illness:

A “cold” in a school-aged child

- family tradition determines whether this is recognized as a pathologic state or part of normal life experience

- family tradition and constraints dictate to what extent sick role is available and accommodations that are required
Example of interpretation of symptoms: Flathead reservation (Montana) (O’Nell)

Study of individuals meeting DSM criteria for major depression

All have core symptoms of low energy, appetite, sleep disturbance, thoughts about death
Three clusters of depressed feelings – which one is the “illness?”

aggrieved - chastised, jilted, ignored and angry about it

bereaved - grief for things that are gone, missing people, lost tribal values

worthless -- feeling as if one would be abandoned, unworthy, reproachful of self for not living up to responsibilities to others
Only “worthless” is seen as pathologic within the culture, associated with suicidality, something to be treated.

aggrieved and bereaved not seen as illness by person or peers

to be bereaved is seen as a sign of maturity, attitude befitting an elder

to be aggrieved is natural condition after certain situations
Public health itself as a culture-bound “condition”

• Culture defines what’s “public health related”
  – Shrinks and expands over time
• Culture defines acceptable interventions
• Culture sanctions the force required to put those interventions into practice
Aspects of culture possibly related to health behavior

- Collective/family/individual orientation
- Power distance
  - Acceptance of inequality based on status, rank, power
- Uncertainty avoidance/tolerance
- Masculinity
  - Aggression/competition versus nurturance/cooperation

(Hofstede 2001)
Culture of organizations

- Relationships among members
- Types of acceptable communication
- Formulation of mission
- Receptivity to change
- Vocabulary/jargon
Can cultural beliefs be modified?

- When people see advantage
- When people see “contradictions” in their own culture
- When someone introduces new:
  - Beliefs
  - Tools
  - Costs and incentives
- When there is trust
When meet across cultures:

- Transactions between “explanatory models”
- Need for mutual respect
- Both “sides” fear disrespect of their model
- Getting both models “on the table” is the beginning of the transaction
To elicit explanatory models (Kleinman)

1. What do you think has caused your problem?
2. Why do you think it started when it did?
3. What do you think your sickness does to you? How does it work?
4. How severe is this sickness? How long will it last?
To elicit explanatory models

5. What kind of treatment do you think you should receive?
6. What are the most important results you hope to get from the treatment?
7. What are the chief problems your sickness has caused you?
8. What do you fear most about your sickness?
Summing up

• Culture can be seen as a system, specific to a group of people, used to facilitate and regulate their interactions and behavior
It is very possible that two groups of people evolve very different processes/labels/meanings for the same situation.

These processes/labels/meanings are perceived as intuitively true and alternative processes/labels/meanings are resisted.

But culture can and does change when modifications are seen as desirable.