The Evolution of Human Emotion

Emotion: Transient, neurophysiological response to a stimulus that excites a coordinated system of components; informs us about relationship to stimulus, and prepare us to deal with it.

Emotions are functional
- Helps us solve complex social coordination problems

Having emotion is universal aspect of human functioning
- Humans emotions have evolved to be complex and differentiated
- Language allows humans to make fine distinctions among emotions
- Humans have self-conscious emotions and moral emotions

Figure 8.1 A General Model of Emotion Elicitation
UNIVERSALITY IN EMOTION-
THE BASIC EMOTIONS
PERSPECTIVE

• Humans share a common base of emotion with their nonhuman primate relatives

• Basic emotions
  • Expressed universally in human faces
  • Brought on by same types of underlying psychological elicitors
  • Associated with unique physiological signatures in central and autonomic nervous systems
  • Based in evolutionary theory
  • Anger, disgust, fear, enjoyment, sadness, and surprise

The Original Universality Studies

• Darwin (1872)
  • Emotions are biologically based and evolutionarily adaptive
  • All humans express emotions in faces in the same way
  • Facial expressions of emotion have communicative and adaptive value

The Original Universality Studies

• Paul Ekman, Wallace Friesen, and Carroll Izard conducted universality studies which provided first methodologically sound evidence for Darwin

Universality Studies: Four studies that found evidence for universality of emotional expressions

| Study 1 | Judgments of facial expressions by literate cultures |
| Study 2 | Judgments of facial expressions by preliterate cultures |
| Study 3 | Judgments of facial expressions posed by members of preliterate cultures |
| Study 4 | Spontaneous facial expressions of emotion |

The Original Universality Studies

• Study 1: Judgments of facial expressions by literate cultures (Ekman, Friesen, & Tomkins, 1969)
  • Observers from US, Argentina, Brazil, Chile, and Japan labeled expressions in photographs
  • Results: Found high agreement for anger, disgust, fear, happiness, sadness, and surprise
  • Problem: All countries were literate and industrialized; problem of shared visual input

The Original Universality Studies

• Study 2: Judgments of facial expressions by preliterate cultures (Ekman, Sorenson, & Friesen, 1969)
  • Observers from New Guinea asked to select story that best describes expressions in photographs
  • Results: Found high agreement for anger, disgust, fear, happiness, sadness, and surprise
The Original Universality Studies

- **Study 3:** Judgments of facial expressions posed by members of preliterate cultures (Ekman, Sorenson, & Friesen, 1969)
  - Americans asked to label expressions in photographs of New Guineans
  - Results: Found high agreement for anger, disgust, fear, happiness, sadness, and surprise

- **Study 4:** Spontaneous facial expressions of emotion (Ekman, 1972; Friesen, 1972)
  - American and Japanese students' facial expressions recorded while they were watching stressful film
  - Results: Americans and Japanese showed same facial expressions at same points in time

The Original Universality Studies

- These studies provided initial support for universality of anger, disgust, fear, happiness, sadness, and surprise

Universality in Emotion Antecedents

- **Emotion antecedents:** events or situations that trigger an emotion
  - Many studies support the universality of emotion antecedents (e.g., Scherer, 1997)
    - Same types of antecedents bring about same emotions across cultures
    - Similarity in relative frequency with which each antecedents elicit emotions

Universality in Emotion Appraisal Processes

- **Emotion Appraisal:** Process by which people evaluate events, situations that lead to them having emotions
  - High degree of cross-cultural similarity in emotion process processes
  - Basic emotions appraised in the same way universally

Universality in Emotion Appraisal Processes

<table>
<thead>
<tr>
<th>Emotion</th>
<th>Universal underlying psychological theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Happiness</td>
<td>Accomplishing a goal</td>
</tr>
<tr>
<td>Anger</td>
<td>Being prevented from accomplishing a goal</td>
</tr>
<tr>
<td>Sadness</td>
<td>Being kept from something you desire or want</td>
</tr>
<tr>
<td>Disgust</td>
<td>Being sickened or repulsed by something</td>
</tr>
<tr>
<td>Fear</td>
<td>Sensing danger caused by unexpected, novel events and being helpless to do something about it</td>
</tr>
<tr>
<td>Surprise</td>
<td>Acknowledging something new or novel</td>
</tr>
<tr>
<td>Contempt</td>
<td>Feeling morally superior over someone else</td>
</tr>
<tr>
<td>Shame/Guilt</td>
<td>Feeling high responsibility for one's own behaviors, which conflict with one's own standards</td>
</tr>
</tbody>
</table>

Table 8.1 Underlying Psychological Themes that Elicit Emotions
### Universality in Expressive Behavior

- Since Ekman's (1972), over 25 published studies demonstrate that when emotion is aroused and there is no reason to modify the expression, universal facial expressions occur.
- This is true for a large number of countries:
  - Judo athletes in 35 countries during Athens Olympics.

### Universality in Physiological Responses to Emotion

- Each of universal emotions, when signaled by universal expressions, have distinct and discrete physiological signature in autonomic nervous system and central nervous system:
  - This finding replicated in cross-cultural studies (e.g., Chinese and European Americans; Indonesians).
  - Emotions help individuals respond to emotional stimuli by preparing body to engage in activity (e.g., fear-flee; anger-fight).

### Universality in Subjective Emotional Experience

- There were many more similarities across cultures in subjective feelings in response to emotions than there were differences.
- Evidence for universal, psychobiological emotional patterning in subjective response.

### Universality in the Coherence among Emotion Response Systems

- Emotion response system coherence: various responses of emotion are related to each other in meaningful way:
  - Cross-cultural coherence between self-reported expressive behaviors, emotional experiences, and physiology; between verbal and nonverbal expressions; and between emotion intensity and physiology.
Universality in Emotional Recognition

- Expressions of anger, disgust, fear, happiness, sadness, and surprise are universally recognized.
- Recent research also suggest contempt, embarrassment, and pride may also be universally recognized.

Summary

- Emotions are universal psychological phenomenon that is based in evolution.
- Universality in emotion appraisal, expression, physiology, and recognition of emotions in others.
- These universal processes allow humans to adapt, respond, and cope with problems in social lives.

Cultural Differences in Emotion Antecedent

- Cultural differences in frequencies of antecedents that bring about an emotion
  - Death of family/close friends, physical separation from loved ones, and world news triggered sadness for Europeans and Americans more frequently than it did for Japanese; Problems in relationships triggered sadness more frequently for Japanese.
  - Situations involving relationships triggered anger more frequently for Americans than Japanese; Situations involving strangers triggered anger more frequently for Japanese.

Cultural Differences in Emotion Appraisal

- Cultural differences in appraisal processes requiring judgments of fairness and morality.
  - African countries appraised situations as more immoral, more unfair, and more externally caused than other countries.
  - Latin America appraised situations as less immoral than other countries.

Cultural Differences in Expressive Behavior: Display Rules

- The Original Display Rule Study:
  - Despite evidence for the universality of emotional expression of basic emotions, there are also cultural differences. This discrepancy can be explained by cultural display rules.

- Cultural Display Rules: Rules that dictate how universal emotional expressions should be modified according to social situation.
  - Deamplification, Amplification, Neutralization, Qualification, Masking, Simulation.
Cultural Differences in Expressive Behavior: Display Rules

• The Original Display Rule Study:
  - Ekman (1972), Friesen (1972): American and Japanese participants viewed highly stressful films in two conditions

<table>
<thead>
<tr>
<th>Condition</th>
<th>Americans</th>
<th>Japanese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alone</td>
<td>Showed disgust</td>
<td>Showed disgust</td>
</tr>
<tr>
<td>With Experimenter</td>
<td>Showed disgust</td>
<td>Smiled</td>
</tr>
</tbody>
</table>

Cultural Differences in Expressive Behavior: Display Rules

• Recent Cross-Cultural Research on Display Rules

<table>
<thead>
<tr>
<th>Type of culture</th>
<th>Individualistic</th>
<th>Collectivistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Ingroup Relations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Okay to express negative feelings; less need to display positive feelings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suppress expressions of negative feelings; more pressure to display positive feelings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Outgroup Relations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suppress expressions of negative feelings; okay to express positive feelings as would toward ingroup</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encouraged to express negative feelings; suppress display of positive feelings reserved for ingroups</td>
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</tr>
</tbody>
</table>

Cultural Differences in Expressive Behavior: Display Rules

• Facial expressions of emotion are under dual influence of (1) universal, biologically innate factors and (2) culturally specific, learned display rules

  - The neurocultural theory of emotional expression

Cultural Differences in Judging Emotions in Others

• There are cross-cultural differences in recognition accuracy rates

  - Americans better at recognizing anger, disgust, fear, and sadness than Japanese
  
  - Cultural source of these differences may be individualism

    - Individualism associated with better recognition of anger, fear, and happiness

Cultural Differences in the Concept and Social Meaning of Emotion

• The Concept of Emotion

  - Americans place importance and value on feelings and emotions

    - In other cultures, there are no word for ‘emotion’ or their concept of emotion is different from English word

Cultural Differences in Judging Emotions in Others

• Decoding rules: rules on how emotional expressions are recognized

  - Ingroup advantage: ability to recognize emotions of others of same culture better than those from different culture

    - Currently no empirical evidence

  - Cultural differences in inferences about emotional experiences underlying expressions
Cultural Differences in the Concept and Social Meaning of Emotion

The Categories of Emotion
- Many English emotion words have no equivalent in other languages
- Emotion words in other languages have no exact English equivalent
  Ex) German word: Schadenfreude
- This does not mean that these emotions don't exist in other cultures
- Suggests different cultures divide their world of emotion differently

The Location of Emotion
- In US, place emotion and inner feelings in the heart
- Japanese place emotion in gut or abdomen
- Chewong of Malay place emotion in liver
- This indicates that emotions are understood differently and have different meanings in different cultures

The Meaning of Emotions to People and to Behavior
- In US, emotions inform oneself about self
- In other cultures, emotions are statements about relationship between people and environment
- The very concept, definition, understanding, and meaning of emotion differ across cultures.

Cultural constructionist approach to emotion
- Emotions are a set of "socially shared scripts" that are inextricably linked with culture and develops as individuals are enculturated into culture
- Emotion reflects cultural environment, and is an integral part of culture
- Culture shapes emotion
- Challenges universality or biological innateness of emotions

Conclusion
- Universality and culture-specific aspects of emotion can co-exist
- Basic emotions are universal
- Subjective experience and emotion language may be culture-specific