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Exploring Emotion and Communication

Psychological Explanations of Emotion

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Overview

- Facial Expressions
- Universality of emotions
- Paradigm Issues
- Other theories

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Psychological Theories of Emotion

- Difficult to measure as a purely psychological construct
 - Behaviourist argument has some merit
- Examined via:
 - Connectionist models
 - Emotion perception
 - Emotion disorders



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Nonverbal behaviour

- Argyle (1988): Primary functions of nonverbal behaviour
 - Express emotion
 - Convey attitudes (likes/dislikes, dominance/submission)
 - Present personality traits
 - Complement speech in issues such as turn-taking, feedback, attention

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Facial Expressions

- Duchenne du Boulogne
 - Physiology: our facial musculature system is designed to display facial expressions in same way across all people.
- Darwin
 - "That the chief expressive actions, exhibited by man and by the lower animals, are now innate or inherited – that is, have not been learnt by the individual, - is admitted by everyone. So little has learning or imitation to do with several of them that they are from the earliest days and throughout life quite beyond our control" (Darwin, 1890, p.371).

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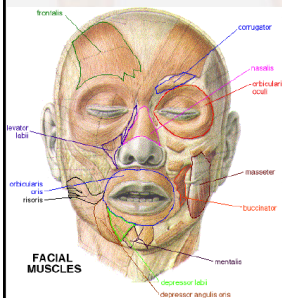
Duchenne (1862)

- Diagnostic innovations to understand facial expressions included deep tissue biopsy, nerve conduction, and clinical photography
- Trigger muscular contractions with electrical probes and record resulting expressions with photographs



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Duchenne (1862)



- Expressions could reveal “accurate rendering of the soul’s emotions”
- We feel emotion then face shows it through contraction of specific facial muscles.

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Basic Emotions?

Reference	Fundamental emotion	Basis for inclusion
Arnold (1960)	Anger, aversion, courage, dejection, desire, despair, fear, hate, hope, love, sadness.	Relation to action tendencies
Ekman, Friesen and Ellsworth (1982)	Anger, disgust, fear, joy, sadness, surprise.	Universal facial expressions
Frijda (personal Sept 8, 1986).	Desire, happiness, interest, surprise, wonder, communication, sorrow.	Forms of action readiness
Gray (1982)	Rage and terror, anxiety, joy.	Hardwired
Izard (1971)	Anger, contempt, disgust, distress, fear, guilt, interest, joy, shame, surprise.	Hardwired
James (1884)	Fear, grief, love, rage.	Bodily involvement
McDougall (1926)	Anger, disgust, elation, fear, subjection, tender-emotion, wonder.	Relation to instincts
Mowrer (1960)	Pain, pleasure.	Unlearned emotional states
Outley and Johnson-Land (1987)	Anger, disgust, anxiety, happiness, sadness.	Do not require propositional content
Panksepp (1982)	Expectancy, fear, rage, panic.	Hardwired
Plutchik (1980)	Acceptance, anger, anticipation, disgust, joy, fear, sadness, surprise.	Relation to adaptive biological processes
Tomkins (1984)	Anger, interest, contempt, disgust, distress, fear, joy, shame, surprise.	Density of neural firing
Watson (1930)	Fear, love, rage.	Hardwired
Weiner and Graham (1984)	Happiness, sadness.	Attribution dependent

Source: Power & Dalgleish (2015), based on Ortony and Turner (1990)

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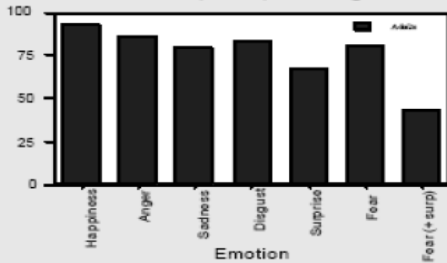
- Birdwhistell (1970): Anthropologist
“There are no universal gestures. As far as we know, there is no single facial expression, stance, or body position which conveys the same meaning in all societies” (p.89)
- Ekman et al. (1969)
Studied emotion recognition across literate and preliterate cultures (Samoa, New Guinea, USA, Australia etc.)
- Displayed photos of emotion expression and gained forced-choice responses

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Ekman & Friesen's (1971) results (adults)

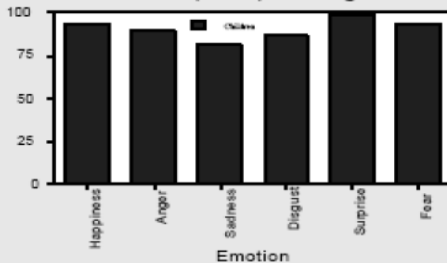
Ekman & Friesen (1971) Findings



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Ekman & Friesen's (1971) results (children)

Ekman & Friesen (1971) Findings



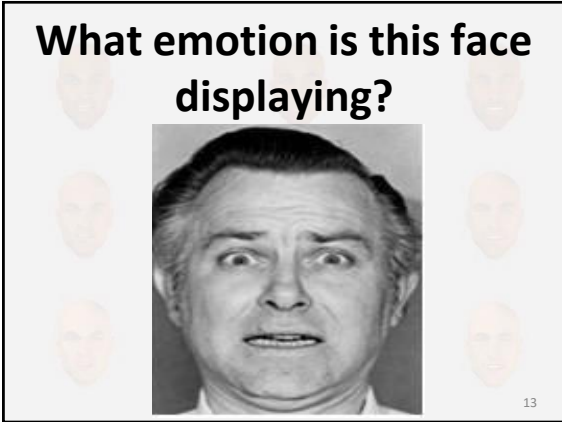
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What emotion is this face displaying?

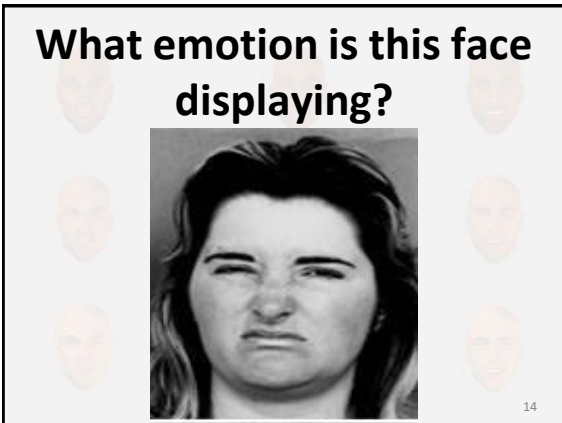


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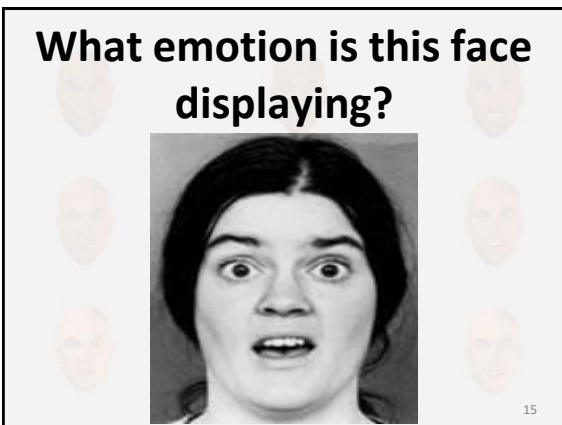
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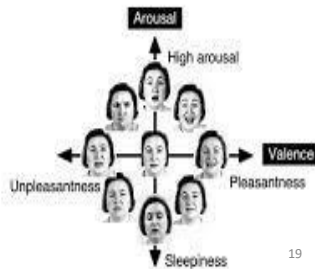
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Categorical versus Dimensional/Continuum Theory

A Categorical theory



B Dimensional theory



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Further evidence for universal emotion displays

- Eibl-Eibesfeldt (1975)
 - Blind/deaf children show similar facial patterns of emotion to universal emotions



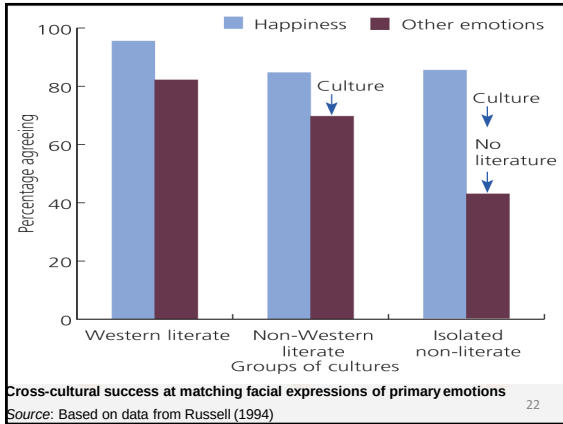
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Universality has several issues:

1. The problem of 'surprise'
 - Can be surprised without invoking emotion.
 - Cognitive component that could be present with any emotion and not unique as emotion itself (Oatley & Johnson-Laird, 1987, Power & Dalgleish, 2015)
2. Methodology (Russell, 1994)
 - Issues with ecological, convergent, & internal validity.
 - Issues with forced-choice response format, within-subjects design, preselected photos of posed expressions
 - 1994 exchange between Ekman & Russell is informative

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Universality has several issues:

3. Neuropsychological issues

- Differential recognition of emotion (McAndrew, 1986)
 - Happiness = 25ms
 - Fear = 300ms
- More thorough processing of negative information?
 - Baumeister et al. (2001)
- Impairment in emotion processing
 - Autism (Baron-Cohen, 1991; Collins & Nowicki, 2001)
 - Schizophrenia; Depression; Bipolar Disorders (Habel et al., 2000; Sergeant et al., 1994; Young et al., 1996)

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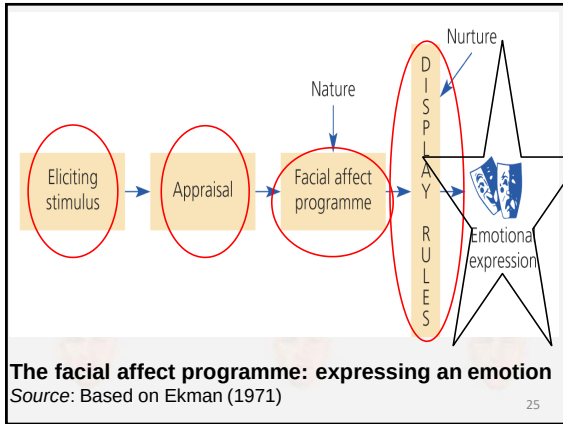
Universality has several issues:

4. In-Group Advantage

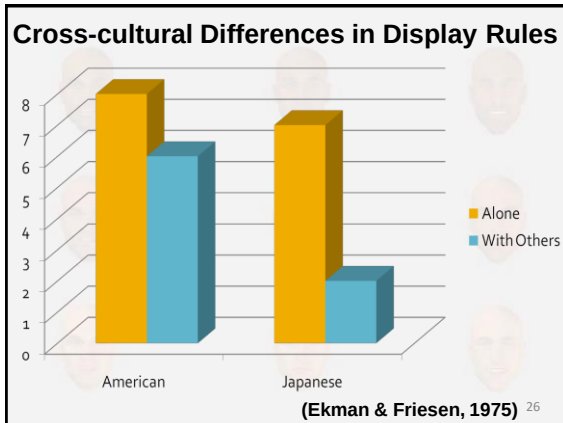
- Better at recognising displays of emotion when interacting with own race than other races (Elfenbein & Ambady, 2002; Hutchings, 2004)
- 'Dialect theory of emotion'
 - Different cultures/regions have differences in accent, so to are emotion expressions
 - Immersion in culture leads to greater knowledge of that culture's display rules (Elfenbein & Ambady, 2003; Hutchings, 2004).

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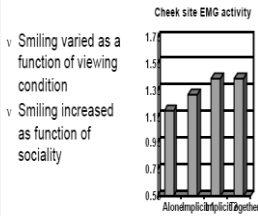
- Individual differences in prejudice type influence perception of racial out-group emotion, particularly anger
 - (Hugenberg & Bodenhausen, 2003, 2004; Hutchings & Haddock, 2008)
- Suggests cognitive process in production *and* interpretation of display rules

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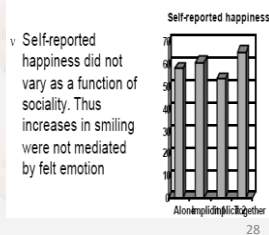
Other theories of emotion expression

• Fridlund – Social intention

Fridlund (1991): Results 1

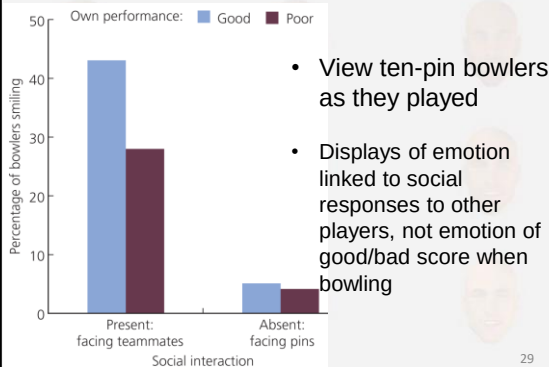


Fridlund (1991): Results 2



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Kraut & Johnson (1979) – ‘Bowling study’



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Control of Expression?

- Jakobs et al. (1999); Zaalberg et al. (2004)
- “a combination of physiological emotion and knowledge of cultural display rules producing facial displays that are related to the internal emotion but which can be controlled to a certain extent” (Hutchings, 2010, p15).
- DePaulo and Friedman (1998)
 - We have ability to deceive others
 - Not accounted in Darwin's theory
- Because we can control our facial muscles, we could use our facial expressions to hide our true feelings about something.
- However, Ekman proposed two ways to distinguish between real and fake expressions.....



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Facial Feedback Hypothesis

- Display of emotion can influence actual emotions
 - Neidenthal et al. (1997); Strack et al. (1988)
- We may mimic people we see/are with
 - Emotion contagion
- Highly contentious
 - ANS and neural system not set up for this
 - See Nosek/Centre for Replication on latest findings

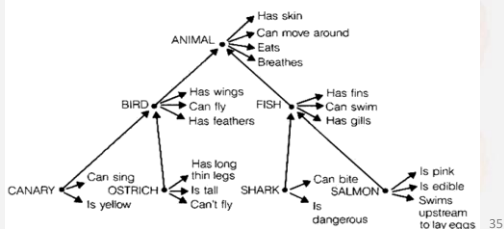
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Network Theories

- Nodes of activation

Hierarchical Model Collins & Quillian, 1969



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Network Theories

- Nodes of activation

– Bower (1981)

Example of a Semantic Network

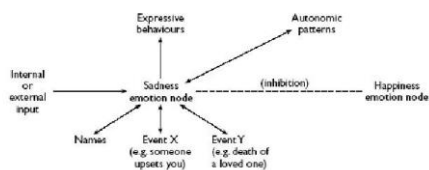


Figure 13.10 An example semantic network theory of emotion
Source: Power and Dalgleish, 1997, Figure 3.2, p.71

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Problems with network theory

- Weighting
 - Different emotions appear to carry different emotional valance weights
 - Anxiety weighted more to attention-related info
 - Depression weighted more to memory-related info
- Development of further models to cope
 - Affect Infusion Model (Bower & Forgas, 2000)
 - Propositional network (Lang, 1979)

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Summary

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- ▶ Understanding emotion extends beyond internal felt experiences
 - ▶ Need to consider expression of emotion
- ▶ Theory developed regarding universality of emotional expression.
 - ▶ But disagreement on which emotions should be included, methodological issues, neuropsychological issues, and evidence from in-group, cross cultural differences, and ability to control expressions casts doubt on universality
- ▶ Alternative theories, such as, social intention, facial feedback and network theories put forward

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