



認知與腦科學研究中心  
Centro de Ciências Cognitivas e Cerebrais  
Centre for Cognitive and Brain Sciences



社會科學學院  
FACULDADE DE CIÉNCIAS SOCIAIS  
FACULTY OF SOCIAL SCIENCES

*Social  
cognition  
seminar*



# SOCIAL COGNITION: From brains to culture

## Ch 13 From Social Cognition to Affect

Haiyan Wu

 @ANDlab3  
[andlab-um.com](http://andlab-um.com)

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- Racial Prejudice is Emotionally Complicated
- Gender Prejudice has Built-in Ambivalence
- Age Prejudice Awaits All of Us
- Sexual Prejudice is Controversial

## Age Prejudice Awaits All of Us

### Sexual Prejudice is Controversial

## **PART FOUR: Beyond Cognition: Affect and Behavior**

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# Structure

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- Physiological Theories Confront Differentiated Emotion
- Social Cognitive Foundations of Differentiated Emotion



# Distinguishing Affects, Preferences, Evaluations, Moods, and Emotions

## (i) Affect and Company

### Defining terms

**Affect** is a generic term for a whole range of preferences, evaluations, moods, and emotions.

**Preferences** include relatively mild subjective reactions that are essentially either **pleasant** or **unpleasant**.

Such **evaluations** can also pertain to objects, and we already discussed them as attitudes.

Preferences and evaluations may be distinguished from affects that have a less specific target, that is, **moods**

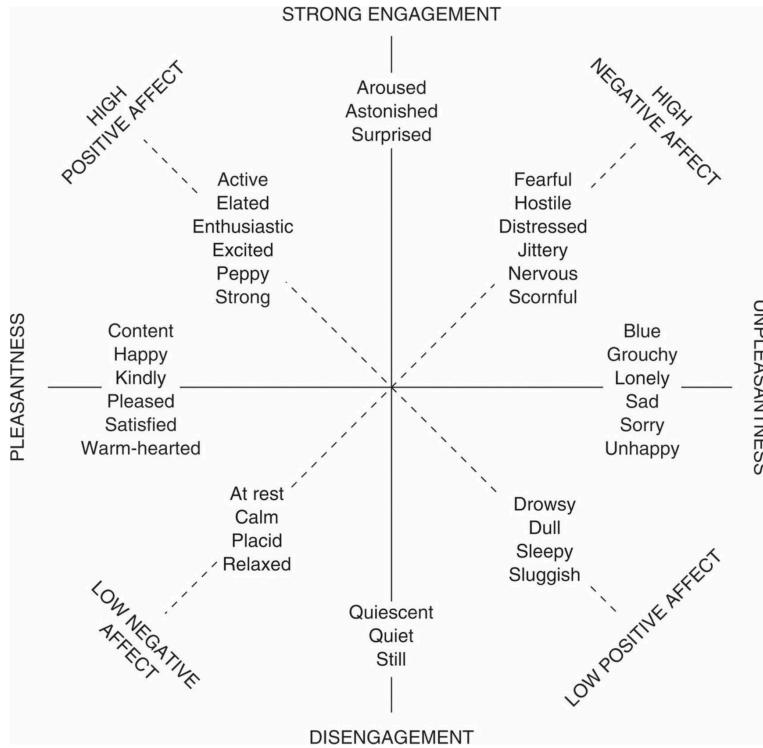
**Emotion** refers to this complex assortment of affects, beyond merely good feelings and bad, to include delight, serenity, anger, sadness, fear, and more, including physiological arousal

# KEY DIFFERENCES BETWEEN **MOODS**      vs      **EMOTIONS**

- **DURATION** MINUTES TO HOURS
- **PROVOCATION** LOWERS THRESHOLD NEEDED TO TRIGGER EMOTIONS
- **MODULATION** REGULATION MOSTLY UNAFFECTED
- **EXPRESSION** NO UNIQUE NONVERBAL EXPRESSIONS
- **AWARENESS** DIFFICULT TO IDENTIFY EXACT TRIGGER(S) CAUSING MOOD

- **DURATION** SECONDS TO MINUTES
- **PROVOCATION** MORE EASILY EXPERIENCED WITHIN MOODS BELONGING TO SAME "FAMILY"
- **MODULATION** MORE DIFFICULT TO REGULATE IF EXPERIENCED WITHIN MOOD
- **EXPRESSION** UNIVERSAL FACIAL EXPRESSIONS
- **AWARENESS** TRIGGERS MORE EASILY IDENTIFIABLE

# Differentiating Positive and Negative Responses



Source: After D. Watson & Tellegen (1985)

People mostly expect and experience slightly positive outcomes, so their baseline is slightly positive; the psychological neutral point is not zero but instead slightly right of zero.

This represents a **positivity offset**, **Pollyanna effect**, or **positivity bias**;

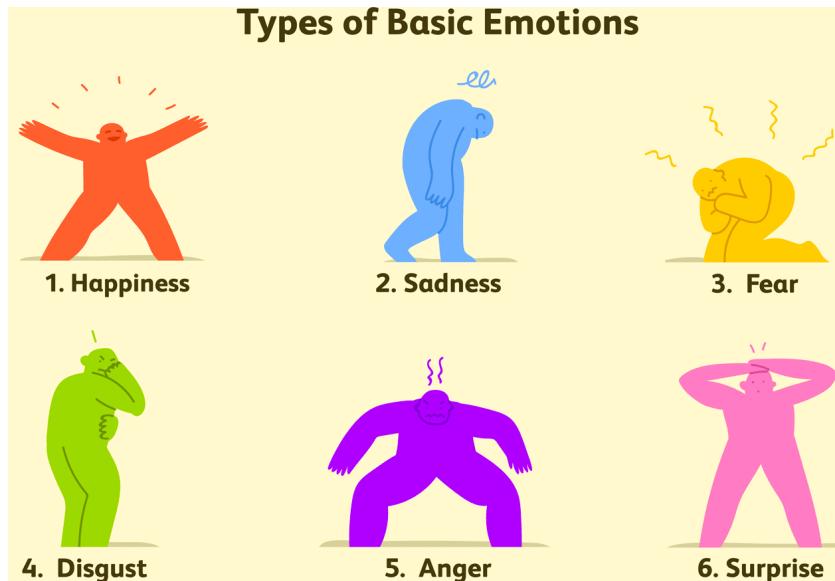
Negative outcomes capture more attention and resources for coping with the threat. This represents a **negativity bias**

1. emphasizes **bipolar** (positive–negative) evaluation

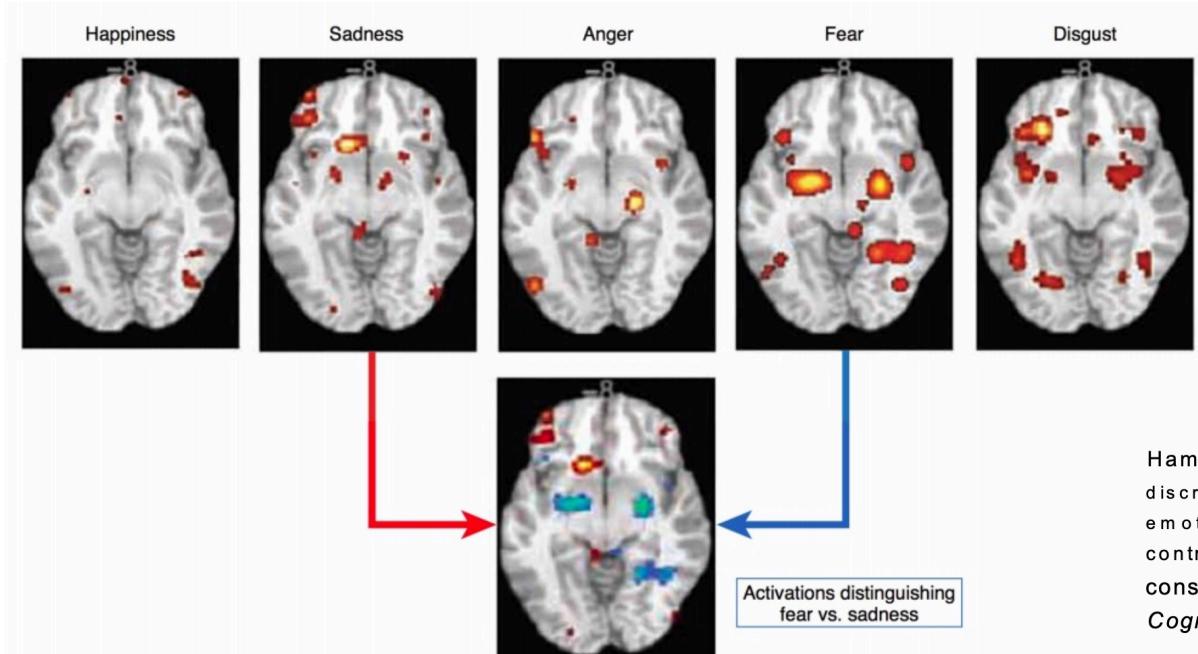
2. **bivalent (two independent valences) structure.**

3. **Positive and negative emotions differ in how they operate.**

# Basic Emotions?



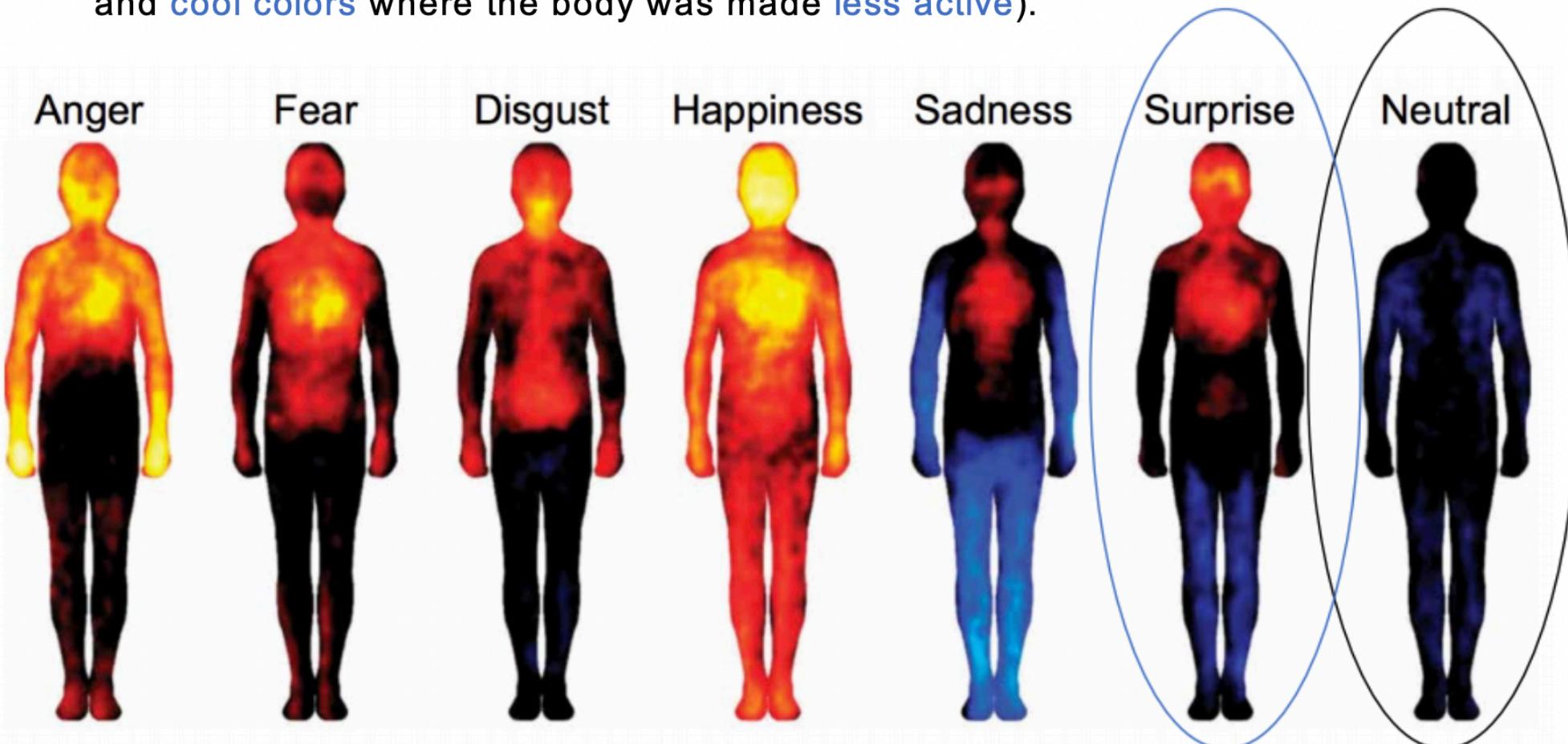
**Brain activation associated with 5 basic emotions**



Hamann. (2012). Mapping discrete and dimensional emotions onto the brain: controversies and consensus. *Trends in Cognitive Sciences*

# Body involved in 6 basic emotions

- 700 people in Finland, Sweden, and Taiwan
- in response to **a variety of stimuli** including emotion words, pictures of emotional facial expressions, emotional experiences in short stories, and emotional scenes in movies.
- to **color a map of the body** (using **warm colors** where they felt an emotion made the body **more active**, and **cool colors** where the body was made **less active**).



Nummenmaa L,  
Glerean E, Hari R,  
Hietanen JK.  
(2014). Bodily maps  
of emotions, *PNAS*

# social constructionist view

## Emotion scripts

### Concept:

Appraising events → emotion → expressions, action tendencies, subjective feelings, physiological states

### Example:

Desired outcome,  
an achievement,  
or esteem, praise → prototypic joy → smile; express enthusiasm,  
seek others; feel positive;  
be energetic, excited, bubbly

*sees emotions as transitory social roles represented cognitively in members of a shared culture, as variations on a central (or prototypic) theme (e.g., Averill, 1983)*

**Table 13.1** Social constructionist view of emotions

### Emotions

- (a) are constituted by social rules prescribed in cultural scripts,
- (b) are importantly interpersonal phenomena that are interwoven with other actors as part of the larger “play,”
- (c) are part of a cultural story or “plot” that gives them meaning,
- (d) involve choice regarding one’s participation as an actor,
- (e) require training for skilled performance,
- (f) require identification with the role to experience intensity, and
- (g) entail interpretation of the role as it fits into the larger social context

# Early Theories Set the Stage for Hypotheses about Physiology and Cognition

## The James–Lange Theory vs The Cannon–Bard Theory

- We experience emotion in response to physiological changes in our body.
- Suppose you are boiling with anger about something that has just happened. Try to *strip away* all the *physiological changes* associated with the emotion. Your pounding heart is calmed, your tensed muscles are relaxed, and your flushed face is cooled. As James said, it is **hard** to imagine maintaining rage in the absence of any of these physiological responses.

(1)

- Emotions can *be experienced even if physiological changes cannot be sensed.*
- If emotional experience occurs when the brain senses physiological changes in the body, as the James–Lange theory proposed, then *eliminating sensation* should also eliminate emotions, and this did not appear to be the case.  
Cannon's new theory focused on the idea that the **thalamus** (丘腦) plays a special role in emotional sensations.
- **Challenge** to CB theory: emotion is sometimes affected by damage to the *spinal cord* (脊髓).

(2)

# The James–Lange Theory vs The Cannon–Bard Theory

Fear



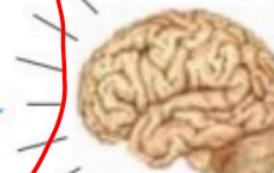
Sensory stimulus



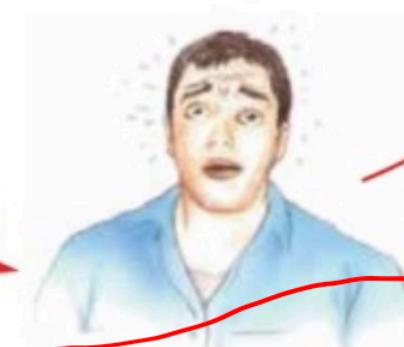
Stimulus perceived

Cannon-Bard  
theory

Emotional experience (fear)



James-Lang  
theory



Emotional expression  
(somatic, visceral response)

# **Physiological Theories Confront Differentiated Emotion**

Physiology might still provide the richness of emotional experience.  
Some noncognitive theories of emotion provide counterpoint to the  
cognitive theories.

# Facial Feedback Theory

- emotional events directly trigger certain innate configurations of muscles, and that we become aware of feelings only upon feedback from the face (Tomkins, 1962; cf. Gellhorn, 1964)
- facial expressions relate to other physiological responses in emotion (**skin conductance, electromyographic or EMG**)

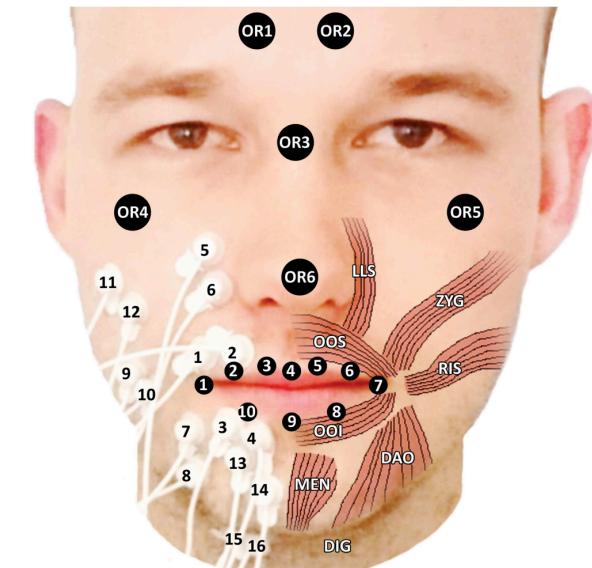


Fig 1. Surface electrode and facial marker positions. Volunteer with sEMG electrodes in bipolar configuration placed on the zygomaticus major, risorius, orbicularis oris superior and inferior, mentalis, depressor anguli oris, levator labii superiors, and digastric muscles, and showing ten markers on the lips and six infraorbitally, supra-orbitally, and on the nose (muscle anatomy adapted from [18]).

# Excitation Transfer

**Arousal** (that is, emotional excitation of the **sympathetic nervous system**) has both automatic and learned origins (Zillmann, 1988)

- (a) arousal is nonspecific and slow to decay,
- (b) people are inept at partitioning the sources of their arousal,
- (c) people cognitively interpret their arousal

Excitation transfer theory is based on Schachter and Singer's (1962) theory that **the experience of emotions depends on autonomic arousal and cognitive interpretation of the arousal state**. The theory suggests that people rely on external rather than internal cues to distinguish and label specific emotions.

For example, people who have just exercised respond more aggressively or more angrily when provoked than do people not previously aroused (Zillmann & Bryant, 1974). Arousal enhances romantic attraction (G. L. White, Fishbein, & Rutstein, 1981). Arousal intensifies even evaluations of one's alma mater (M. S. Clark, 1982), as well as one's egotistically satisfying attributions (Gollwitzer, Earle, & Stephan, 1982), and the likelihood of counterarguing a persuasive communication (Cacioppo, 1979). All these studies fit excitation transferring from one source to another, intensifying subsequent affect. Their implications are broadened

# Affective Neuroscience

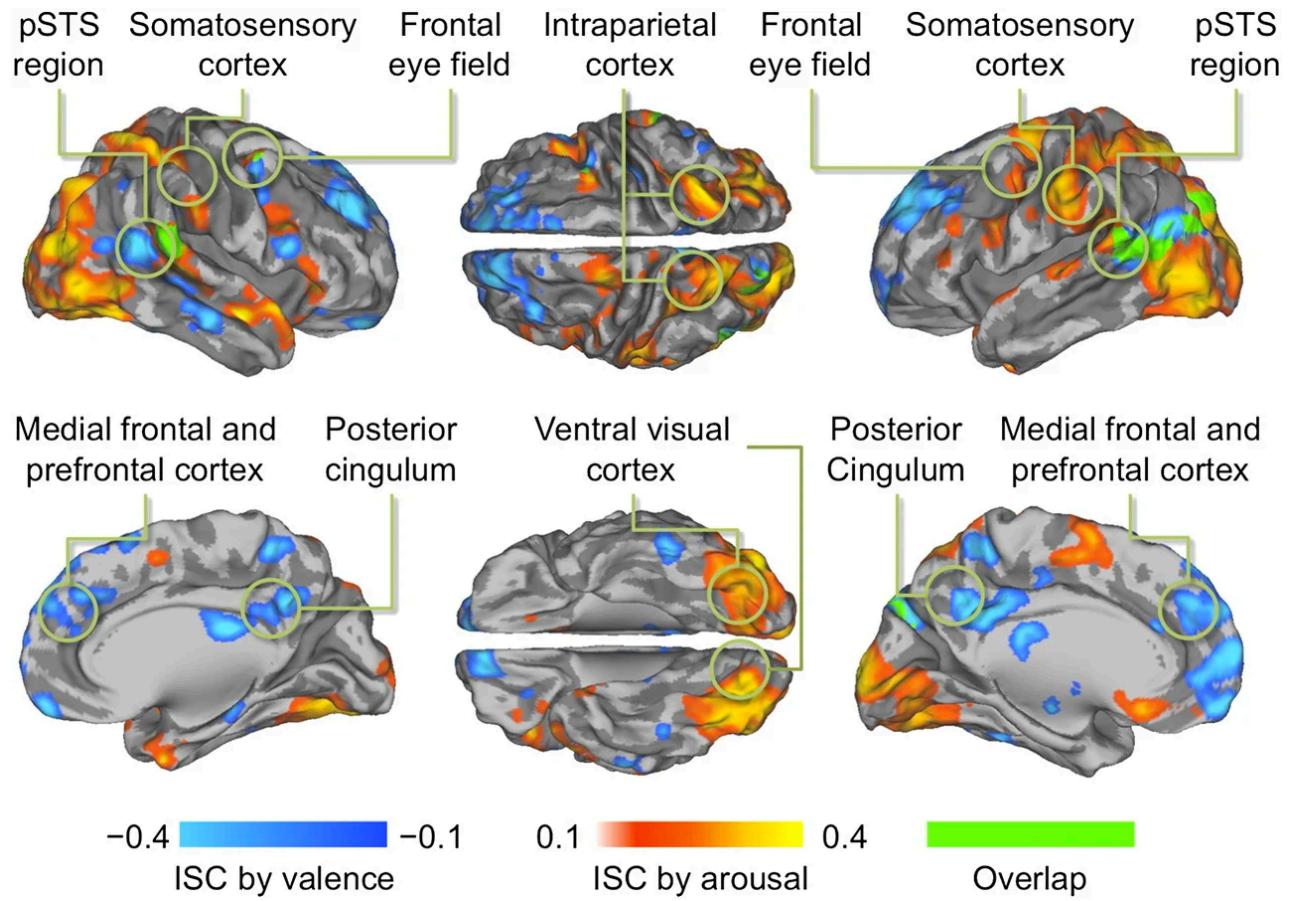
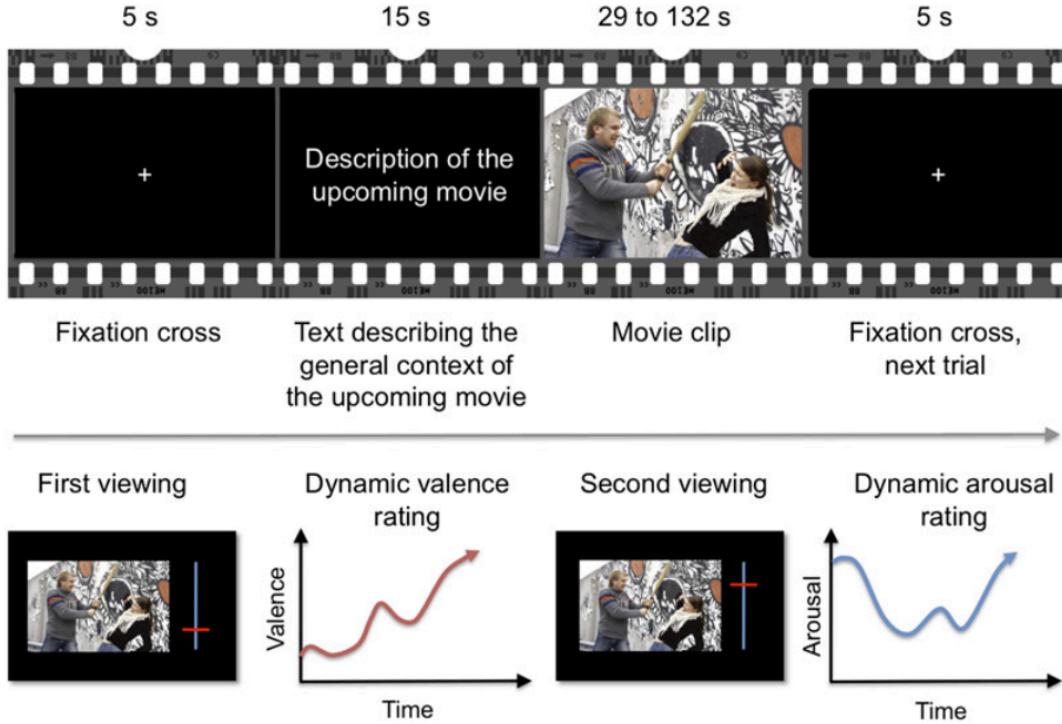
**Table 13.3** Remedies for the seven sins of affective neuroscience

- (1) Recognize the intermingling of affective and cognitive neural circuits;
- (2) Acknowledge that affect involves the thinking cortex as well as the older brain's subcortical structures;
- (3) Recognize that emotions correspond to measurable bodily responses, not just psychological constructions;
- (4) Integrate knowledge of plausible neural circuits in the psychology of emotion;
- (5) Realize that emotions differ with age;
- (6) Avoid looking for emotions in discrete locations of the brain; and
- (7) Include unconscious responses as part of emotion systems.

Source: Davidson (2003)

The screenshot shows the homepage of the Society for Affective Science. At the top right, there is a navigation bar with links: ABOUT, CONFERENCES, MEMBERSHIP, AWARDS, STUDENTS/TRAINEES, JOURNAL, and JOBS. To the left of the navigation is the society's logo, which consists of a stylized cluster of blue and teal circles. Below the navigation, there is a large banner image featuring the journal cover of "Affective Science" and a text overlay that reads "Announcing New Editors". On the left side of the page, there is a sidebar with links to various sections: MISSION STATEMENT, SOCIETY LEADERSHIP, CONTACT, ANNOUNCEMENTS, MESSAGE FROM SAS, LEADERSHIP, and NEWSLETTER. The main content area contains the journal cover image, which features the title "Affective Science" in large white letters, followed by "An Official Journal of the Society for Affective Science" and "Volume 1 • Number 1 • January 2009". Below the journal cover, there is a block of text about new editors.

sciences publication committee is pleased to announce that Ralph Adolphs, Linda Lomax and Michelle (Lani) Shiota have been selected to serve  
ef of the Society's flagship journal, *Affective Science*. They will take over the role from founding editors Wendy Berry Mendes, James Gross and  
st 2022. The team brings considerable editorial experience from their leadership roles at other top journals. In addition, the new team covers a  
scholarship in subfields of psychology and neuroscience. Their diversity in expertise and prior experience puts the new team in an ideal place to  
ission to publish research from a range of disciplines, perspectives and methods, and to further grow *Affective Science* in its next phase.



Nummenmaa et al, 2012, PNAS

# Social Cognitive Foundations of Differentiated Emotion

## Emotion as Cognition Plus Arousal: Interruption Theories

Schachter's two-component theory posits that diffuse physiological arousal catalyzes cognitive interpretation, so emotions are mediated by cognitive activity

Arousal-plus-mind theory (Mandler, 1975) resembles Schachter's in that physiological arousal combines with evaluative cognition to produce emotion

Berscheid: The greater the interdependence, then, the greater the potential for intense negative emotion if one partner leaves, withdraws, or dies.

Table 13.4 Theories relating cognitive structure to affect

Theories and theorists	Cognitive structure	Affective impact
<i>Interruption</i>		
Schachter	Unexplained arousal plus cognitive interpretation	Labeled emotion
Mandler	Interrupted application of schema (perceptual) or goal-directed action	Positive if fit, facilitate; negative if no fit, block
Berscheid	Interrupted interdependent goal sequence	Same
<i>Matching</i>		
Keltner	Expectations about power relations	Positive if high-power self; negative if low-power self
Fiske	Application of schema or category	Associated affect <sup>1</sup>
Linville	Complexity of representation	Moderation of affect <sup>2</sup>
Tesser	Elaboration of schema through thought	Extremity of affect <sup>2</sup>
<i>Outcomes</i>		
Weiner	Attribution for outcome (locus, stability)	Differentiated emotions
Kahneman & Miller	Comparing present outcome to norms	Amplify emotion if abnormal
<i>Managing</i>		
Simon	Change goal priority due to environment	Emotion as alert mechanism
Oatley & Johnson-Laird	Change goal priority due to probability of success	Same
Carver & Scheier	Discrepancy between current state and standard	Emotion cues effort or withdrawal

Notes:

<sup>1</sup> For attitudinal complements to schema-triggered affect, see Fazio's MODE model and Greenwald et al.'s IAT, covered in Chapter 10.

<sup>2</sup> To reconcile these apparently contradictory theories, see text.

# Cognitive Structures and Affect: Matching Theories

- *the interplay among emotions and cognitions in social relationships, specifically power asymmetries (Keltner, Gruenfeld, & Anderson, 2003)*
- High power is associated with approach emotions and behaviors, and thus with positive affect, as well as left frontal activity and the release of **dopamine**, Low power is associated with avoidant, inhibited emotions and behaviors
- **Schema-Triggered Affect** (S. T. Fiske )
- schemas based on prior experiences can carry immediate affective tags.

emphasize matching prior expectations about events

# Schema Complexity and Affective Extremity

- **complexity-extremity hypothesis** (Linville, 1982; Linville, Fischer, & Salovey, 1989; Linville & Jones, 1980; Chapters 4, 11) focuses on affective consequences of informational intricacy



- the theory predicts that the greater the complexity of a schema, the more moderate the affect it typically elicits.



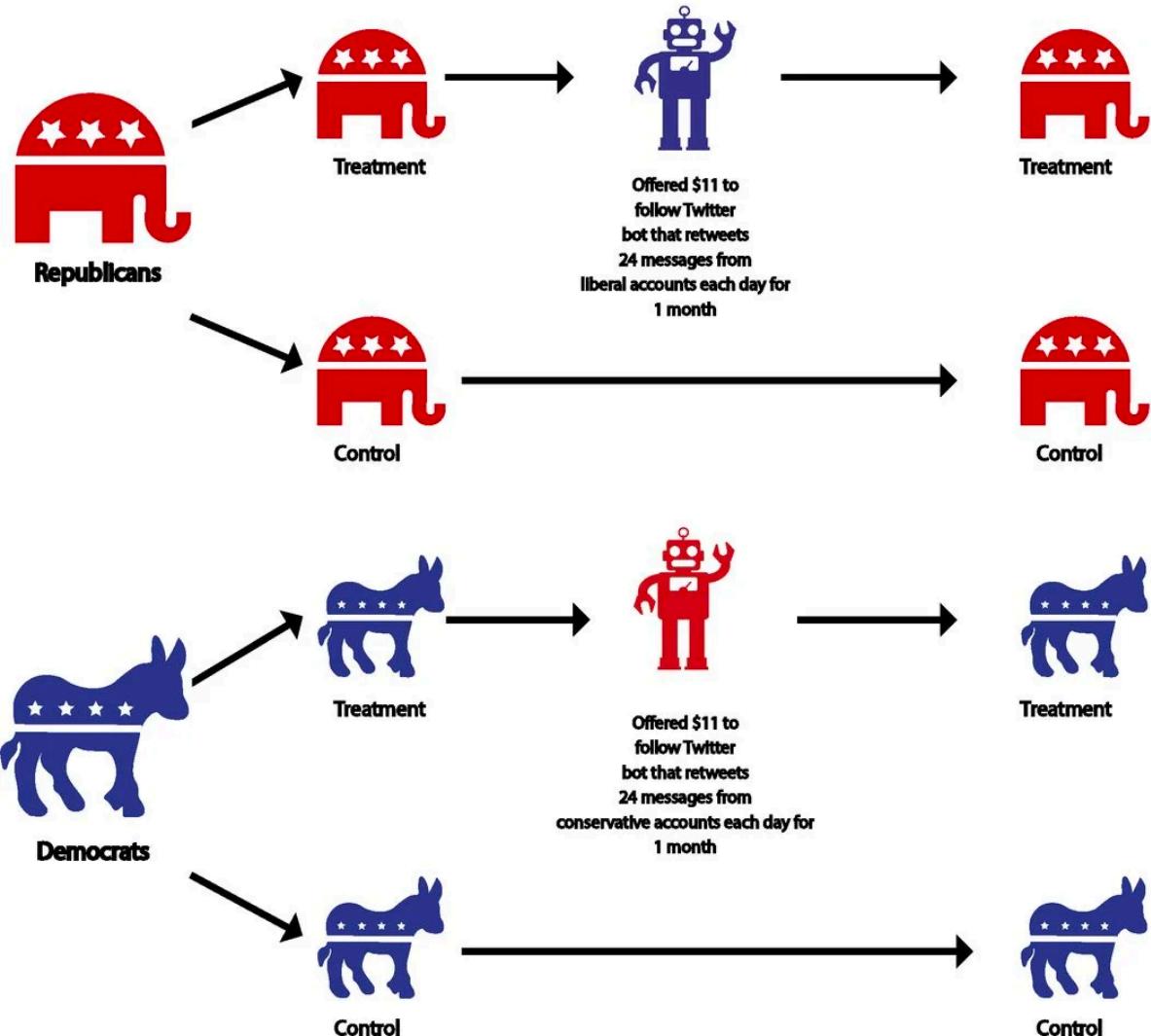
evaluate outgroup members (low complexity) more extremely than ingroup members (high complexity), all else being equal.

# Tesser's thought- polarization hypothesis

- simply thinking about an attitude can lead to an immediate polarization in the direction of that attitude.
  - Tesser's theory states that thought makes schemas more organized, internally consistent, and evaluatively uniform, so thought indeed makes the schema (evaluatively) simpler and, therefore, more polarized, which fits Linville's predictions
  - the complexity-extremity hypothesis refers to initial evaluations at one point in time, whereas the thought-polarization hypothesis refers to changes over time
  - people make an initial public commitment to their evaluations (perhaps because they are more motivated by pressures to be consistent)

**Exposure to opposing views on social media can increase political polarization**

Initial Survey	Randomization	Weekly Surveys	Post-Survey
Respondents were offered \$11 to provide their Twitter ID and complete a 10-minute survey about their political attitudes, social media use, and media consumption habits (demographics provided by survey firm).	One week later, respondents were assigned to treatment and control conditions within strata created using pre-treatment covariates that describe attachment to party, frequency of Twitter use, and overall interest in current events.	Respondents in treatment conditions informed they are eligible to receive up to \$6 each week during the study period for correctly answering questions about the content of messages retweeted by Twitter .Bots.	Respondents were offered \$12 to repeat the pre-treatment survey one month after initial survey.



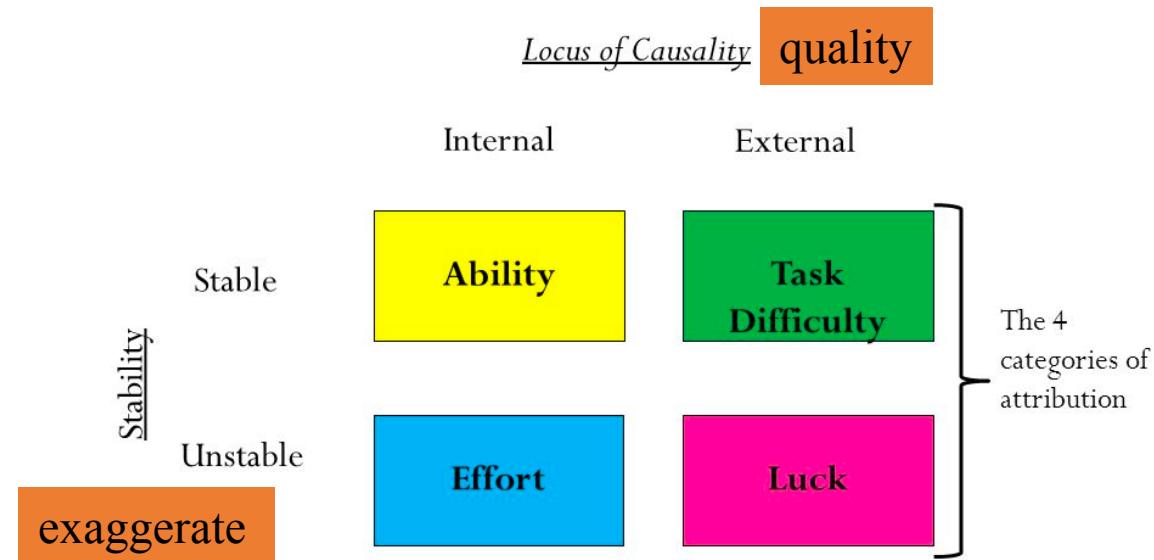
# Obtained Outcomes and Affect(i)

## Weiner's Model

### Attributions for Attained Outcomes

#### 1. Weiner's attributional theory

The locus and controllability factors determine the quality of emotions, and the stability factor tends to exaggerate them.



**Table 13.5** Examples of Weiner's locus dimension with (controllable) positive and negative outcomes

	Own Negative Outcome	Own Positive Outcome
Attributed to self & controllable	Guilt	Pride
Attributed to another & controllable	Anger	Gratitude

*Note:* This example omits uncontrollable outcomes, as well as outcome stability, more generally, and other people's outcomes.

# Hypothetical Outcomes and Affect

- **Norm theory** extends these and related ideas into a theory of how people decide what is normal and, by exclusion, what is surprising and therefore emotion producing

Norm theory's relevance for affect lies essentially in its emotional amplification hypothesis; namely, that events elicit stronger emotion when their causes are abnormal.

- Abnormality influences emotional reactions to other people; one feels **more sympathy** for someone victimized by chance;
- Again, the more easily imagined the counterfactual scenario, the **more intense** the emotion one experiences.

# Emotions as Managers of Goals

- emotions essentially manage people's priorities  
*most White people as well intentioned and rejecting their own racist beliefs*
- Emotions can control cognition, alerting people to important goals  
*emotions are alarm signals consisting of interruption and arousal, and they divert people from pursuing one goal and point them toward pursuing another goal that has meanwhile increased in importance (Simon, 1967 )*
- Intense emotions do interrupt well-planned, ongoing cognitive activities  
*(interrupt both attention and memory)*

many emotions occur when planned behavior is interrupted, or could have been interrupted

# Appraisal Theories

- term **appraisal** (Magda Arnold., 1945); her theory holds that we immediately and automatically appraise all that we encounter as a fundamental act of perception, producing tendencies to act
- **personal meaning** is viewed as a type of cognition, but not necessarily conscious, verbal, deliberate, or rational. Appraisal relates one's goals and beliefs to environmental realities (Lazarus & Smith, 1988)

## Primary appraisal

people assess personal relevance (what is at stake for me). Primary appraisal determines both motivational relevance (regarding one's own goals and concerns) and motivational congruence (regarding whether the stimulus facilitates or thwarts one's goals).

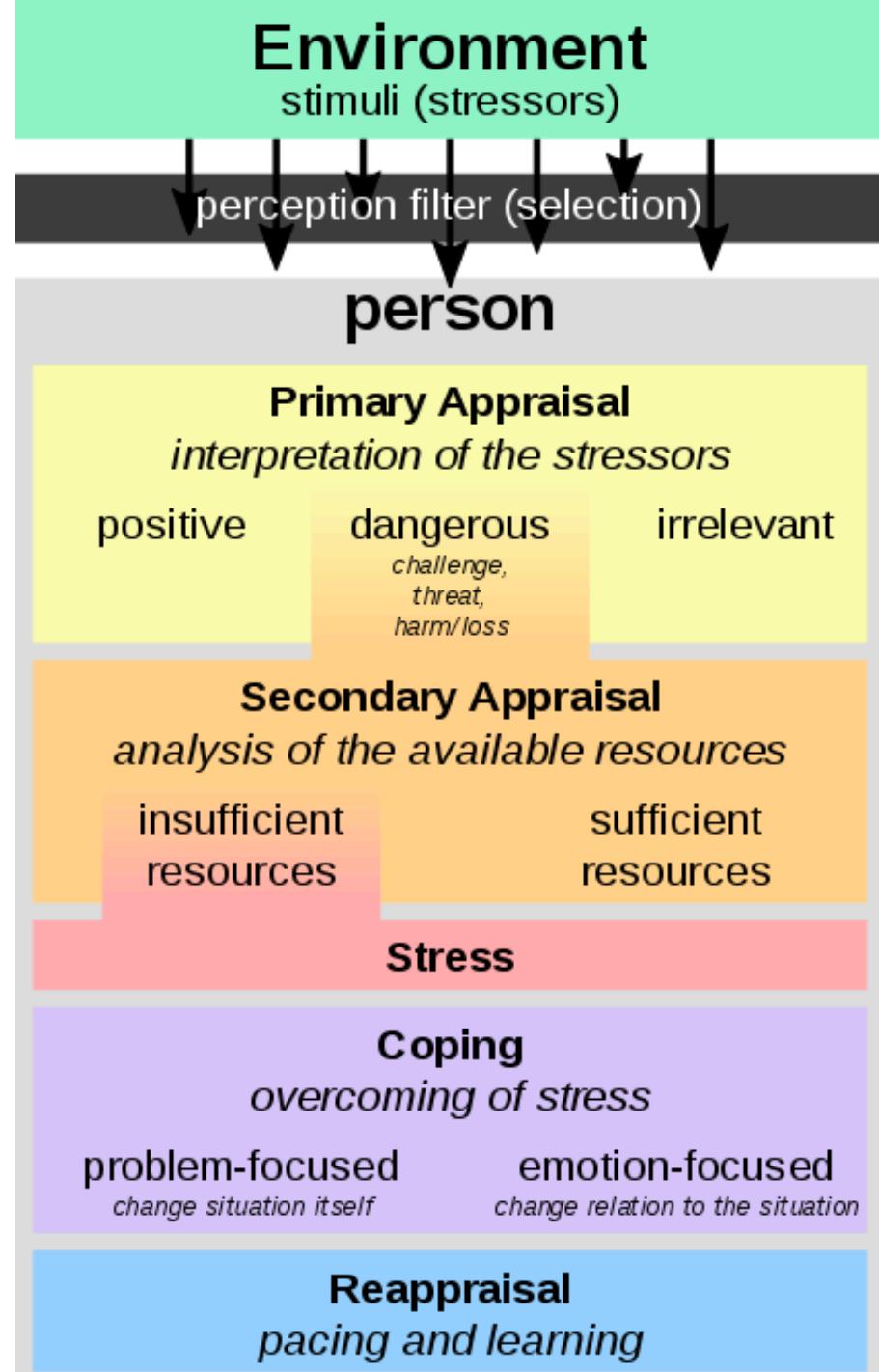
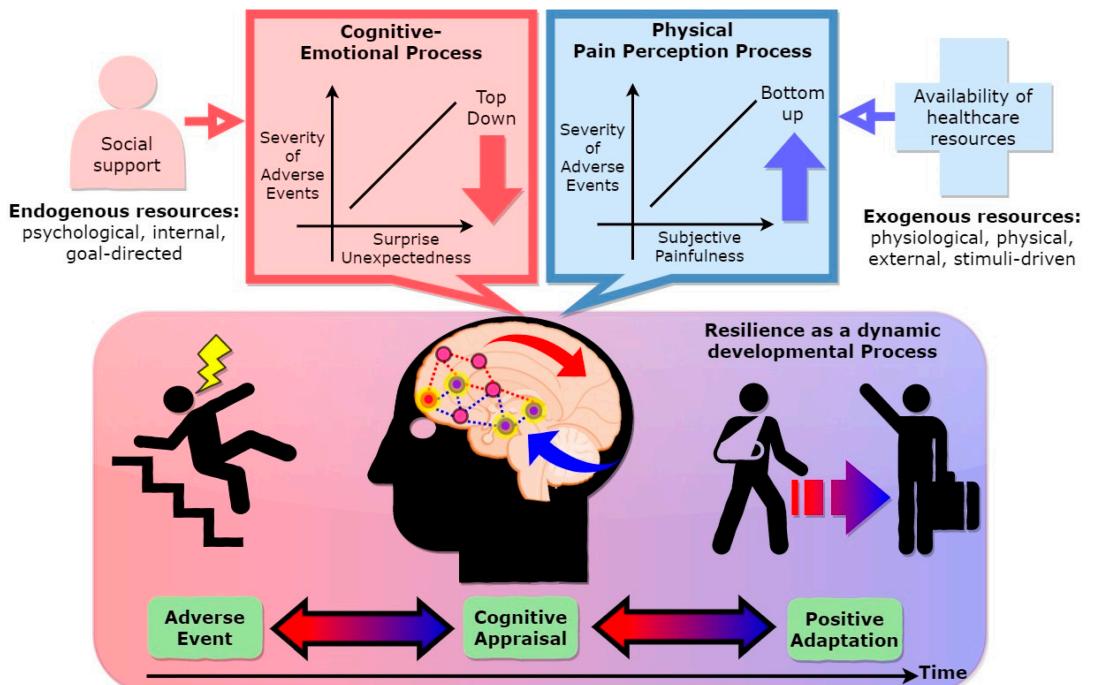
## Secondary appraisal

people consider how to cope (What can I do? What are my options?) **problem- focused coping** and **emotion-focused coping**, which attempts to adjust one's reactions through avoidant attentional strategies or changing the meaning of the threat

# Cognitive Appraisals

*people's knowledge of their circumstances and how these cognitive appraisals lead to emotion (Smith & Ellsworth, 1985)*

- (a) pleasantness, motive consistency, and valence;
- (b) agency and responsibility;
- (c) certainty, probability, and control;
- (d) attention, interest, and novelty



# Affective Forecasting

- People generally overestimate the impact of negative events,
- People fail to take account of their **psychological immune system** (i.e., self-protective mechanisms), which enables them to get past the blows that life deals.
- People may be misled by their tendency to **recall past events that were emotion-laden but atypical** (Morewedge, Gilbert, & Wilson, 2005). People also **overestimate the extent to which past events affected** them (T. D. Wilson, Meyers, & Gilbert, 2003). Hence, people fall prey to **durability bias**, expecting negative events to affect them longer than they actually do.

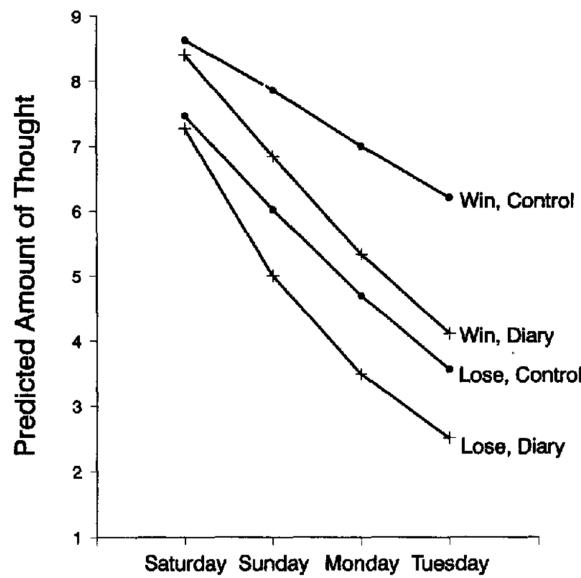
## EMOTIONAL WEATHER FORECAST



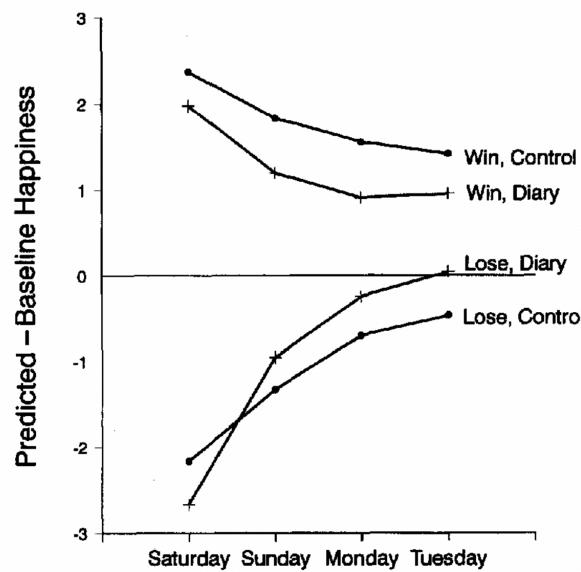
@JANELLE SILVER

**It must be troubling for the god who loves you  
To ponder how much happier you'd be today  
Had you been able to glimpse your many futures.**

—Dennis (2001, p. 72)

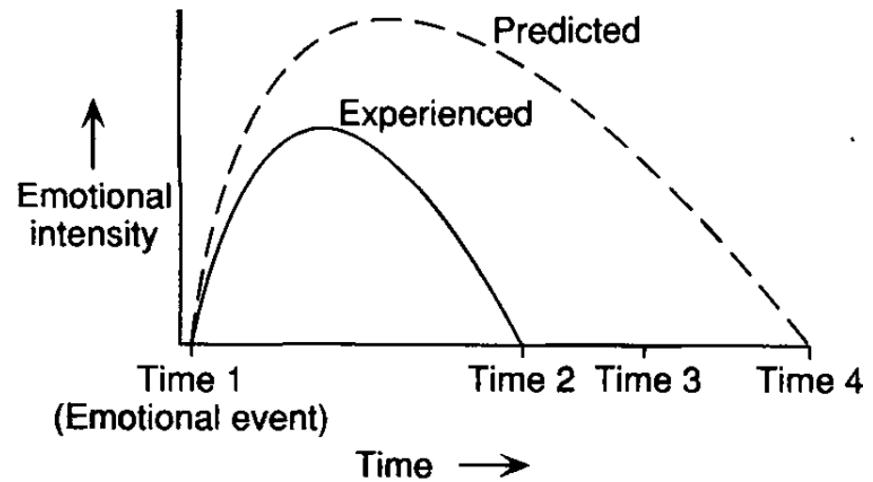


*Figure 2.* Study 1: Effects of diary on thought predictions. The higher the number, the greater the amount of predicted thought about the football game.

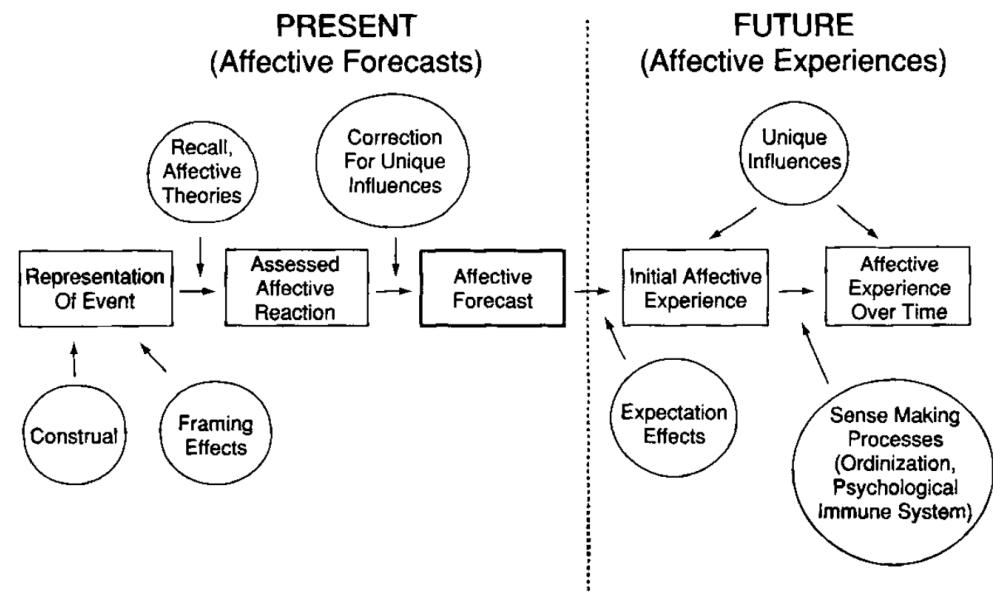


*Figure 1.* Study 1: Effects of diary on affective predictions. The higher the number, the happier people predicted they would be, relative to their baseline level of happiness.

Wilson, Timothy D., et al. "Focalism: a source of durability bias in affective forecasting." *Journal of personality and social psychology* 78.5 (2000): 821.



**Fig. 1.** The hypothetical time course of predicted and experienced emotion.



**Fig. 2.** Sources of influence and bias on affective forecasts.

## Further Readings

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