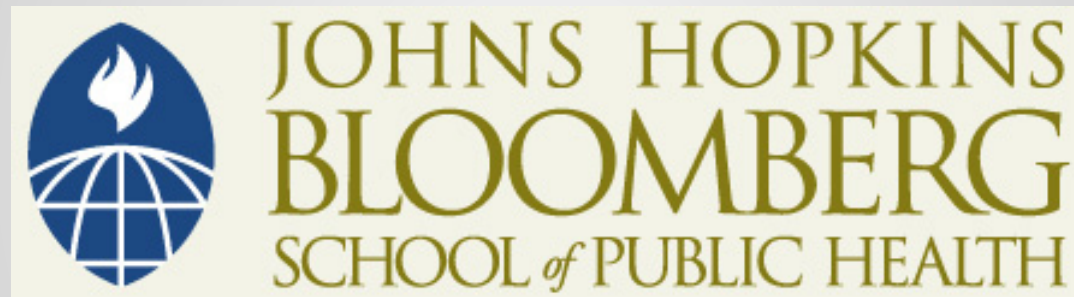


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The Interpersonal Level

Larry Wissow

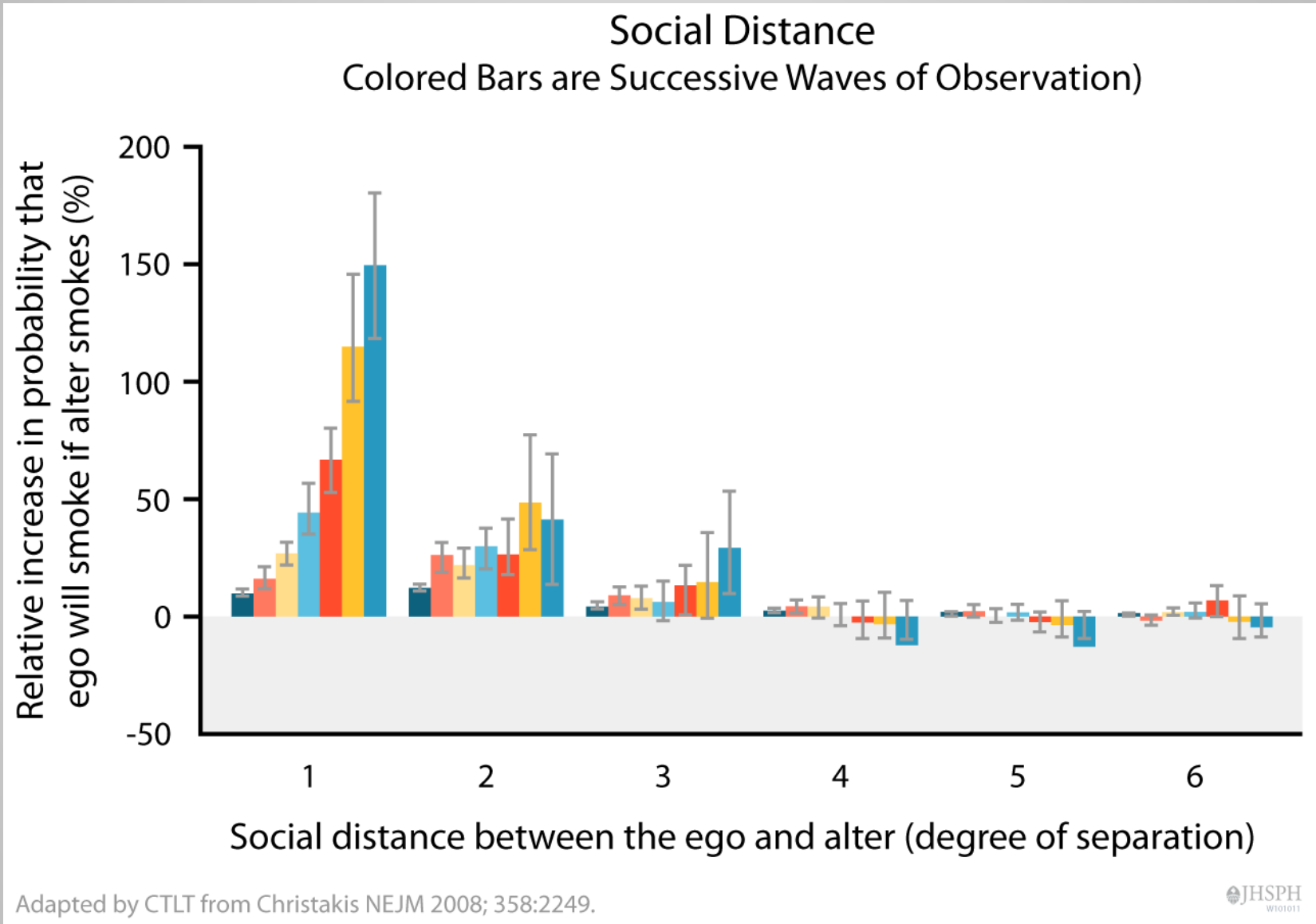
ISBT II

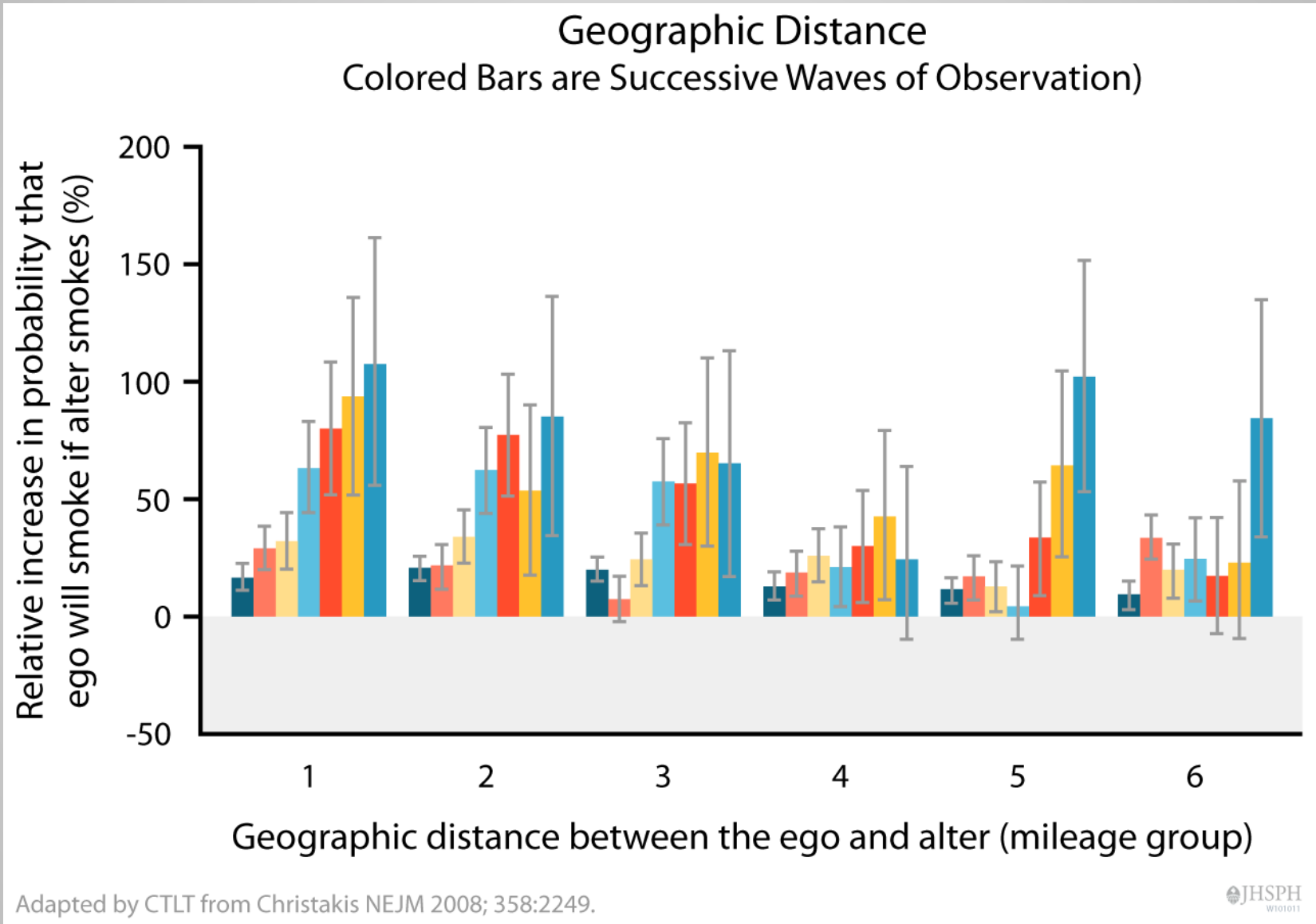
Agenda

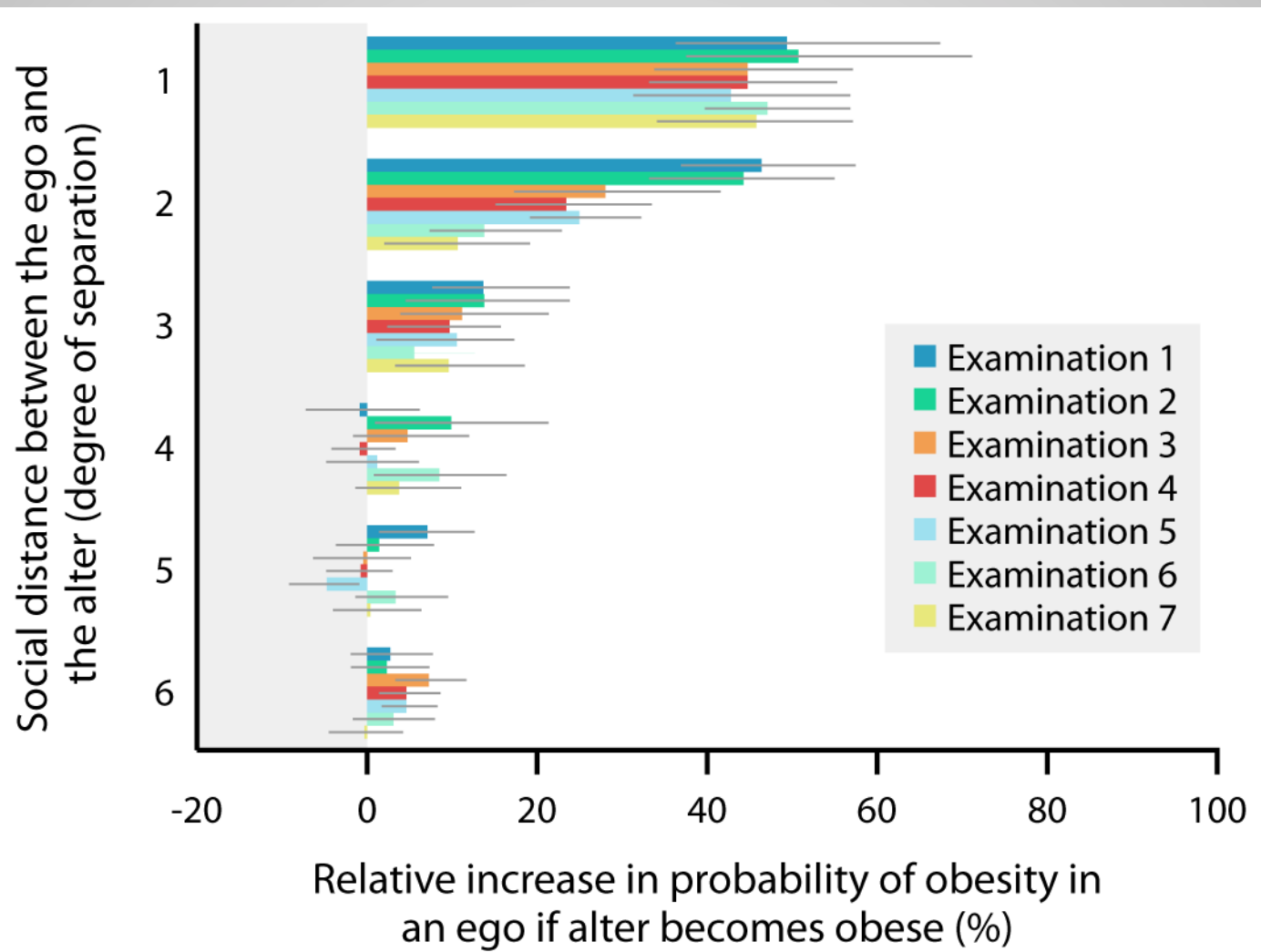
- Social cognitive theory
- Why are social influences so powerful
 - Social emotions
 - Mirror neuron systems
 - Ultimatum Game and social-emotional interference with logical choice
- Peer influences and programs
- Putting intra and interpersonal together

The problem

- Human ecology
 - Internal forces that influence behavior
 - Variations in personality, cognitive abilities of different kinds
 - Variations in regulation of our internal milieu
 - Impact of the physical environment
 - Presence or lack of key resources
 - Impact of the social environment
 - But how does it work?

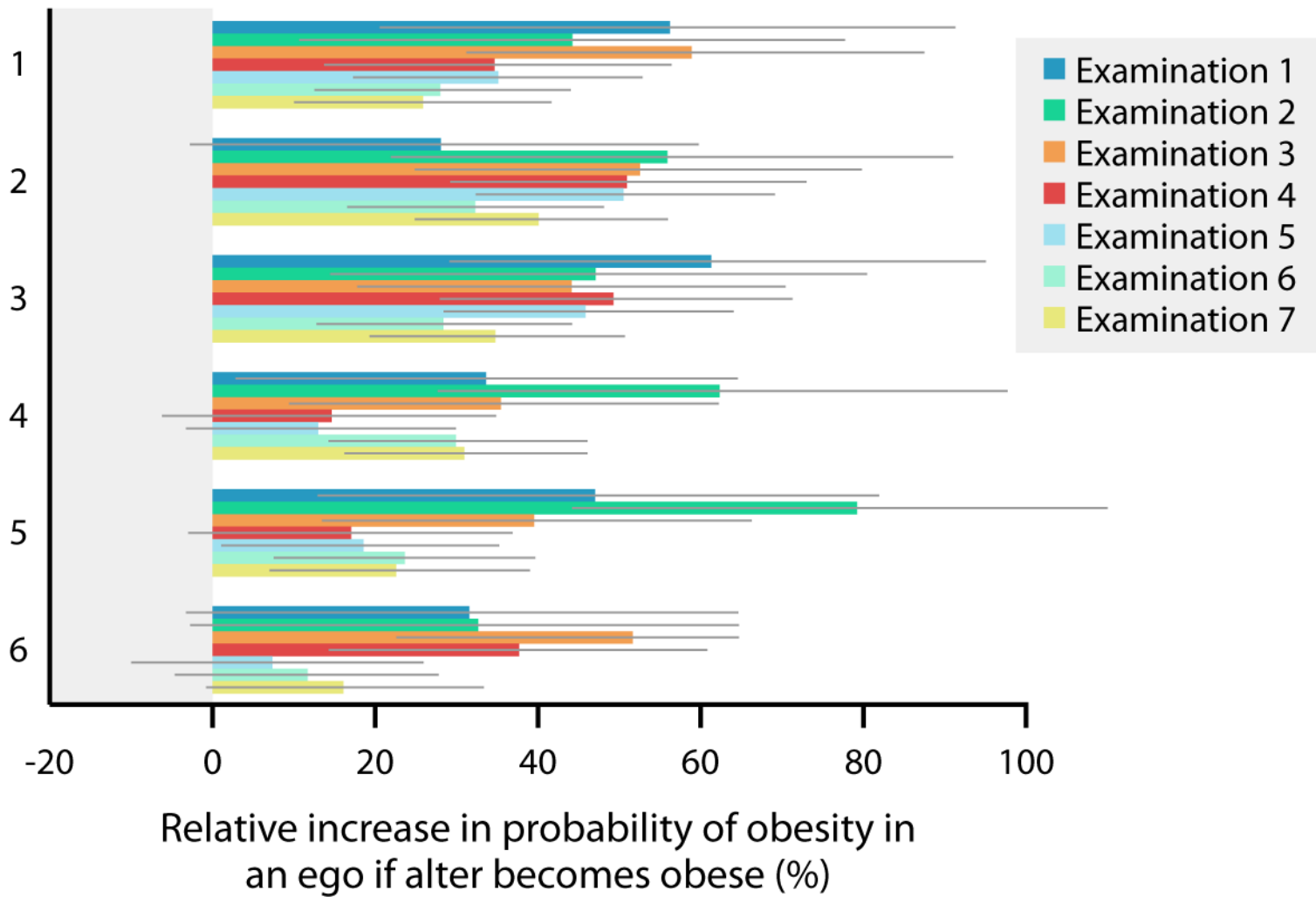






Adapted by CTLT from Christakis, 2007, NEJM 2007;357:370-9.

Geographic distance between the ego and the alter (mileage group)

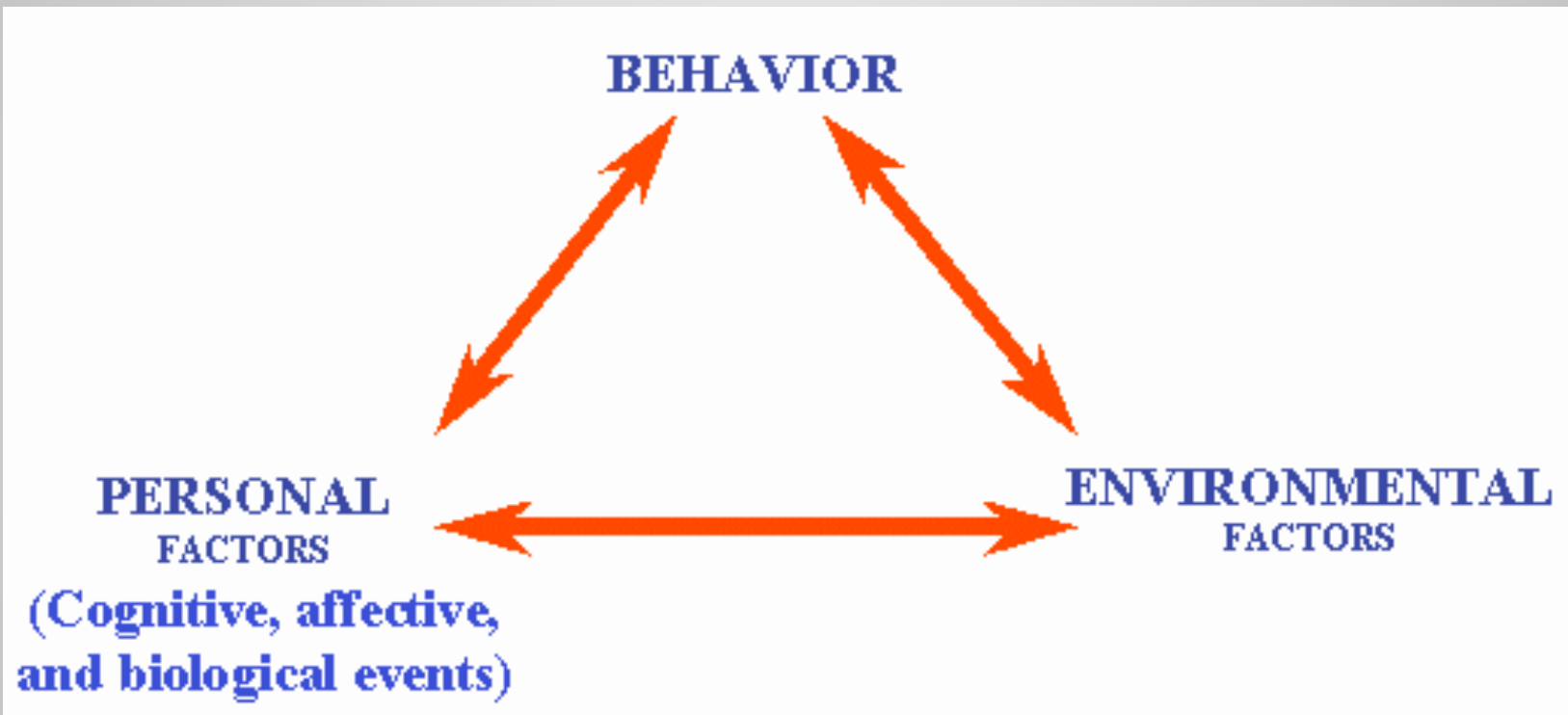


Adapted by CTLT from Christakis, 2007, NEJM 2007;357:370-9.

Social cognitive theory

- Albert Bandura 1960's
- Advances:
 - Re-enforcement could be and was often vicarious
 - Learning can take place by watching others
 - Humans not just reactive to the environment
 - Have their own potentially unique goals
 - Able to act on the environment
 - Use cognition to construct their reality

Social cognitive theory

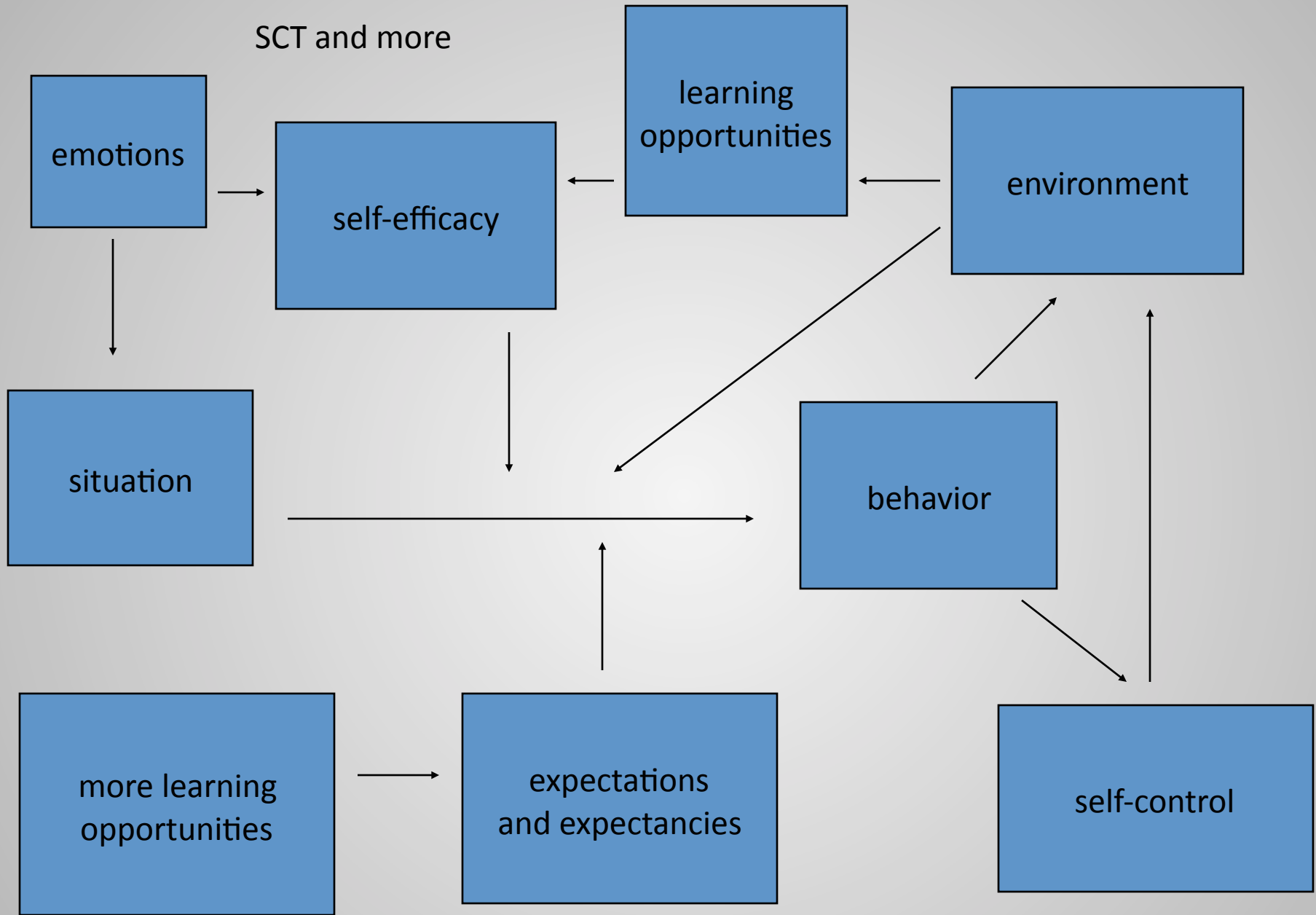


Source: Pajares (2002). Overview of social cognitive theory and of self-efficacy. 12-8-04. From <http://www.emory.edu/EDUCATION/mfp/eff.html>.

Social cognitive theory

<i>Concept</i>	<i>Definition</i>	<i>Potential Change Strategies</i>
Reciprocal determinism	The dynamic interaction of the person, behavior, and the environment in which the behavior is performed	Consider multiple ways to promote behavior change, including making adjustments to the environment or influencing personal attitudes
Behavioral capability	Knowledge and skill to perform a given behavior	Promote mastery learning through skills training
Expectations	Anticipated outcomes of a behavior	Model positive outcomes of healthful behavior
Self-efficacy	Confidence in one's ability to take action and overcome barriers	Approach behavior change in small steps to ensure success; be specific about the desired change
Observational learning (modeling)	Behavioral acquisition that occurs by watching the actions and outcomes of others' behavior	Offer credible role models who perform the targeted behavior
Reinforcements	Responses to a person's behavior that increase or decrease the likelihood of reoccurrence	Promote self-initiated rewards and incentives

SCT and more



But why the social influence? social emotions

- Embarrassment, shame, guilt, contempt, indignation, compassion, fear, happiness, etc.
- Have reward value internally (positive or negative)
- Have linked behaviors that are recognized by others
 - Body posture
 - Facial expression
 - Change in tone of voice

Social emotions

- Recognized rapidly and unconsciously starting in early childhood through visual and auditory paths

Social emotions

- Building blocks of moral systems in any given culture
 - Prevention of harm to vulnerable
 - Reciprocity and fairness
 - Loyalty to group
 - Punishment of those who betray
 - Respect for authority
 - Deference to those above

Mirror neurons and emotions

- Areas of the brain that “fire” when you do something OR when you watch/hear someone do the same thing
- Internally simulate the action or feeling
- Happens unconsciously (not “declarative”)
- Not “interpreted” – just “known”
- Seems responsible for generating emotional states internally and recognizing them in other people

Social emotions: the “ultimatum game” and fairness

- I have \$10
 - I offer to give you some
 - If you accept a share, we both get some
 - If you refuse a share, neither gets any
- Respondent should take anything
 - Something better than nothing
- Experimental data: modal successful offer is 50:50 split; lower offers mostly refused

Ultimatum game

- Respondents seem driven by fairness
- Objecting to unfairness may be a way to maintain social reputation or assert one, or to regulate behavior in a collaborating group
- Which wins out – punishing unfairness or accepting personal gain?

The brain and ultimatums

- Respondent plays 30 “games”
 - 10 no contest, 10 versus PC, 10 versus human
- PC and human present series of offers that are variously “fair” or “unfair”
- fMRI of respondent during task
- [Sanfey, Science 2003;300:1755](#) (free with registration)

Peer-to-peer/network programs

- Have expert knowledge of the social environment
- “Natural” sources of information
- Overcome logistical/technical barriers to delivery of information
- Build on observation that “similarity” important aspect of information transmission

Are all peer groups the same?

- Developmental differences in peer influence
- Differing degrees of trust among members
- Tolerance for heterogeneity of beliefs
- Tolerance for cross-membership in other networks
- Ability of the group to tolerate change

Contrasts in HIV outreach

- Finding opinion leaders
 - Relatively easier in gay versus IVDU communities because of smaller IVDU networks
- Openness to outreach
 - IVDU culture more closed, wary of outsiders

The “A Pause” program to prevent teen pregnancy (Mellanby)

- Targets young teens (ages 13-14)
- 10 sessions
 - Six sessions delivered by trained adults
 - Four sessions delivered by 16-17 year olds
 - Study replaces the peer sessions with adult leaders

Content of “peer” sessions”

- Didactics
- Discussions
- Role plays around assertiveness
- Expected outcomes:
 - Changes in knowledge, attitudes, beliefs

Correct answers to “Most teens have had sex by the time they are 16” (male respondents – females moreso)

Leader	Pre (% correct)	Post (%correct)
Peer	133 (31.1)	268 (62.6)
Adult	62 (26.2)	106 (45.3)

Comparing source effects for social versus “science” information (next slide)

Correct answers to “A girl can get pregnant if she has sex during her period” (male respondents)

Leader	Pre (% correct)	Post (% correct)
peer	185 (43.4)	286 (67.9)
adult	140 (59.6)	171 (72.2)

Conclusions about sources

- Best sources for “facts” varied by content but often was adults
- Best sources for attitudes and social norms were peers
- Peer-led sessions produced more self-consciousness and perceived as more difficult
- Open to information from peers, but may seek confirmation elsewhere

Peer sessions and “deviancy”

- Social learning not confined to positive behaviors
- Clustering deviant peers in a setting with a common “enemy” may re-enforce allegiance to the deviant group
- Marginalization is painful, but once it happens re-integration is difficult

Attempts to manipulate social norms

- Norms may be more group-specific than you think (Werch J Am Col Hlth 2000;49:85)
- “Binge drinking is bad for you!”
 - Most students don’t binge
 - Most student’s friends don’t binge
 - Many more students underestimate the rate of bingeing than over-estimate it
- Campaign ends up making it *more* normative

Back to Christakis

- What do we think are the mechanisms related to “contagion” of smoking or weight?
 - Vicarious experiences of rewards
 - Emotional valence attached to social settings
 - Shared deviancy
 - Readjustment of norms
- How to counter, intervene?

Fishbein's "transtheoretical" list

- Necessary and sufficient to produce behavior
 - Form a strong intention or make commitment
 - No environmental constraints
 - Possess skills necessary

Fishbein's "transtheoretical list"

- Also important factors
 - Believe that advantages outweigh risks
 - Normative pressure supports the behavior
 - Behavior consistent with self-image or standards
(with gentle help resolving inconsistencies)
 - Emotional reaction to behavior is positive (overall)
 - Feel that have skills (self-efficacy)

We might add

- Information needed to decide presented in understandable ways
 - Think about difficulties in data presentation and assimilation
 - Think about likely biases that will alter interpretation
- Start small
- Be patient