Shifting Temporal Horizons Influence Motivation Across Adulthood

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National Health Interview Survey:
Percent reporting Serious Psychological Distress

Centers for Disease Control and Prevention, 2003
Socioemotional Selectivity Theory
Carstensen, 1993; Carstensen et al., 1999; Carstensen, 2006)

- Humans are uniquely able to monitor time – including lifetime -- and do so at both conscious and subconscious levels.
- Goals are always set in temporal contexts.
- Because chronological age is associated with time left in life, goals change across the life span.
• Expand horizons
• Acquire knowledge
• Meet new people
• Take chances
• Live in the moment
• Know what’s important
• Invest in sure things
• Deepen relationships
• Savor life
Time horizons influence preferences

- When time horizons are manipulated experimentally, preferences change systematically. Younger people show preferences similar to the old when time horizons are shortened and older people show preferences similar to the young when time horizons are expanded. (Fredrickson & Carstensen, 1990; Fung, Carstensen & Lutz, 1999; Fung, Lai & Ng, 2001)

- When natural occurrences, such as personal illnesses, epidemics, political upheavals, or terrorism prime endings, preferences of the young come to resemble those of the old (Carstensen & Fredrickson, 1998; Fung et al. 1999; Fung & Carstensen, 2006)
Capture the unexplored world.

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Preferences for Emotional Ads by Age

% Selecting Emotional Headline

Younger

Older

Control

Preferences for emotional ads by age and condition

Recognition Memory: Type of Advertisement Slogan by Age

Recognition Memory: Type of Advertisement Slogan by Age


![Graph showing the proportion correct for Emotionally Meaningful Slogans and Knowledge-Related Slogans for young and old participants.](image-url)
In subsequent studies we identified a relative preference among older people for positive information over negative. We postulate that there is a developmental shift in motivation across adulthood in which a preference for negative information becomes a preference for positive information (Charles, Mather & Carstensen, 2003; Mather & Carstensen, 2003; Mather & Carstensen, 2005; Carstensen, Mikels & Mather, 2006; Lockenhoff & Carstensen, 2008). We call this shift the “positivity effect.”
Journal of Experimental Psychology
Amygdala activity

Amygdala Activity

Mather, Canli, English, Whitfield, Wais, Ochsner, Gabrieli & Carstensen, Psychological Science, 2004
Attentional bias scores


positive faces

negative faces
What are the costs and benefits associated with the positivity effect?
Does the positivity effect influence anticipatory responses to monetary gains and losses?
Gain Anticipation

Younger

Older

Samanez-Larkin, Gibbs, Khanna, Nielsen, Carstensen, & Knutson, 2007
Loss Anticipation

Younger  Older

Samanez-Larkin, Gibbs, Khanna, Nielsen, Carstensen, & Knutson, 2007
Cue Ratings

![Graph showing cue ratings for younger and older adults]

- **Younger Adults**
- **Older Adults**

- Valence vs. Arousal

Legend:
- Lose $0.00
- Win $0.00
- Lose $0.50
- Win $0.50
- Lose $5.00
- Win $5.00

Samanez-Larkin, Gibbs, Khanna, Nielsen, Carstensen, & Knutson, 2007
<table>
<thead>
<tr>
<th></th>
<th>Preventative Care</th>
<th>After-hours Care</th>
<th>Prescription Drugs</th>
<th>Appointment Availability</th>
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Löckenhoff & Carstensen, Psychology and Aging, 2007
If older adults focus on their feelings versus the information when making decisions, will they make better choices?
HealthNow: dental care is fully covered

HealthNow: routine exams are not covered

CareNet: prescription drugs are fully covered

CareNet: physical therapy is covered

Choice
HealthNow: dental care is fully covered

HealthNow: routine exams are not covered

CareNet: prescription drugs are fully covered

CareNet: physical therapy is covered

Choice
Main Effect of Age: $F(1, 114) = 5.49$, $p < .05$

Mikels, Lockenhoff, Maglio, Goldstein, Garber & Carstensen, *Journal of Experimental Psychology*, 2010
Age by Condition Interaction: F(1, 114) = 6.62, p < .005

Mikels, Lockenhoff, Maglio, Goldstein, Garber & Carstensen, Journal of Experimental Psychology, 2010
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