



The Interplay of News Frames on Emotional and Cognitive Processing



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Abstract

This study uses psychophysiological measures to illustrate how the interplay of frame valence (gain/loss) and frame level (episodic/thematic/mix) influences attention, cognitive elaboration, information recall and emotional response. A pilot study (N=68) with 2x3 experimental design regarding the issue of child adoption among same-sex male couples reveals that information is processed differently with different frame dimension combination

Theory

Excitative media response state: physiological arousal in response to emotional media messages, measured by increased electricity conducted by the skin.

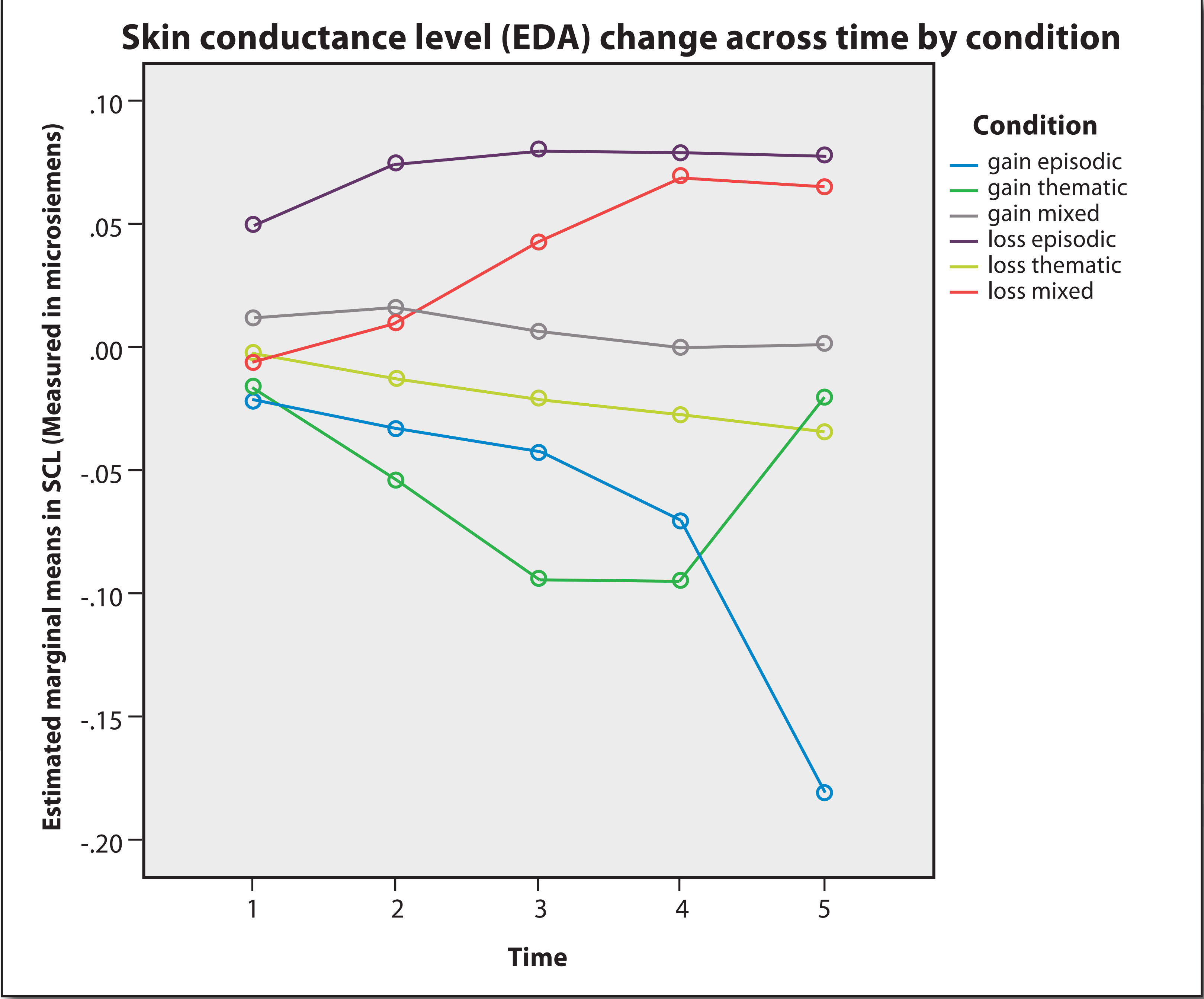
Limited capacity of motivated mediated message processing (LC4MP model): more cognitive effort is spent on processing motivationally relevant information.

News frame

Gain vs Loss
Episodic vs Thematic vs Mixed

Hypotheses

- H1:** Compared to gain frame, loss frame generates more physiological arousal, evidenced by higher level of skin conductance.
- H2:** People with more negative attitude toward issues of same-sex marriage and adoption would experience higher level of arousal.



Regression model with explanatory variables explaining Negative Attitude

Variable	Negative attitue towards gay marrige	Negative attitue towards gay adoption
Avarage skin conductance change	8.610* (SE 4.38)	5.386** (SE 2.25)
Gain	.618 (SE .49)	.625 (SE .46)
Episodic	.243 (SE .57)	.066 (SE .54)
Thematic	.261 (SE .58)	.251 (SE .55)
*p <.05 **p <.01		

Method

Data collected in the Physiology and Communication Effects Lab, at UW-Madison

2*3 design (gain/loss * episodic/thematic/mixed)
N=68

Participants were randomly assigned to one of six conditions. In each condition, news story headlines and accompanying graph/image are manipulated to represent successful or failed attempts of male couples to adopt.

Sensors were attached to participants’ hands.

Skin conductance level (indicating physiological arousal) was measured and recorded during 5secs before the start of the stimulus (baseline EDA) and 30secs of stimulus exposure. Then, we calculate the average skin conductance change by subtracting mean EDA baseline from mean EDA of 5 time blocks (15secs) of stimulus exposure.

Findings

Higher physiological arousal is associated with more negative attitudes towards gay marriage and gay adoption

Loss frame tends to generates more physiological arousal than gain frame, supporting negativity bias proposition

No significant difference in attitude across different frame combinations

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Physiological arousal by frame combinations (higher EDA = higher arousal)

