Stimulus Valence and Mood Valence in Discourse Comprehension

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Suppose you learn that two friends have rushed to a computer store so they can try to get a great deal before the store closes. Later, you hear the ending to the story: Either they got their deal or they did not. In our experiments, we ask two questions: Will you attend differently to the ending as a function of its positive or negative valence? Will the valence of your own mood—positive or negative—have an impact on the way in which you process the outcome?

Because models of discourse processing have largely been silent on these issues, we developed a theoretical perspective from other areas of inquiry. To address the impact of outcome valence, we drew on research that documents the existence of a *negativity bias* in several domains (Rozin & Royzman, 2001). People give more immediate attention and apply more thorough cognitive processing to negative than to positive information. With respect to mood, we drew on literature that documents *mood congruency* (Bower & Forgas, 2000). People focus more attention and better remember information congruent with their mood and are also more likely to formulate judgments congruent with their mood.

Our predictions for how these two forces interact in circumstances of discourse processing emerge from prior work on the time course of local and global effects on narrative processing (Egidi & Gerrig, 2006). We expected that stimulus valence would impose strong attentional constraints during moment-by-moment comprehension and prevail over mood. However, once people have formed a complete representation of the discourse, mood should become a more dominant force and lead to mood congruency.

In two experiments, we induced participants to experience positive or negative moods ($ts > 8$, $ps < .001$). Participants read stories with positive or negative endings.
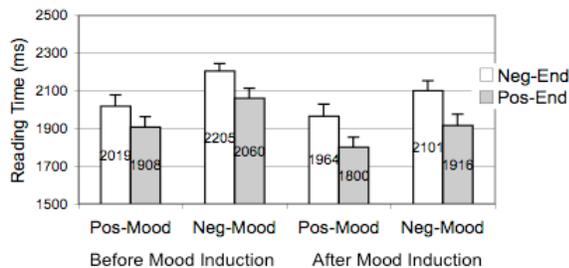

Figure 1: Reading times of endings as a function of mood.

We normed the endings to ensure that readers thought both outcomes were equally likely. We recorded participants' reading times for (Exp. 1) and judgments about the likelihood (Exp. 2) of those endings. In Experiment 1, participants (N=95) read some stories before and some after the mood induction. As shown in Figure 1, participants read the negative endings more slowly ($Fs > 15$, $ps < .001$). The negativity bias occurred both before and after the mood inductions—ending valence did not interact with the stage of the study (before or after mood induction) or with the mood valence ($Fs < 1$).

In Experiment 2, participants (N=60) rated how surprising they found the positive or negative endings. This task differs from moment-by-moment reading in that it requires evaluation of the endings in light of the entire story. The scale ranged from (1) *not surprising at all* to (9) *extremely surprising*. As shown in Figure 2, participants judged endings congruent with their mood as less surprising ($Fs > 6$, $ps < .05$).
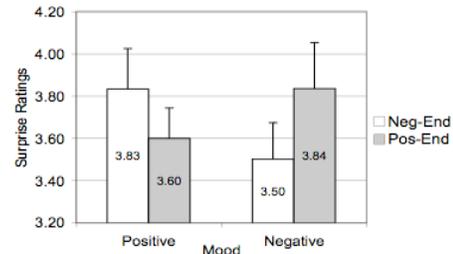

Figure 2: Surprise ratings of endings as a function of mood.

This research illustrates the impact of outcome valence and mood valence on discourse comprehension: People devote more time to integrate negative events into story contexts; their mood influences their sense of the likelihood of story outcomes. These results broaden our theoretical understanding of discourse comprehension.

References

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