

**Saving the last for best:
A positivity bias for end experiences**

Ed O'Brien & Phoebe C. Ellsworth

University of Michigan

In press, *Psychological Science*

Saving the last for best:

A positivity bias for end experiences

Imagine your favorite restaurant is closing and your final meal tastes especially delicious. Is it actually tasty, or is it enjoyable because you know it is the last one?

Previous research suggests that salient endings to events may foster more positive attitudes toward them. For example, students reminded of graduation feel greater affection for their school (Ersner-Hershfield, Mikels, Sullivan, & Carstensen, 2008) and people who consider relocating value hometown friends more highly (Fredrickson & Carstensen, 1990). However, “lasts” are also common in everyday life and need not involve significant experiences. In a typical day, Linda might read the last chapter of a book, eat the last bite of lunch, listen to the last symposium speaker, and give the last kiss goodnight. And she may assess the quality of each (e.g., “How interesting was that final talk?”). Serial positioning may affect such assessments when made salient because people are highly sensitive to temporal contexts, which influence many evaluations besides major life episodes (Aaker, Rudd, & Mogilner, 2011; Levine, 1997; McGrath & Tschan, 2004). Thus, just as graduations trigger warmer perceptions of school, people might judge everyday “last” events more positively because they more generally signal an “end” to the experience.

To test this possibility, we recruited participants to eat different flavors of chocolates one by one. We predicted that (i) the last chocolate would be more enjoyable when its finality was salient, (ii) it would taste better than the others irrespective of flavor, and (iii) the experiment would be more enjoyable overall because endings drive global evaluations (e.g., *duration neglect*: Redelmeier & Kahneman, 1996); if the last

chocolate tastes better, the overall experience should seem better.

Method

Fifty-two students (28 males), recruited individually in public campus areas, participated in an alleged taste test of new Hershey Kisses containing local ingredients. Unbeknownst to participants, they would eat 5 unnamed chocolate flavors: milk, dark, crème, caramel, and almond. An experimenter, blind to the hypothesis, pulled a random flavor from a hidden pocket inside a full bag of candy (to conceal the true number) that contained 1 of each. Participants then ate and rated it from 0 (*not at all enjoyable*) to 10 (*extremely enjoyable*). They also described each flavor so we could record actual orders.

Participants were randomly assigned to the “next” or “last” condition. In the “next” condition, the experimenter said, “Here is your *next* chocolate,” before each chocolate after the first. In the “last” condition, the experimenter followed this script but said, “Here is your *last* chocolate,” before the fifth chocolate. Thus, participants were either unaware or aware of which chocolate was last.

Participants then indicated which chocolate they liked best and how much they enjoyed the experiment overall, followed by a manipulation check and demographic questions. Finally, they were funnel-debriefed (none indicated suspicion).

Results

First,¹ was the fifth chocolate more enjoyable when described as “last” rather than “next”? Yes. “Last” participants rated the fifth chocolate better ($M=8.18$, $SD=1.87$) than “next” participants ($M=6.26$, $SD=2.30$), $t(43)=3.07$, $p=.004$, $d=0.92$, liking it more than any other chocolate. As expected, ratings of Chocolates 1-4 did not differ by condition, $ts<1.00$ (see Figure 1).²

Second, were “last” chocolates preferred to others? Yes. The majority of “last” participants chose the fifth chocolate as their favorite (64%), significantly more than “next” participants (22%), $\chi^2(4)=9.95, p=.04$.

Third, was the experiment more enjoyable overall when it ended with “last” chocolates? Yes. As predicted, the effect of condition on overall enjoyment was mediated by ratings of the end chocolate, $\beta=.38, p=.016$. Thus, the experiment was rated more enjoyable by “last” participants ($M=8.73, SD=1.42$) than “next” participants ($M=7.65, SD=1.70$), $t(43)=2.30, p=.026, d=0.69$.

Discussion

Endings are powerful. Long painful experiences that end relatively pleasantly are remembered better than short painful experiences that do not (Redelmeier & Kahneman, 1996). A short life that ends on a high note seems better than a long life that ends in mediocrity (Diener, Wirtz, & Oishi, 2001). Moral behavior at the end of life outweighs immoral behavior leading up to it (Newman, Lockart, & Keil, 2010). And significant end events (e.g., graduation) promote positive event-related experiences (Kurtz, 2008).

This research demonstrates the power of endings in everyday life and in real-time. Participants who knew they were eating the final chocolate of a taste test enjoyed it more, preferred it to other chocolates, and rated the overall experience as more enjoyable. These results are especially intriguing because the “end” was somewhat artificial and impermanent (e.g., participants could still eat chocolates after finishing our experiment). This suggests that the same experience becomes better simply because people are aware that it is the last in a series, which influences subsequent evaluations and preferences. This observation probably extends far beyond Hershey Kisses. For example, the last book

of a series or speaker in a symposium may receive unwarranted praise; research subjects may give overly-positive responses on last tasks of experiments; and last job applicants or students (e.g., final papers to grade) may look especially qualified.

Such implications suggest many directions for future research. Why, exactly, are everyday experiences enhanced upon signaling their end (e.g., evolved appreciation for anticipated scarcity: Kurzban & Leary, 2001), and through what mechanisms (e.g., selective attention: Carstensen & Mikels, 2005; increased savoring: Quoidbach, Dunn, Petrides, & Mikolajczak, 2010)? What are potential boundaries (e.g., hedonic adaptation: Frederick & Loewenstein, 1999) or parameters (e.g., positive versus negative experiences)?

Until then, consider the cheaper option during your final visit to a restaurant – it may taste just as delicious as any other.

Notes

1. Seven participants were eliminated for incorrect manipulation checks (i.e., What information preceded the fifth chocolate? Next/Last/None/Don't know).
2. Actual flavors were roughly equal across each position for both conditions, making it unlikely that "last" participants ate better fifth chocolates by chance. Nonetheless, 24 additional participants completed the taste test in a set order. "Almond" was randomly chosen as fifth. Replicating the effect, "last" participants enjoyed it more ($M=7.98$, $SD=1.71$) than "next" participants ($M=6.09$, $SD=1.99$), $t(22)=3.31$, $p<.001$, $d=1.02$.

References

- Aaker, J., Rudd, M., & Mogilner, C. (2011, in press). If money doesn't make you happier, consider time. *Journal of Consumer Psychology*.
- Carstensen, L., & Mikels, J. A. (2005). At the intersection of emotion and cognition: Aging and the positivity effect. *Current Directions in Psychological Science*, *14*(3), 117-121.
- Diener, E., Wirtz, D., & Oishi, S. (2001). End effects of rated life quality: The James Dean effect. *Psychological Science*, *12*(2), 124-128.
- Ersner-Hershfield, H., Mikels, J. A., Sullivan, S. J., & Carstensen, L. L. (2008). Poignancy: Mixed emotional experience in the face of meaningful endings. *Journal of Personality and Social Psychology*, *94*(1), 158-167.
- Frederick, S., & Loewenstein, G. (1999). Hedonic adaptation. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 302-329). New York: Russell Sage Foundation.
- Fredrickson, B. L., & Carstensen, L. L. (1990). Choosing social partners: How old age and anticipated endings make people more selective. *Psychology and Aging*, *5*(3), 335-347.
- Kurtz, J. (2008). Looking to the future to appreciate the present: The benefits of perceived temporal scarcity. *Psychological Science*, *19*, 1238-1241.
- Kurzban, R., & Leary, M. R. (2001). Evolutionary origins of stigmatization: The functions of social exclusion. *Psychological Bulletin*, *127*, 187-208.
- Levine, R. (1997). *A geography of time*. New York: Basic Books.
- McGrath, J. E., & Tschann, F. (2004). *Temporal matters in social psychology: Examining*

- the role of time in the lives of groups and individuals*. Washington, DC: American Psychological Association.
- Newman, G. E., Lockhart, K. L., & Keil, F. C. (2010). "End-of-life" biases in moral evaluations of others. *Cognition*, *115*(2), 343-349.
- Quoidbach, J., Dunn, E. W., Petrides, K. V., & Mikolajczak, M. (2010). Money giveth, money taketh away: the dual effect of wealth on happiness. *Psychological Science*, *21*(6), 759-763.
- Redelmeier, D. A., & Kahneman, D. (1996). Patients' memories of painful medical treatments: Real-time and retrospective evaluations of two minimally invasive procedures. *Pain*, *66*(1), 3-8.

Figure 1. Enjoyment across chocolate position and condition. Error bars $\pm 1SE$.

