

Concept

Peak-end rule

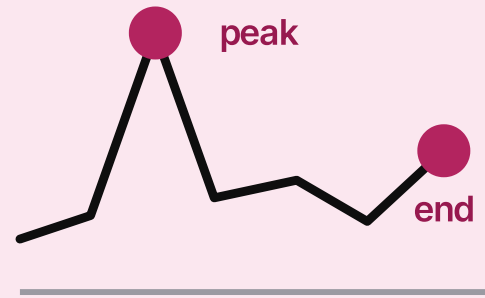
We remember an experience by its most intense moment and by how it ends, not by how long it lasted.

In Spanish

Regla del pico y el final

Origin

Kahneman et al. (1993)



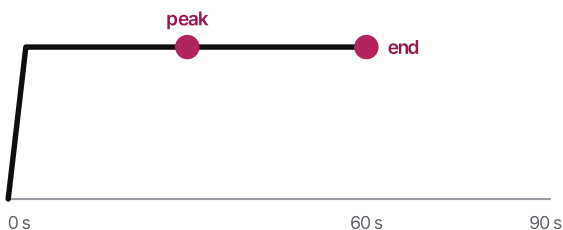
What problem it addresses

It explains why a longer experience with a good ending can be remembered more fondly, and why a single bad moment shapes how we judge a service.

An example

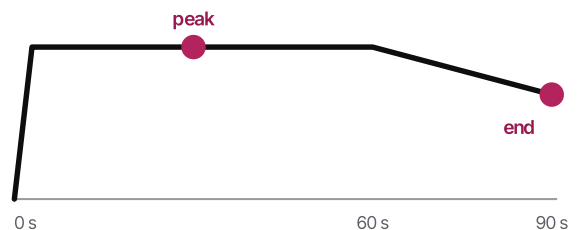
In an experiment, each person put their hand in very cold water twice. Then they had to choose which of the two trials to repeat.

Trial A



60 seconds at 14 °C. **Ends at its worst.**

Trial B



The same 60 s plus 30 s more with slightly less cold water. **Ends better.**

B has more cold in total, but most people preferred to repeat it.

Why it happens

1

Memory does not keep every second of an experience.

2

It keeps two moments: the most intense and the last.

3

Duration barely counts. More time is not remembered as worse.

Applications in design

Use it like this

Take care of the ending: the goodbye, the bill, the cancellation. And reduce the worst moment before polishing the rest.

Avoid

Dressing up the ending to cover a service that is bad from start to finish.

Don't fall for it

When judging something, also remember how long it lasted and how the middle went, not just the ending.

Memory $\approx$ (peak + end) $\div$ 2

What the research says

What we report after an experience looks more like the average of the peak and the end than the sum of all its moments. This was shown with cold water (Kahneman et al., 1993) and with real colonoscopies (Redelmeier and Kahneman, 1996).

● ● ● **Solid evidence.** The formula is an approximation, not an exact rule.

Connections

Used in

Experience design

Service design

Journey map

Related to

Von Restorff effect

Touchpoint

Negativity bias

Authors and works

1993	Daniel Kahneman et al.	Showed it with the cold water experiment.
1996	Donald Redelmeier and Daniel Kahneman	Confirmed it with real patients during a colonoscopy.

Sources

Original sources

- Kahneman, D., Fredrickson, B. L., Schreiber, C. A., & Redelmeier, D. A. (1993). When more pain is preferred to less: Adding a better end. *Psychological Science*, 4(6), 401–405. [View source \(https://doi.org/10.1111/j.1467-9280.1993.tb00589.x\)](https://doi.org/10.1111/j.1467-9280.1993.tb00589.x)
- 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. [View source \(https://doi.org/10.1016/0304-3959\(96\)02994-6\)](https://doi.org/10.1016/0304-3959(96)02994-6)

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