One Curve to Rule Them All

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If you are interested in software and its trends, there is a curve (Fig. 1) that you will come across again and again. Interestingly, in different diagrams and context.

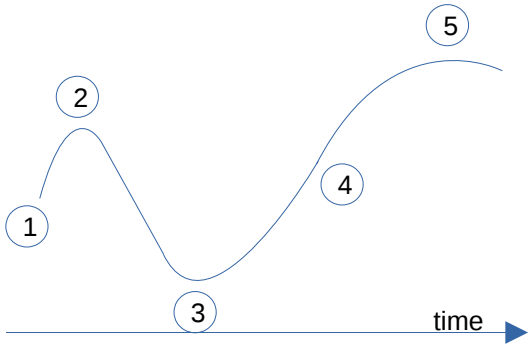

Fig. 1: The curve

Incarnation I

Assuming your company has planned a reorganization in the past that impacted your department, you may have been presented with this curve as part of a chart illustrating the Kübler-Ross grief cycle. Although originally created with death in mind, the model is often used to explain the emotions (y-axis) one goes through when experiencing loss in general. So do not worry if you are shocked after the reorganization announcement, once you get used to it several days later, it you should be fine again. Regarding the states refer to table 1.

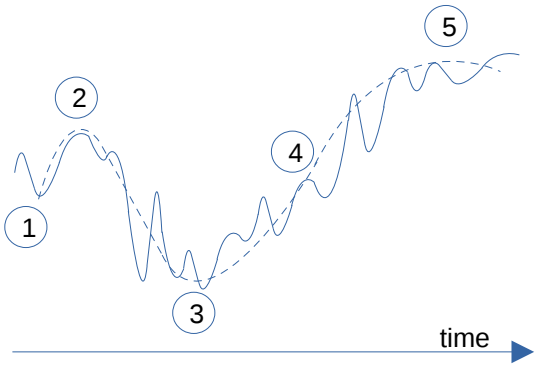

Fig. 2: My curve

Incarnation II

The same curve is also used to describe the Dunning-Kruger effect, which explains the relation of persons with less expertise and their tendency to overestimate their ability. However, it seems that the curve was not part of the original publication but associated later. Anyway, I can observe similar state transitions in myself when I am learning something new. Though for me, the grade of self-assessment on the y-axis looks more like Fig. 2. There are many more rapidly changing (daily) ups and downs. The names of the striking points can be found in table 1.

Incarnation III

The third incarnation of the same graph is the Gartner hype cycle, which visualizes the relation of a given technology's visibility (y-axis) over time. Since there are a lot of hypes these days, you can see references to this cycle quite often, most recently in relation to ChatGPT.

Table 1: The five states of the three models.

	I Kübler-Ross	II Dunning-Kruger	III Gartner
1	Shock		Technology Trigger
2	Denial	Peak of "Mount Stupid"	Peak of Inflated Expectations
3	Anger & Depression	Valley of Despair	Through of Disillusionment
4	Bargaining	Slope of Enlightenment	Slope of Enlightenment
5	Acceptance	Plateau of Sustainability	Plateau of Productivity

Discussion

What makes this curve so versatile that it can be used to explain three (and maybe even more) effects? Fig. 2 looks like a Fourier series, maybe that is why it fits in so many situations? Well – no. The point is that the three phenomena above are not all that different, they are all related to change. Change through a stroke of *fate*. Change through learning. Change due to an emerging new technology. In all these cases, the curve illustrates the impact of the caused change over time, the impulse response of an elastic system (criticism Gartner).

My takeaway message

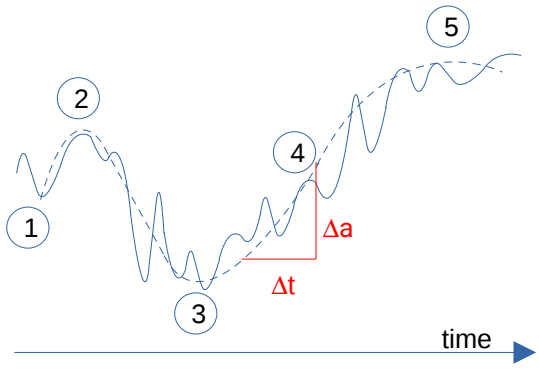

Fig. 3: The change of change

A hypothetical chart just showing change in response to change, what is it good for? Personally, I try to have an eye on the curve progression to avoid getting trapped by the "It will get worse before it gets better" fallacy (Dobelli). Whenever there is no positive progress over a longer period of time (Fig. 3), I guess it is worth asking questions like: The reorganization shows no real improvement, maybe someone missed something important in the planning phase? I still feel lost about the new thing I am trying to learn, maybe I should consult another book, tutorial or person? There is still hype around that new technology, looks like some have a keen interest in keeping the hype alive or it really is a game changer and I should finally get into it.

References

Kübler-Ross	https://en.wikipedia.org/wiki/Five_stages_of_grief, last access 2023-03-05.
Dunning-Kruger	https://en.wikipedia.org/wiki/Dunning%E2%80%93Kruger_effect, last access 2023-03-05.
Gartner	https://en.wikipedia.org/wiki/Gartner_hype_cycle, last access 2023-03-05.
Dobelli	Dobelli, R., 2013. The Art of Thinking Clearly: Better Thinking, Better Decisions. Hodder & Stoughton Ltd.