

Making vs Using Mental Maps

Peer Cruelty

"You aren't smart as me"

"I think her child isn't very good as mine in school"

If these words, summon in addition to just a voice, a painful memory (or two) then we all traversed through a common point in the latent space of our helpless childhood.

They say comparison is the thief of joy, but just as thieves (and politicians) rob from one source and bring to another, it brings joy when we compare ourselves to some peer who tries, but fails to reach our level in a common race of sorts. School is the first and most obvious one where this is seen, but lately the post-college life has been compared to a sort of rat race with various comparisons.

A different approach to look at this, is from the perspective of Learning theories from psychology and neuroscience

It has been purported for long, that learning is a gradual process with a nice, elegant curve. But it has also been said its abrupt, akin to punctuated evolution. No change for long followed by abrupt shifts (aha moments!) and then super rapid advances.

The data isn't as beautiful as the theories however. No matter how beautiful a theory is, she has to somehow court the beastly data, trying all her charm to wile it without getting violated. Maybe its inherent in us humans to not see a beautiful damsel stripped of her honors that we hold on to theories more than wanting to see data savage it apart.

Learning Curve

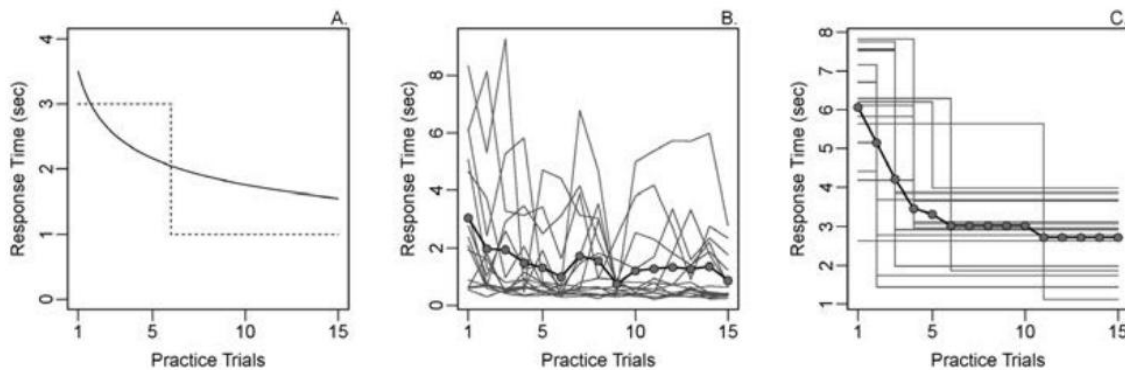


Figure 9.1 Estes' (1956) example of the difficulty of linking learning-curve data to learning theories. **(A).** Predictions: the solid and dashed lines show predictions from the gradual-decrease and all-at-once models of learning, respectively. **(B).** Data from Reder and Ritter (1992). The gray lines show the times for 15 individuals as a function of practice; the circles are means across individuals, and these means decrease gradually with practice. **(C).** Hypothetical noise-free data from the all-at-once learning model. Individuals' data are shown as thin gray lines. The mean, shown with points, nonetheless decreases gradually. This panel shows that the mean over individuals does not reflect the structure of any of the individuals.

Consider Estes' famed work from 1956. The biggest (and only) thing to notice is this : everyone has the same patterns of learning, but everyone has different paths to reach convergence.

In other words, everyone in the study makes the map but at different times. Perhaps not due to intelligence, or IQ, or race, or any politically abused term but rather how they represent the whole in an interconnected scheme of bits.

Some might make it fast, but it ultimately turns out to be fragile (what practitioners called lack of generalizability), while others can be slow to make but the map is resilient to time and adaptive to changes. Still others, rarely can link unrelated maps in their memory, using some conceptual leap, visible only after the original map was formed. We are more different within than we realize.

K was my best friend in school and my mother always compared me to him (and him to me as well). I never understood why him, and there was a deep-seated unrest of comparing one to one's childhood best friend for past years suddenly when one is in a certain age. Enemies should be opaque to each other in terms of reading intent. Best friends cannot have that. What I know, he knows and very little in the way. In all the relevant and necessary (for me) ways I couldn't be jealous of anyone, but somewhere in the

process my parents and peers ensured it is not a specific someone that needed to be compared to, but the process of comparison itself that must be upheld. At all times.

Now, this is ok, since Mother Nature raises her sons through competition (among other processes), but is it any relevant to compare a bat to a leopard, as much comparing one's ear to one's legs?

It's deeply rooted in our mind, culture and perhaps DNA to compare, contrast and select. But optimally, it should be only among the ones that are competing for the same, single objective by contrasting approaches. Say, a Swayamwar of many men openly courting for a woman of high nobility or an entrance exam deciding who becomes a doctor vs dentist. That kind of stuff. School isn't that stuff.

The first problem then, is to ensure the person(s) we are comparing are **NEEDING** to have the same map? put in other way, are we going for the same goal? Two employees might want promotions for *very* different reasons ; person A wants it so that they want to organize and direct a project they personally invested in, to affect the company bottom line better. Person B might be needing it to ensure her next job 1 - 1.5 years later is a massive career step financially and socially. Often times, person B wins such battles than person A simply because deception is always the sharper weapon in decisions made by convincing other humans, and more you are committed truthfully to an idea, the less your capability to deceive.

20 years later now that I see myself a neuroscientist and K as a software engineer in a company, both in northern Europe, and both in a relationship with northern girls.

One can ask, of what use was the comparison, if the map we were building were of two different countries to begin with?