

## **Don't let history kill your product: what designers can learn from economic history.**

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Designers are forward thinking – they look at the way things are, and think of ways to make them different and ideally better. Implicit in this process is behavior modification as new concepts and products necessarily entail a change in the way people use it, think about it and interact with it. In other words, people are expected to learn and adapt. A successful product (at the sales level, but also at the aesthetic level) is one that makes it relatively easy for people to learn and to adapt. To understand how people adjust their behavior, the designer might want to turn to research in psychology or education. Or it might be useful to look at past product successes and failures in changing consumers' behavior: this is what economic historians do.

Economic history is the study of economic events, in the past. One might wonder what a 'forward thinking' group might find in the detailed examination of past economic events? Certainly, designers seek inspiration in the past- in past fashion or cultural trends – but are there additional insight that the economic past might yield? On a first level, designers might be curious about the circumstance that made it possible for their profession to emerge. Larger, cheaper and faster production was the necessary condition for the advent of the consumer society that design then came to service. Although certain design movements are 'anti-consumerist' this should not make us forget that mass production enshrined the separation between building (manufacturing) and conceptualizing (designing), thus laying the foundations for professional product design.

But this may not be the kind of practical knowledge designers need from fellow social observers who have a few tips to give, in particular in the field of consumer learning and product adoption. The study that put economic history on the path of practically every student in the social sciences is a story about keyboards. You use one everyday: the QWERTY (read the top left 6 letters on your English keyboard next time you sit at a computer). This letter combination was developed in the U.S. in the 1860s. The first typewriter model had letters in alphabetical order. Unfortunately, early prototypes



showed that fast typing jams (type writers had arms and stamps, just as pianos do), so the solution was to devise a keyboard that would purposely slow us down. Have you ever wondered why the “A”, one of the most commonly used letters, is so far left and can only be reached with your weakest finger (the left pinky)? Well, Mr. Type Writer Inventor wanted you to struggle with the “A”, not press it down too strong so that it would not jam the machine. In addition to these anti-ergonomic concerns, he added a marketing trick: notice that “type writer” can be punched out with one finger using only letters from the first row!

This explains how QWERTY came about, but it does not explain why we never switched to another keyboard, in particular when we leapt from analog to digital. Imagine you had been hired by IBM, in the 1970s to design a keyboard for the PC. What factors would you have taken into consideration? Ergonomics, frequency of letter usage and aesthetics would certainly have been on your list – but, as an economic historian would tell you, this would not have been enough. In fact, the only keyboard you could have designed at that point was a QWERTY one. Why? Because by then, an entire network of people who had learned QWERTY, ran training classes for QWERTY, or wrote manuals for QWERTY were stuck with this habit. While they might individually wish for a more functional keyboard, they would never be the first to switch- because there was a huge economic cost to being the only one to budge. Even if your new design was theoretically superior, if nobody switches, your design is dead! This is what economic historians call a lock-in.

The crazy thing about lock-ins is that they are completely random. There is nothing inherent to the QWERTY design that determined its adoption instead of another design. The only sure thing is that one, and only one standard, would come to dominate. If you backtrack to the late 19<sup>th</sup> century, there were several typewriter models and keyboard layouts. It took a series of savvy marketing moves to tip the balance in QWERTY’s favor. Once the ‘tipping point’ was crossed, there was no turning back. Marketers in all industries that require a standard are well aware of this tipping point: VHS defeated Betamax for example, by waging fierce competition in the early years, to reap all the benefits subsequently.

So what is the lesson for product designers? In principle, there may exist a better design, but in effect it might not sell. You need to take into account the history of the product you are trying to improve and the network of people and activities that it fits in. This is particularly true if you are designing in areas with established habits and benefits from having everyone follow the same behavior (driving, telecommunications and escalators for example). **By recognizing instances that resemble the QWERTY lock-in, you'll be a savvier designer.** And if you do decide to shake people out of their habits, you'll need a very good marketing campaign and a strategy to change consumers' behavior.

Economic historians tell us that learning is not just a matter of psychology- it's also a matter of cost and economics! A good designer should be able to leverage both by knowing the history and economic context of the product she is designing for, and envisage the consequences of the new solution.

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**To write this article we drew on the following sources:**

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