BUSINESS DISRUPTION

PERSPECTIVES ON A MULTIFACETED PHENOMENON

WOLFGANG WEIN, MD PHD
THE CLASSICAL IDEAS

Joseph Schumpeter, a representative of the Austrian School of Economics formed the topos of *creative destruction* in capitalism. Old, established technologies are replaced (destroyed) by new ones, which are more efficient, have more accessible raw materials or are easy and cheaper to produce. The entrepreneur and/or inventor is the driving force behind the innovation, but the process can lead to discontinuity, economic imbalance and to the breakdown of established enterprises.

The process of innovation is driven by *ideas* and requires the right *view or intuition* to see the benefit of new technologies, *freedom* and *courage* to implement them and the *inner strength* to overcome resistance and old-fashioned ways of thinking.

R. Henderson & K. Clark recognized, that big, successful companies fail, because to embark on the innovative technology would strongly interfere with the *architectural organisation* of the company. E.g. a company built around selling large computer systems to banks and institutions was structurally unable to grasp the revolutionary change brought about by personal desk computers, used by the general population.

The main reason, Clayton Christensen suggested for this kind of *blindness* of big companies is, that the innovative technologies are *at the beginning slightly inferior* (unshapely prototypes or difficult to produce) than the standard products of the successful company. Successful companies then are unable to understand groundbreaking technological innovations – they continue to *pursue the strategies which drove their (past) success*!
TWO CLASSICAL EXAMPLES

- **Gunfire at sea, Elting Morison (1966):** a revolutionary technology to make naval gun fire faster and more accurate was rejected by the navy experts of the US Ministry of defense (around 1900). They *couldn’t see the benefit* and stuck with what they grew up with in the navy.

- **Kodak:** 1975 a young engineer constructed the first digital camera using the lens of a super 8 camera, a magnetic tape of a portable cassette recorder and a TV screen. Even though he worked for Kodak and the company started to build digital cameras, they were unable to cope with the upcoming mobile phones equipped with digital cameras. Kodak went bankrupt in 2012. Think of **Nokia**!
THE QUESTION THEN IS...

- What are the mechanisms, what are the reasons, why huge, tremendously successful companies fail to understand or take on board disruptive innovations?
FIVE THOUGHTS FOR YOUR CONSIDERATION

1. Reasons why big companies fail to deal with disruptive innovation (on top of insights already mentioned): **Intrinsic psychological factors**

   - Managers proud of and personally successful with the old technology made it to the board room. The **board members** - now they need to bury their past success and embrace a completely different technology.

   - **Power and career considerations**: if one has three years to go, he/she cares less about developments defining the business for the next fifteen years.

   - Imagine you are personally responsible for the unit assembling classical cameras and your engineers are experts in this field. What would happen if digital cameras would be built instead? Are you an expert in digital devices? **Concealed egoism**.

   - **Non-invented-here syndrome**: a huge budget is given to your R&D division, spent on incremental improvements of the classical cameras. Would you want the bulk of the budget to go to a digital camera division, to digital guys, or even mobile phones with cameras? No!

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2. »Selfdestroying Innovation«:

- An interesting case are medical therapies, which are able to cure severe diseases. Example Sovaldi and similar drugs for Hepatitis-C.
- Hepatitis-C is a horrible, chronic viral disease, affecting the liver. These patients suffered for a long time, with many hospital stays, liver punctions, marginally useful therapies, developing liver cirrhosis leading to death over time as well as liver cancer.
- Then came Sovaldi (Sofosbuvir), as the first drug of its class, with a cure rate of about 67% and a relatively high price (ca. 70.000€ per patient). It was vilified by sickfunds and serves until today as example for the evil, greedy, capitalistic pharma industry. In combination with similar compounds today there is a cure rate of ca. 95%. With the entry of new compounds, the prices went down significantly, so that the therapy today is completely reasonably priced.
- In 2016, the World Health Organization (WHO) set targets to eliminate HCV infection as a public health threat by 2030. But then, when the pool of infected people is dried out and all the patients healed, hepatitis C as a disease will cease to exist. And the sales of this successful class of drugs will go against zero.
- The strange effect then is, that one of the greatest discoveries and victories in medicine will have creatively destroyed its own market! > a very interesting case!
3. »Paradox disruption« : The case of old medicines

- Most of the widely used classical drugs like paracetamol, metformin, ACE-inhibitors, H2-blockers, etc have been invented, studied, registered and marketed by European pharma companies in the last 60 years or so.

- Due to obsessive price slashing by sickfunds and payors in Europe, prices have become so low (e.g. € 1,65 for a pack of a heart medicine), that the drugs can only be produced in China & India.

- Recently, India stopped the export of drugs deemed important to serve their own population in the Corona crises e.g. paracetamol. If Corona-victims in Europe need fever-lowering drugs like paracetamol now, they might not be available.

- In 2018 it was found that the raw-material of one specific drug produced in China was contaminated by a harmful substance. The factories were closed down by regulators > ca. 50 mio. Europeans were left without their blood pressure medication!

- So you can invent, develop, register and market essential drugs, but if you lose them carelessly, you might find yourself »self-disrupted« from your own inventions!
FIVE THOUGHTS FOR YOUR CONSIDERATION

4. Deal with *disruptive innovation* by *acquisition*!
- Around 2000, Roche was in a difficult situation, with a portfolio of mainly older products
- 1990 they acquired a majority stock of 56% of *Genentech*, one of the top *biotech firms* in the US
- Genentech developed some of the cutting edge biotech drugs of the 2000 plus-years, like Herceptin, Rituxan, Avastin, Lucentis, each becoming multi-billion blockbusters
- In 2008, Roche made a surprise bid for the remaining 44% of shares; after long negotiations in 2009 Roche acquired Genentech fully for $46.8 billion.
- Sales of Genentech’s top drugs were above $7 billion in 2008 and $21 billion in 2018. Deal seen as a success
- Trade off of important strategic considerations like pipeline, timing, cost of capital, sales projections, impact on company R&D, corporate culture.
- The strategy shows that big companies can successfully deal with disruptive innovation by smart acquisitions, which can reversely re-energize its own R&D and corporate culture!
FIVE THOUGHTS FOR YOUR CONSIDERATION

5. Technological innovation is not the sole paradigm, there is a **cultural paradigm** too!

- The first digital wrist watch entered the market in 1971. The watches were extremely precise, didn’t need winding, had many functions and looked futuristic. But they didn’t take the entire market, like mobile phones or iPhones!
- There might be cases, where linear technological progress is not the only driving force and cultural needs and wants come into play like *fashion, status, culture, style* etc. One sees **more classical watches than digital ones**, and there is a faible for *oldtimers, hand-made shoes, vinyl records* etc.
CONCLUSION

- »Creative destruction« as coined by J. Schumpeter is nothing else than the *idea-based* way in which *innovative ideas, cultural paradigms* and *technological developments* interact in a free society.

- It should not be seen as destruction, since replacing old or less efficient technologies or goods by better ones is the way progress happens.

- Big companies fail by building on strengths, which made them great in the past and they sometimes struggle with disruptive innovation, which would require a complete re-shuffling of their »*organisational architecture*«.

- On top we discussed cases of »*selfdestroying Innovations*«; of »*paradox disruption*«; of dealing with disruptive innovation by »*strategic acquisition*« and the dualism between the dynamic of the technological progress and the separate trends of »*cultural paradigms*«.
DISRUPTION BY FRAMING

Why not preaching in China??