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Software is Eating the World, Revisited

Scarcity to abundance, then back again

Erik Torenberg Aug 9, 2021 15 2

Housekeeping:

- On Deck released its Series A investment memo from earlier this year. It remains the best picture into On Deck's business. Stay tuned for more in this vein.
- This is the last week to apply for Village Global's accelerator to be considered for our fall cohort. We've had some great companies go through.
- I'm hiring a researcher in residence—open to different kinds of experiences, but academics, analysts, and writers are good archetypes. If of interest, please reply with an example of or a link to the best research you've done.

In 2011, Marc Andreessen argued "software is eating the world".

"Over the next 10 years," Marc said, "I expect many more industries to be disrupted by software, with new world-beating Silicon Valley companies doing the disruption in more cases than not."

"Software eating the world" has become one of the most important phrases of the last ten years, and as a result, there are a few different ways you can interpret it:

One way is to say that software will disrupt every business. Every industry will become software dominated.

Another way is to say that the rest of the world is going to start behaving like software. That the changes that drove disruption in the software industry will also take place in every other industry. It's a bit of a "we shape our tools and then they shape us" dynamic.

What does this mean?

The way we create software is also the way we create businesses: Scratch your itch, release early, build stuff people want, empower beta users by treating them as co-creators, and iterate until you hit product-market-fit. That approach to building software extended to building software businesses, and is now extending to all kinds of businesses.

Another implication of this is that the same transformation the software industry underwent, from being supply constrained to demand constrained, will take place in other industries.

To zoom out and elaborate on this point: the world is organized around scarcity. Technology increases access to scarce things by helping us do more with less, helping orders of magnitude more people enjoy something for a fraction of the cost.

When friction goes away, it tends to reappear somewhere else. Abundance inevitably leads to new forms of emergent scarcity that are hard to predict in advance. (NB: Read Danco's blog! He has deeply informed my thinking).

To give some historical context: if you think about the world before today, natural resources were essentially the only scarce assets. Everything was organized around those fundamental units of production capital (factory, human, brand). Capital was the limiting factor. Most of what you made could be sold because people needed stuff and there wasn't that much of the stuff out there. This was the world of atoms.

Now, in the world of bits, there are much fewer barriers to communicating, finding products, or getting work done — so the fundamental variable is *not* the unit of production or the unit of capital; it's the unit of demand. You can call it attention, loyalty, brand affiliation, whatever you want. The idea is the same: In a world of scarcity, supply constraints are paramount. In a world of abundance, demand is king. In other words, capital and production are no longer the scarce resource—attention and loyalty are.

This is also Ben Thompson's idea of aggregation theory: Pre-internet, you captured profits by controlling supply. Post-internet, you capture profits by aggregating demand. The internet made distribution freeand& transaction costs zero, making it viable for a distributor to integrate forward with end users at scale. In other words, the internet disintermediated the supplier / distributor / end user relationship by allowing digital content to be aggregated & delivered directly to the end user. Zero transaction costs means adding one more customer is as simple as adding one more row in a database. Which means that the best companies win by providing the best experience, which earns them the most consumers/users, which attracts the most suppliers, which enhances the user experience in a virtuous cycle.

Think of it like this: if you own all the users (e.g Google, Facebook), you're not going to charge them exorbitant rent. You're going to charge *everybody else* who wants to get to those users and sell them goods and services.

We saw this happen in the media industry. Newspapers used to enjoy local monopolies on distribution. Google & Facebook didn't create better newspapers; they reduced newspapers to a minimal form of printed, written content, and made that content compete with all other content in the world. Indeed, there used to be a limited supply of content. You had to get the newspaper at a specific time to get it. Now the content is available—everywhere, all the time.

As scarcity shifts from supply to demand, business models evolve too. And we can see this with video games. Video games used to make all their money by charging for games, but then they switched to a free to play model, charging only for new, scarce complementary assets (virtual goods). They ended up making way more money as a result.

Unbundling and rebuilding happens in every industry that gets influenced by software. Songs get unbundled from CDs and then rebundled into playlists. Articles get unbundled from newspapers and then rebundled into social media feeds. Curation becomes more important.

Another dynamic that happens when software eats industries is what we spoke about in Death of The Middle: Frictionless consumption leads to automatic if/else decisions, which transforms normal distributions into more bimodal, winner-take-most distributions.

To recap, in a world where supply (capital and production) is abundant, we're going to reorient around what's actually scarce — what people care about. The stakes are high: people only have so much attention and interest and loyalty to give.

To be clear, actual scarcity still defines most of the world. Large fractions of the earth's population still don't have clean drinking water, or quality health care, or access to banking services. Education, housing, healthcare are areas among others where technology will make a massive difference.

This scarcity to abundance and then back to scarcity again flywheel accelerates like this: Software takes over, customers get hooked on new capabilities and then immediately ask for more, which pushes the whole tech cycle to move faster. Entrepreneurs conquer scarcity which leads to abundance, which leads to emergent scarcity somewhere else, which leads to unbundling and rebundling, internet-native business models, and more winner-take most distributions.

Until next week,

Erik

Dave Goldblatt Writes Things That Are Dope · Aug 22, 2021

"people only have so much attention and interest and loyalty to give."

Until we're all plugged in to neuralink, then we'll have unbounded interest :)

Reply

Mayank (Poppins.me) Aug 9, 2021

This is really, really good Erik! I quite like the idea of attention and loyalty to win in the abundant world of software. Curious why B2B/enterprise softwares still lack behind. any thoughts?

Reply