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## What Has Steve Jobs Wrought?

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[Steve Jobs](#) had an insanely great ride on the waves of digitization that have transformed the way we work and play over the last few decades. But taking a cursory look at the hundreds of tributes published to commemorate the anniversary of his passing, I was surprised to find lots of trees but not a single forest. The pig picture view of Jobs' life is sorely missing.

We hear about a lot of specific things that he did or stimulated: He was "[a genius toymaker](#)," a "[genuine human being](#)," a "[patent warrior](#)." He invented this, pushed for that, and denounced the other thing. All true. But wasn't there something bigger that connected all the dots besides his creativity and drive?



I think we may have the clue in the [summing up](#) of Jobs' work (and life) by his biographer Walter Isaacson, a year ago: "Some leaders push innovations by being good at the big picture. Others do so by mastering details. Jobs did both, relentlessly. He revolutionized six industries: personal computers, animated movies, music, phones, tablet computing and digital publishing. You might add a seventh: retailing, which Jobs did not quite revolutionize but did reimagine. Along the way, he produced not only transforming products but also, on his second try, a lasting company, endowed with his DNA." This statement is reflected in one way or another in many of the current tributes. [Wired's Mat Honan](#), for example, writes that Jobs "didn't simply shake up industries; he fundamentally traumatized them."

This was the big picture Jobs was so good at? "Revolutionizing" or "traumatizing" a number of industries? Maybe. It's possible that the only thing that drove him was the desire to play the rebel, toppling the established order one industry domino after the other. But maybe there was an even bigger arc to his vision. Maybe he revolutionized industries because he saw a world without them, because he understood what digitization has wrought.

"[What has God wrought](#)" was the first message sent by telegraph and with it Samuel Morse had launched the Electronic Century. This was the pre-history

of digitization, using electronic means to alter our previous notions of time and space and to provide new means of delivering news, information, and entertainment. It has spawned a number of industries (telegraph, telephone, radio, TV, film, recorded sound and music) and vast academic empires in economics and anti-trust law. Based on distinct analog technologies, the pre-digital era trained everybody—in government, business, academia, the press—to perceive the economy as divided along the lines of “industry” segments and to hold the entrenched belief that each industry has unique “competitive forces” and requires unique skills and experience.

One hundred and one years after Morse sent his message, John von Neumann published “[A First Draft of a Report on the EDVAC](#),” called by historians Martin Campbell-Kelly and William Aspray “the technological basis for the worldwide computer industry.” We have arrived at the practical application of digitization, of turning all information into ones and zeros, and the new Digital Century. But what we got for the next thirty plus years was yet another “industry.”

Steve Jobs, the rebel that he was, ignored the rigidity and perceived boundaries of “industries” and instead has bet on the digitization of all industries producing and transmitting content: publishing, film, music, radio, TV... Especially after he came back to [Apple](#) in 1997, at the time when the invention of another rebel, Tim Berners-Lee, has taken the world by storm. The Web (not “the Internet”) was the glue and the catalyst that would speed up the spread of digitization to all analog devices and channels for the creation, communications, and consumption of information.

The waves of digitization sweeping all these industries, the shift from analog to digital, was Steve Jobs’ big picture and he rode each wave successfully. In 2002, digital storage surpassed non-digital storage for the first time, according to [Martin Hilbert and Priscila Lopez](#). By 2007, 94% of storage capacity in the world was digital, a complete reversal from 1986, when 99.2% of all storage capacity was analog. On January 9, 2007, Jobs announced that Apple Computer, Inc. would from that point on be known as Apple Inc., because computers were no longer the main focus of the company. Jobs has created a company (which became the most valuable company in the world five years later) that did not fit anymore into any specific “industry” pigeonhole.

Jobs is gone but digitization continues its relentless march. The current wave is all about “things”—your car, house, electrical grid, even [cows](#). And companies like [FedEx](#) and [P&G](#) and [GE](#) are leading indicators for the next big digitization wave: All businesses will be digitized.

What we want to know is Who will ride the next wave of digitization, Who will be the next Steve Jobs? It may well be someone who is still in high-school

or college today, but [Grace Ching](#) votes for Amazon's [Jeff Bezos](#). I agree. But again, not because of all the things she enumerates—Amazon's warehouses, the expansion beyond books, the Kindle—but because of the vision driving them, the big picture. In yet another example of how difficult it is for even astute observers of the tech scene to get over the “industry” mind-set, Steven Levy [asked Bezos last year](#): “Was it difficult to turn yourself from a retail company into a consumer electronics company?”

Bezos answered: “It's not as different as you might think. A lot of our original approaches and techniques carried over very well. For example, we've always focused on reducing the time between order and delivery. In hardware, it's the same principle. An example is the time between when we take delivery on a processor to when it's being used in a device by a customer. That's waste. Why would we own a processor that's supposed to go into a Kindle Fire that's not actually in a customer's hands? That's inventory management.”

Bezos is bothered by waste the same way Steve Jobs was bothered by lack of imagination or bad aesthetics. Product design was the core of Steve Jobs' strategy to ride the digitization waves. Delivery, the speed of delivery, is the core of Bezos'. Jobs has applied the same design principles across a range of previously separate and distinct devices; Bezos is applying the same management principles across a range of previously separate and distinct business activities.

Bezos, channeling the big wave of digitization which has destroyed “industry” boundaries, sees the big picture of analog turning into 1s and 0s, successive waves of big data that helps apply the same principles to selling goods, to offering services, to storing, discovering and consuming information, to coordinating work and leisure, to creating content.

Just like Steve Jobs.

### [Steve Jobs' Most Important Products](#)

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