

Home
Essays
H&P
Books
YC
Arc
Bel
Lisp
Spam
Responses
FAQs
RAQs
Quotes
RSS
Bio
Twitter

PAUL GRAHAM

WHY TV LOST

March 2009

About twenty years ago people noticed computers and TV were on a collision course and started to speculate about what they'd produce when they converged. We now know the answer: computers. It's clear now that even by using the word "convergence" we were giving TV too much credit. This won't be convergence so much as replacement. People may still watch things they call "TV shows," but they'll watch them mostly on computers.

What decided the contest for computers? Four forces, three of which one could have predicted, and one that would have been harder to.

One predictable cause of victory is that the Internet is an open platform. Anyone can build whatever they want on it, and the market picks the winners. So innovation happens at hacker speeds instead of big company speeds.

The second is Moore's Law, which has worked its usual magic on Internet bandwidth. [1]

The third reason computers won is piracy. Users prefer it not just because it's free, but because it's more convenient. Bittorrent and YouTube have already trained a new generation of viewers that the place to watch shows is on a computer screen. [2]

The somewhat more surprising force was one specific type of innovation: social applications. The average teenage kid has a pretty much infinite capacity for talking to their friends. But they can't physically be with them all the time. When I was in high school the solution was the telephone. Now it's social networks, multiplayer games, and various messaging applications. The way you reach them all is through a computer. [3] Which means every teenage kid (a) wants a computer with an Internet connection, (b) has an incentive to figure out how to use it, and (c) spends countless hours in front of it.

This was the most powerful force of all. This was what made everyone want computers. Nerds got computers because they liked them. Then gamers got them to play games on. But it was connecting to other people that got everyone else: that's what made even grandmas and 14 year old girls want computers.

After decades of running an IV drip right into their audience, people in the entertainment business had understandably come to think of them as rather passive. They thought they'd be able to dictate the way shows reached audiences. But they underestimated the force of their desire to connect with one

another.

Facebook killed TV. That is wildly oversimplified, of course, but probably as close to the truth as you can get in three words.

The TV networks already seem, grudgingly, to see where things are going, and have responded by putting their stuff, grudgingly, online. But they're still dragging their heels. They still seem to wish people would watch shows on TV instead, just as newspapers that put their stories online still seem to wish people would wait till the next morning and read them printed on paper. They should both just face the fact that the Internet is the primary medium.

They'd be in a better position if they'd done that earlier. When a new medium arises that's powerful enough to make incumbents nervous, then it's probably powerful enough to win, and the best thing they can do is jump in immediately.

Whether they like it or not, big changes are coming, because the Internet dissolves the two cornerstones of broadcast media: synchronicity and locality. On the Internet, you don't have to send everyone the same signal, and you don't have to send it to them from a local source. People will watch what they want when they want it, and group themselves according to whatever shared interest they feel most strongly. Maybe their strongest shared interest will be their physical location, but I'm guessing not. Which means local TV is probably dead. It was an artifact of limitations imposed by old technology. If someone were creating an Internet-based TV company from scratch now, they might have some plan for shows aimed at specific regions, but it wouldn't be a top priority.

Synchronicity and locality are tied together. TV network affiliates care what's on at 10 because that delivers viewers for local news at 11. This connection adds more brittleness than strength, however: people don't watch what's on at 10 because they want to watch the news afterward.

TV networks will fight these trends, because they don't have sufficient flexibility to adapt to them. They're hemmed in by local affiliates in much the same way car companies are hemmed in by dealers and unions. Inevitably, the people running the networks will take the easy route and try to keep the old model running for a couple more years, just as the record labels have done.

A recent article in the *Wall Street Journal* described how TV networks were trying to add more live shows, partly as a way to make viewers watch TV synchronously instead of watching recorded shows when it suited them. Instead of delivering what viewers want, they're trying to force them to change their habits to suit the networks' obsolete business model. That never works unless you have a monopoly or cartel to enforce it, and even then it only works temporarily.

The other reason networks like live shows is that they're cheaper to produce. There they have the right idea, but they haven't followed it to its conclusion. Live content can be way cheaper than networks realize, and the way to take advantage of dramatic decreases in cost is to [increase volume](#). The networks are prevented from seeing this whole line of reasoning because they still think of themselves as being in the broadcast business—as sending one signal to everyone. [4]

Now would be a good time to start any company that competes with TV networks. That's what a lot of Internet startups are, though they may not have had this as an explicit goal. People only have so many leisure hours a day, and TV is premised on such long sessions (unlike Google, which prides itself on sending users on their way quickly) that anything that takes up their time is competing with it. But in addition to such indirect competitors, I think TV companies will increasingly face direct ones.

Even in cable TV, the long tail was lopped off prematurely by the threshold you had to get over to start a new channel. It will be longer on the Internet, and there will be more mobility within it. In this new world, the existing players will only have the advantages any big company has in its market.

That will change the balance of power between the networks and the people who produce shows. The networks used to be gatekeepers. They distributed your work, and sold advertising on it. Now the people who produce a show can distribute it themselves. The main value networks supply now is ad sales. Which will tend to put them in the position of service providers rather than publishers.

Shows will change even more. On the Internet there's no reason to keep their current format, or even the fact that they have a single format. Indeed, the more interesting sort of convergence that's coming is between shows and games. But on the question of what sort of entertainment gets distributed on the Internet in 20 years, I wouldn't dare to make any predictions, except that things will change a lot. We'll get whatever the most imaginative people can cook up. That's why the Internet won.

Notes

[1] Thanks to Trevor Blackwell for this point. He adds: "I remember the eyes of phone companies gleaming in the early 90s when they talked about convergence. They thought most programming would be on demand, and they would implement it and make a lot of money. It didn't work out. They assumed that their local network infrastructure would be critical to do video on-

demand, because you couldn't possibly stream it from a few data centers over the internet. At the time (1992) the entire cross-country Internet bandwidth wasn't enough for one video stream. But wide-area bandwidth increased more than they expected and they were beaten by iTunes and Hulu."

[2] Copyright owners tend to focus on the aspect they see of piracy, which is the lost revenue. They therefore think what drives users to do it is the desire to get something for free. But iTunes shows that people will pay for stuff online, if you make it easy. A significant component of piracy is simply that it offers a better user experience.

[3] Or a phone that is actually a computer. I'm not making any predictions about the size of the device that will replace TV, just that it will have a browser and get data via the Internet.

[4] Emmett Shear writes: "I'd argue the long tail for sports may be even larger than the long tail for other kinds of content. Anyone can broadcast a high school football game that will be interesting to 10,000 people or so, even if the quality of production is not so good."

Thanks to Sam Altman, Trevor Blackwell, Nancy Cook, Michael Seibel, Emmett Shear, and Fred Wilson for reading drafts of this.

■ [Japanese Translation](#)
