

Life After Television

Why AT&T's purchase of DirecTV, Google's acquisition of Twitch.tv, AppleTV, FanTV, and Amazon's FireTV . . . signal the end of "TV."

Plus, Comcast and Time Warner Cable — Netflix — Net Neutrality and Title II

BRET SWANSON > August 20, 2014

Nearly 25 years ago, our friend George Gilder wrote a book called *Life After Television*. Moore's law of microchips and similarly powerful forces in fiber optics, digital storage, and wireless radio transmission, Gilder said, would enable the construction of a new network of computers that would end the era of mass media. George famously got rid of the rarely used televisions in his home to support the thesis of his book — that the coming "worldwide web of glass and light" would blow up the lowest-common-denominator world of dumb content, dumb terminals, and even dumber mass advertising and replace it with a network of choice, quality, interactivity, and intelligence.

But wait, you say. Life *after* television? Aren't we in the *Golden Age* of television? Critics and fans alike have called shows like "The Sopranos," "The Wire," "Breaking Bad," "Mad Men," "House of Cards," and "Game of Thrones" the best television of all time. Over the last two decades, dozens of other smaller shows have established cult followings. Likewise, sports viewership is exploding across the globe — China is mad for American basketball, while Americans now watch English Premier League soccer and Indian cricket.

Meanwhile, in May AT&T (T) announced it is acquiring DirecTV (DTV) for \$48-billion. Google (GOOG) is buying tiny Twitch.tv for a cool billion. The deals have television right in their names. Television lives!

Well, sort of. Gilder didn't call his book "Life After Video Entertainment." He said the television model — its technology, its content, its business paradigm — was dead.

The big bandwidth of cable networks and then satellite began the disruption of TV. We went from three networks to fifty channels, then a hundred channels, then 500, and now 900. As choice grew, so did the spectrum of quality — we got more good content and more bad stuff, too. We also moved away from the simple broadcast advertising model toward a mix of subscription and ad-supported content. The DVR then added time-shifting and further complicated the advertising equation.

Broadband and the Web have now supercharged all these phenomena. We enjoy far more choice and diversity, and the spectrum of quality is broader still. The producers, delivery channels, and business models for video are also multiplying (and in some cases recombining and overlapping in surprising ways). ***We are only in the middle of the beginning of what will be a decade-long process of sorting out the video content, creation, distribution, aggregation, user-interface, viewing, advertising, and subscription markets.***

Consider today's U.S. video landscape:

- The paid video market is large but may have peaked. Cable MSOs are the largest paid video providers (MVPDs) with 54 million subscribers, or 53% of the

market. Satellite firms have 35 million subscribers, or 34% of the market. After entering the business in 2005, Verizon (VZ) FiOS and AT&T U-verse now total nearly 12 million, or 11% of the market. Cable MSOs, however, lost around 1.7 million paid video subscribers in 2013, on top of a 1.4 million decline in 2012. Most of those losses were offset by telco and satellite gains, yet 2013 still saw U.S. net paid video losses of around 104,000.

- Broadband is still growing but will reach saturation soon. The cable and telco firms added 2.6 million net residential broadband subscribers in 2013, and total U.S. broadband subscribership of 86 million is now approaching that of video. **Indeed, for the the first time ever in 2Q14, total cable broadband subscribers of 49.9 million slightly outnumbered cable video subscribers.**
- Mobile video is an important new platform, with traffic growing around 100% per year. Although it is constrained in some ways by the inherent bandwidth limitations of cellular wireless, technologies like LTE Broadcast, small cells, and Wi-Fi will continue to improve capacity, and business models like “sponsored data” will help consumers pay for the huge load video puts on wireless networks.

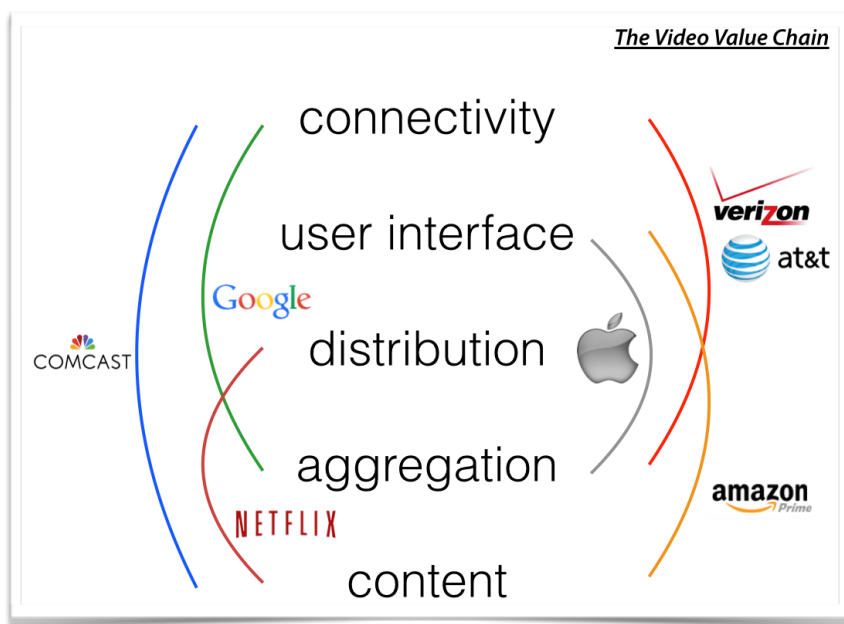
These broadband platforms have, of course, given rise to “over the top” Web video from YouTube, Netflix, and thousands of smaller video sources.

- Cisco (CSCO) estimates that 72% of U.S. consumer Internet traffic is now streaming video. By 2018, it believes that number will be 81%. If we include managed IP traffic, such as video

delivered by cable MSOs in an IP format, the proportions are even higher — 85% in 2014 and an estimated 88% by 2018.

- High-end Web video (movies, TV shows, and produced content) is growing especially fast. Netflix (NFLX) streamed 6.5 billion hours of video in 1Q14 and continues to account for around a third of evening peak residential broadband traffic.
- With 100 hours of video uploaded each minute and six billion hours watched each month, YouTube accounts for 10-20% of Internet traffic. Google (GOOG) is accelerating its plans to leverage the YouTube platform both to deliver higher-end content and to take online video advertising to the next level.
- Netflix, YouTube, iTunes, Amazon Video, and Hulu, according to Sandvine, now account for 55% of North American downstream broadband traffic. Peer-to-peer BitTorrent, meanwhile, once the top bandwidth consumer by far, now accounts for just 3.4%.

Very little in this video value chain is settled. Firms at every layer are fighting over, and



attempting to shape, the structure and economics of all the other layers.

In the simplified diagram above, we can see how software, Web, computer, content, and broadband firms increasingly overlap. The very nature of the digital world encourages a rapid cycle of both *integration* of nearby layers and also *modularity* as new entrants build specialized and competitive (although compatible) components. It is a never-ending process.

- Amazon (AMZN) and Apple (AAPL), for example, are investing heavily in their own Web video and “TV” efforts — including content aggregation, content delivery networks, residential devices that complement or even replace the set-top-box, user interface software, and, in Amazon’s case, content production.
- HBO is rapidly expanding its HBO Go online platform. It is doubling its Seattle technology office to 100 software engineers by the end of the year. Time Warner (TWX) CEO Jeff Bewkes says the company will likely use the HBO tech platform to deliver its Turner and Warner Bros. content as well.
- Major League Baseball’s **MLB.com** is among the most sophisticated video delivery platforms. Its MLB Advanced Media division sells its video services, infrastructure, and insights to other video providers, such as ESPN Watch and CBS Sports.
- Hundreds of other players — Facebook (FB), Vimeo, Hulu, Twitch.tv, Vine — are supplying video platforms and creating and aggregating content. Everyone with a smartphone is now a content creator.

The content, aggregation, and customer interface markets are constantly shifting.

- Netflix is moving toward the HBO model, and vice versa.

- Once merely an aggregator of content, HBO launched the model of producing its own original series. “The Sopranos” was the most successful early example. The rising cost of third-party content and the proliferation of competitive aggregators pushed HBO into content creation.
- Netflix at first was the “mail order HBO” and became the “online HBO.” In late 2012 it signed an exclusive, \$300-million-a-year deal to distribute Disney (DIS) content online beginning in 2016. But it also followed HBO’s original programming roadmap, winning an Emmy award last year for its original series “House of Cards” and garnering 31 total nominations this year for a growing set of shows, movies, and documentaries.

Aggregation Not Enough

These moves into content, along with the market and legal failure of Aereo, show that **aggregation alone is not enough**. Aereo, a firm that captured over-the-air broadcast content and then stored and streamed it to online subscribers, was a too-clever-by-half attempt to game the technical and business oddities of the changing content delivery ecosystem. It tried to take the best of both worlds — “free” content from broadcast and “free” delivery via the Internet — and combine them. But even if it had succeeded in the courts, Aereo wasn’t going to make it commercially. At the time of its court loss, it had only around 80,000 customers.

- Another example of the phenomenon is BuzzFeed, the news and pop culture Web aggregator, which is now launching BuzzFeed Media to produce original video content.
- Apple doesn’t produce its own original content, but it does offer its own version of “aggregation-plus.” AppleTV, for example, offers content through the iTunes store. But it also provides nested distribution of other channels and competitors. It provides access to the broadcast network

libraries, Netflix, HBO Go, ESPN's library, MLB.com, AMC, and many other TV channels and Web video outlets. AppleTV thus offers two key products to the consumer — (1) access to iTunes content and (2) an attractive, easy-to-use, Apple-branded portal to much of the rest of Web-video-and-TV-world.

- Amazon Video is attempting much the same thing through its FireTV system. In addition, Amazon is producing its own content (\$100 million worth in its third quarter alone) and also signed a big exclusive deal to offer HBO original content through FireTV.
- Others like Google and FanTV (which Time Warner Cable (TWC) adopted) have their own user interfaces that act as browser-channel-guide-portal.

The cable and telco video providers are adjusting to this new world with varying degrees of success.

- The MVPDs have been implementing TV Everywhere and similar concepts, where a video TV subscription also provides access to most channels on any Internet-connected device — computers, tablets, smartphones.
- The MVPD firms' on-demand platforms have now moved beyond movies and the episodic content of premium channels. Today, many on-demand services offer past episodes of network channels, basic cable channels, and semi-premium channels as well.
- Over time, the MVPDs are allocating more bandwidth on their network platforms to the interactive services of broadband and on-demand and relatively less bandwidth to traditional TV channels. But this does not mean all broadcast channels are dead.

The movement toward broadband Web video does not alter the fact that for some applica-

tions broadcast technologies are still superior.

Broadcast Birds

Satellite, in particular, is still the most cost effective means to deliver popular content. Especially content that large numbers of people like to watch live — this means sports and also news. An entire continent can be covered by two or three satellites for the price of a couple hundred million dollars. A wired broadband network covering the same area costs a couple hundred *billion*.

DirecTV's NFL Sunday Ticket demonstrates the success of the satellite-sports sweet spot. But without a robust broadband offering, DirecTV was limited. The proposed combination with AT&T potentially creates America's most comprehensive communications platform — a super-efficient *broadcast* system, an improving *broadband* network (especially with AT&T's new GigaPower fiber nets), and one of the two largest and fastest *mobile* operations. The trick will be to find the right product mixes to best utilize the strengths of each platform and to satisfy the rapidly evolving desires of customers and diversity of content.

| Broadcast vs. Stream | | | | |
|----------------------|------|--------------------|--------|----------------|
| | cost | bandwidth consumed | choice | inter-activity |
| broadcast | low | low | low | low |
| stream | high | high | high | high |

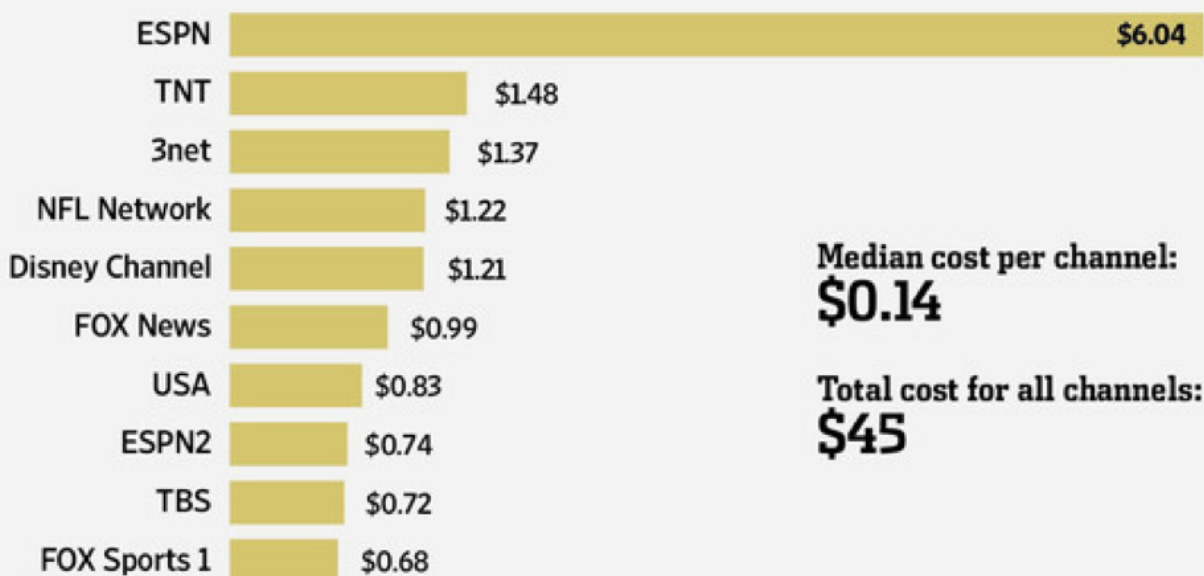
Dish Network (DISH), meanwhile, is left as a low-cost provider serving an increasingly niche, although not insignificant, market.

Content Costs

The high cost of content is driving many of these changes and is one reason neither the MVPDs nor the HBOs and Netflixes can merely aggregate programming. Comcast (CMCSA) says its content costs are up 54% in the last five years and 98% in the last 10

Pay Per Person

Estimated amount cable providers pay top networks each month, per subscriber, in 2014



Source: SNL Kagan

The Wall Street Journal

years. That's one rationale for its Time Warner Cable (TWC) acquisition and is also a big factor in AT&T's pursuit of DirecTV. More video subscribers means better negotiating leverage with Hollywood and Madison Avenue.

It's no surprise that the most popular and expensive content is also the content most likely to survive delivery in broadcast form, whether cable, satellite, or over-the-air. As we can see in the chart above prepared by SNL Kagan, most of the high-cost cable channels are sports, news, and family programming. Many of these channels, and others like them, will survive the move toward broadband in a recognizable fashion.

Yet even ESPN and Disney will supplement traditional broadcast with multiple online outlets, whether on their own platforms or others'. And it's not clear that large numbers of second and third tier cable channels, who are wholly dependent on the cable "bundle" for their existence, will survive — at least as a TV channel. Some will be forced to move to the Web.

As *The Wall Street Journal's* Holman Jenkins writes, "The real problem isn't the rising value of sports, but the declining value of everything else, which is increasingly available on demand on Netflix or Amazon, without commercials. The shrinking value that viewers attribute to standard cable fare is the force that threatens to pull apart the pay-TV bundle and thus the industry's traditional economics."

Content Creators and Consumers

Broadband empowers both content creators and consumers.

- HBO and broadband providers are now offering "skinny bundles" — an HBO subscription and a broadband subscription without cable TV for \$40-\$50 a month. This lets consumers skip the vast bulk of basic cable they don't watch but still access the top-quality HBO series they love, as well as the richness of the Web.
- The sports leagues are empowered, too. The NFL Network, NBA Network, MLB.com, and all the college sports confer-

ences have leveraged the increased bandwidth of both cable and the Web.

- The Web creates space for unlimited “channels” of content — from six-second video clips to 10-minute “how to’s” to Twitch.tv’s round-the-clock video game voyeurism. The possibilities are endless, and surprising content will exist in many forms. It might be hosted independently, or by a YouTube, Vimeo, or Vevo, or by a reseller. It will be free, and paid, and advertised, and freemium.
- Bandwidth abundance gives content creators more power. But it also imparts more content *competition*. So while leverage has shifted toward content, there are no guarantees for content creators, small or large.

The Competitive Landscape

The cost of content and broadband’s empowerment of consumers will tend to erode the power of those that *only* aggregate.

Netflix and HBO, therefore, will likely succeed largely to the extent they can produce compelling original content. HBO has the upper hand because of its larger in-house library of original content.

Until its big success with “House of Cards,” Netflix’s content was getting dangerously stale. Original programming has saved the company for now, and in 2016 the Disney programming will provide a big upgrade, although at a steep price.

Netflix’s key advantage is its low-cost bundle. People who write about media say consumers don’t like bundles and would prefer *a la carte*. But many consumers actually do like bundles. Compared to paying for each movie, each episode, each cartoon, bundles are easy, and cheap. Does the harried mother/father want to pay for each episode of “Dora the Explorer”? Or would she/he rather hand her child the iPad and say, “I need half an hour, find something to watch on Netflix.” If

what you want is easy, inexpensive, and you don’t care about having the latest, greatest content, Netflix might be a good buy. Then again, if this content delivered to all my devices is now included in my TV Everywhere cable bundle, what’s the justification for Netflix?

Apple and Amazon’s quasi *a la carte* models, on the other hand, better fit a different set of consumers who may spend less time watching but are more discriminating in their choices. Apple and Amazon have more up-to-date content, rivaling the on-demand libraries of the MVPDs, and they also provide access to a wide range of networks for those who have truly “cut the cord” — something Netflix doesn’t offer. This general purpose user interface is a key advantage if consumers do make a bigger shift from the MVPDs toward a broadband only world.

It’s funny that Netflix, in many ways the chief antagonist of the cable firms, is more like a cable firm in its bundle structure. It is also more likely than Apple or Amazon to survive along side cable — at least for a while — than to replace cable for some set of consumers. Many consumers, of course, will use several or all of these platforms — cable, Apple, Amazon, Netflix, HBO Go, Samsung SmartTV — at least until one of them finds a way to deliver a streamlined experience that satisfies most of a customer’s needs.

For Apple and Amazon, the potential upside of becoming a primary user interface for video is large. Success with AppleTV or FireTV could help leverage the rest of each firm’s product ecosystem — especially in the cloud. All of these firms are seeking to become the hub of the consumer’s digital life. Success in video would add yet one more reason to join or stay in these firms’ cloud ecosystems.

The risks, however, are relatively low. Apple and Amazon can still be very successful if its video ambitions don’t catch on. Not so for Netflix. Except for its original shows and its

Disney deal, most of Netflix is easily replicable.

The Big Policy Question

For 15 years now, broadband has been by far the MVPDs' best, highest-margin product. Using just a sliver of their network capacity, and with no content costs, they generate big cash flows. TV has been a big revenue source, but low margin. *Now, the MVPDs best product is also their biggest product.*

The fights over Net Neutrality and interconnection, therefore, go to the heart of broadband service provider economics. Bandwidth abundance reduces the value of the traditional cable TV model. But it boosts the value of the broadband pipe.

Cable MSOs and telco video providers are clearly getting squeezed on the paid TV video side — by the cost of content, by Web video, and by competitive channels (i.e., by each other). This is business in a dynamic, competitive environment. Despite this pressure, the broadband providers' networks are enormously valuable.

The bigger threat is if they also get squeezed on their ability to monetize broadband. If regulation prevents or discourages these firms from monetizing the broadband channel (which is the direction in which technology and economics are pushing), then they are in trouble.

In the Federal Communications Commission's Open Internet proceeding, Chairman Tom Wheeler has proposed basic non-blocking and non-discrimination rules under section 706 of the '96 Telecom Act. He advocates a case-by-case review of complaints and does not presume to prohibit before the fact potential technical and business innovations. Broadband would remain a Title I information service.

A vocal political faction, however, is demanding that Wheeler reclassify broadband as a Title II common carrier — like the old monopoly telephone network. Title II would mean price regulation, micromanagement of network interconnection, prior bureaucratic approval of new products and technologies, and much more.

Broadband and mobile networks and the core Internet have all grown up outside of Title II. The lack of interference from Washington is a big factor in their success (and why the heavily regulated Title II telephone network is withering away).

A Title II reclassification of broadband would: throw broadband into a regulatory world it's never seen¹; undermine the economics and existing technical and business arrangements of the entire ecosystem; and ignite a decade's worth of strident litigation. Not only would Title II disrupt today's broadband, video, and Web markets, it would also prevent this highly dynamic system from finding its way toward the new technologies, better products, lower prices, and unseen content innovations of the future.

The likelihood that the FCC and states would narrowly tailor rules in a Title II world is slim. Some Title II advocates believe the FCC can "forbear" from most of Title II's most onerous restrictions. All our experience, however, says that despite all good intentions these comprehensive regulatory regimes metastasize.

Despite the upheaval, the broadband providers, content creators, and cloud and software intermediaries are all playing in a growing market full of opportunity. In the short term, content and Web firms might gain an edge from more regulation. Eventually, however, content and Web firms would suffer, too, as investment in broadband networks declined. **EE**

¹ In the late 1990s and early 2000s, DSL was subject to many Title II restrictions, and it was a disaster. Cable modems and the rest of the Internet, on the other hand, were defined as Title I information services and thrived. When DSL was relieved of its Title II designation, it recovered.