

THE INTERNET AS COPY MACHINE

The Internet is a copy machine. At its most foundational level, it copies every action, every character, every thought we make while we ride upon it. In order to send a message from one corner of the Internet to another, the protocols of communication demand that the whole message be copied along the way several times. IT companies make a lot of money selling equipment that facilitates this ceaseless copying. Every bit of data ever produced on any computer is copied somewhere. The digital economy is thus run on a river of copies. Unlike the mass-produced reproductions of the machine age, these copies are not just cheap—they are free.

Our digital communication network has been engineered so that copies flow with as little friction as possible. Indeed, copies flow so freely we could think of the Internet as a super-distribution system, where once a copy is introduced it will continue to flow through the network forever, much like electricity in a superconductive wire. We see evidence of this in real life. Once anything that can be copied is brought into contact with Internet, it will be copied, and those copies never leave. Even a dog knows you can't erase something once it's flowed on the Internet.

COPY-TRANSMISSION

This super-distribution system has become the foundation of our economy and wealth. The instant reduplication of data, ideas, and media underpins all the major economic sectors in our economy, particularly those involved with exports—that is, those industries where the US has a competitive advantage. Our wealth sits upon a very large device that copies promiscuously and constantly.

Yet the previous round of wealth in this economy was built on selling precious copies, so the free flow of free copies tends to undermine the established order. If reproductions of our best efforts are free, how can we keep going? To put it simply, how does one make money selling free copies?

I have an answer. The simplest way I can put it is thus:

When copies are super abundant, they become worthless.

When copies are super abundant, stuff that can't be copied becomes scarce and valuable.

When copies are free, you need to sell things that can not be copied.

Well, what can't be copied?

There are a number of qualities that can't be copied. Consider "trust." Trust cannot be copied. You can't purchase it. Trust must be earned, over time. It cannot be downloaded. Or faked. Or counterfeited (at least for long). If everything else is equal, you'll always prefer to deal with someone you can trust. So trust is an intangible that has increasing value in a copy-saturated world.

There are a number of other qualities similar to trust that are difficult to copy, and thus become valuable in this network economy. I think the best way to examine them is not from the eye of the producer, manufacturer, or creator, but from the eye of the user. We can start with a simple user question: why would we ever pay for anything that we could get for free? When anyone buys a version of something they could get for free, what are they purchasing?

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From my study of the network economy, I see roughly eight categories of intangible value that we buy when we pay for something that could be free.

In a real sense, these are eight things that are better than free. Eight uncopyable values. I call them "generatives." A generative value is a quality or attribute that must be generated, grown, cultivated, nurtured. A generative thing cannot be copied, cloned, faked, replicated, counterfeited, or reproduced. It is generated uniquely, in place, over time. In the digital arena, generative qualities add value to free copies, and therefore are something that can be sold.

EIGHT GENERATIVES BETTER THAN FREE

Immediacy: Sooner or later you can find a free copy of whatever you want, but getting a copy delivered to your inbox the moment it is released—or even better, produced—by its creators is a generative asset. Many people go to movie theaters to see films on the opening night, where they will pay a hefty price to see a film that later will be available for free, or almost free, via rental or download. Hardcover books command a premium for their immediacy, disguised as a harder cover. First in line often commands an extra price for the same good. As a sellable quality, immediacy has many levels, including access to beta versions. Fans are brought into the generative process itself. Beta versions are often de-valued because they are incomplete, but they also possess generative qualities that can be sold. Immediacy is a relative term, which is why it is generative. It has to fit with the product and the audience. A blog has a different sense of time than a movie or a car. But immediacy can be found in any media.

2 **Personalization:** A generic version of a concert recording may be free, but if you want a copy that has been tweaked to sound perfect in your particular living room—as if it were preformed in your room—you may be willing to pay a lot. The free copy of a book can be custom edited by the publishers to reflect your own previous reading background. A free movie you buy may be cut to reflect the rating you desire (no violence, dirty language okay). Aspirin is free, but aspirin tailored to your DNA is very expensive. As many have noted, personalization requires an ongoing conversation between the creator and consumer, artist and fan, producer and user. It is deeply generative because it is iterative and time consuming. You can't copy the personalization that a relationship represents. Marketers call that "stickiness" because it means both sides of the relationship are stuck (invested) in this generative asset, and will be reluctant to switch and start over.

- Interpretation: As the old joke goes: software, free; The manual, \$10,000. But it's no joke. A couple of high profile companies, like Red Hat, Apache, and others make their living doing exactly that. They provide paid support for free software. The copy of code, being mere bits, is free—and becomes valuable to you only through the support and guidance. I suspect a lot of genetic information will go this route. Right now getting your copy of your DNA is very expensive, but soon it won't be. In fact, soon pharmaceutical companies will PAY you to get your genes sequence. So the copy of your sequence will be free, but the interpretation of what it means, what you can do about it, and how to use it—the manual for your genes so to speak—will be expensive.
- 4 **Authenticity:** You might be able to grab a key software application for free, but even if you don't need a manual, you might like to be sure it is bug free, reliable, and warranted. You'll pay for authenticity. There are nearly an infinite number of variations of the Grateful Dead jams around, but buying an authentic version from the band itself will ensure you get the one you wanted, or even that it was indeed actually performed by the Dead. Artists have dealt with this problem for a long time. Graphic reproductions such as photographs and lithographs often come with the artist's stamp of authenticity—a signature—to raise the price of the copy. Digital watermarks and other signature technology will not work as copy-protection schemes (copies are super-conducting liquids, remember?) but they can serve up the generative quality of authenticity for those who care.
- Accessibility: Ownership often sucks. You have to keep your things tidy, up-to-date, and in the case of digital material, backed up. And in this mobile world, you have to carry it along with you. Many people, me included, will be happy to have others tend our "possessions" by subscribing to them. We'll pay Acme Digital Warehouse to serve us any musical tune in the world, when and where we want it, as well as any movie, photo (ours or other photographers). Ditto for books and blogs. Acme backs everything up, pays the creators, and delivers us our desires. We can sip it from our phones, PDAs, laptops, big screens from where ever. The fact that most of this material will be available free, if we want to tend it, back it up, keep adding to it, and organize it, will be less and less appealing as time goes on.

- **Embodiment:** At its core the digital copy is without a body. You can take a free copy of a work and throw it on a screen. But perhaps you'd like to see it in hi-res on a huge screen? Maybe in 3D? PDFs are fine, but sometimes it is delicious to have the same words printed on bright white cottony paper, bound in leather. Feels so good. What about dwelling in your favorite (free) game with 35 others in the same room? There is no end to greater embodiment. Sure, the hi-res of today—which may draw ticket holders to a big theater—may migrate to your home theater tomorrow, but there will always be new insanely great display technology that consumers won't have. Laser projection, holographic display, the holodeck itself! And nothing gets embodied as much as music in a live performance, with real bodies. The music is free—the bodily performance expensive. This formula is quickly becoming a common one for not only musicians, but even authors. The book is free; the bodily talk is expensive.
- Patronage: It is my belief that audiences WANT to pay creators. Fans like to reward artists, musicians, authors and the like with the tokens of their appreciation, because it allows them to connect. But they will only pay if it is very easy to do, a reasonable amount, and they feel certain the money will directly benefit the creators. Radiohead's recent high-profile experiment in letting fans pay them whatever they wished for a free copy is an excellent illustration of the power of patronage. The elusive, intangible connection that flows between appreciative fans and the artist is worth something. In Radiohead's case it was about \$5 per download. There are many other examples of the audience paying simply because it feels good.

The fact that most of this material will be available free, if we want to tend it, back it up, keep adding to it, and organize it, will be less and less appealing as time goes on.

Findability: Where as the previous generative qualities reside within creative digital works, findability is an asset that occurs at a higher level in the aggregate of many works. A zero price does not help direct attention to a work, and in fact may sometimes hinder it. But no matter what its price, a work has no value unless it is seen; unfound masterpieces are worthless. When there are millions of books, millions of songs, millions of films, millions of applications, millions of everything requesting our attention—and most of it free—being found is valuable.

Sadly, the long tail is only good news for the giant aggregators, and larger mid-level aggregators such as publishers, studios, and labels.

The giant aggregators such as Amazon and Netflix make their living in part by helping the audience find works they love. They bring out the good news of the "long tail" phenomenon, which we all know, connects niche audiences with niche productions. But sadly, the long tail is only good news for the giant aggregators, and larger mid-level aggregators such as publishers, studios, and labels. The "long tail" is only lukewarm news to creators themselves. But since findability can really only happen at the systems level, creators need aggregators. This is why publishers, studios, and labels (PSL)will never disappear. They are not needed for distribution of the copies (the Internet machine does that). Rather the PSL are needed for the distribution of the users' attention back to the works. From an ocean of possibilities the PSL find, nurture and refine the work of creators that they believe fans will connect with. Other intermediates such as critics and reviewers also channel attention. Fans rely on this multi-level apparatus of findability to discover the works of worth out of the zillions produced. There is money to be made (indirectly for the creatives) by finding talent. For many years

the paper publication TV Guide made more money than all of the 3 major TV networks it "guided" combined. The magazine guided and pointed viewers to the good stuff on the tube that week. Stuff, it is worth noting, that was free to the viewers. There is little doubt that besides the mega-aggregators, in the world of the free many PDLs will make money selling findability—in addition to the other generative qualities.

These eight qualities require a new skill set. Success in the free-copy world is not derived from the skills of distribution since the Great Copy Machine in the Sky takes care of that. Nor are legal skills surrounding Intellectual Property and Copyright very useful anymore. Nor are the skills of hoarding and scarcity. Rather, these new eight generatives demand an understanding of how abundance breeds a sharing mindset, how generosity is a business model, how vital it has become to cultivate and nurture qualities that can't be replicated with a click of the mouse.

In short, the money in this networked economy does not follow the path of the copies. Rather it follows the path of attention, and attention has its own circuits.

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Careful readers will note one conspicuous absence so far. I have said nothing about advertising.

Ads are widely regarded as the solution, almost the ONLY solution, to the paradox of the free.

Most of the suggested solutions I've seen for overcoming the free involve some measure of advertising.

I think ads are only one of the paths that attention takes, and in the long-run, they will only be part of the new ways money is made selling the free.



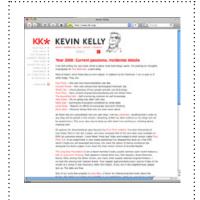
But that's another story.

Beneath the frothy layer of advertising, these eight generatives will supply the value to ubiquitous free copies, and make them worth advertising for. These generatives apply to all digital copies, but also to any kind of copy where the marginal cost of that copy approaches zero. (See my essay on Technology Wants to Be Free.) Even material industries are finding that the costs of duplication near zero, so they too will behave like digital copies. Maps just crossed that threshold. Genetics is about to. Gadgets and small appliances (like cell phones) are sliding that way. Pharmaceuticals are already there, but they don't want anyone to know. It costs nothing to make a pill. We pay for Authenticity and Immediacy in drugs. Someday we'll pay for Personalization.

Maintaining generatives is a lot harder than duplicating copies in a factory. There is still a lot to learn. A lot to figure out. Write to me if you do. 🗈



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Kevin Kelly is Senior Mayerick at Wired magazine. He helped launch Wired in 1993, and served as its Executive Editor until January 1999. He is currently editor and publisher of the Cool Tools web site. From 1984-1990 Kelly was publisher and editor of the Whole Earth Review, a journal of unorthodox technical news. He co-founded the ongoing Hackers' Conference, and was involved with the launch of the WELL, a pioneering online service started in 1985. He authored the best-selling New Rules for the New Economy and the classic book on decentralized emergent systems, Out of Control.

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