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Wikipedia, Flickr, and Twitter aren't just revolutions in online social media. They're the vanguard of a cultural movement. Forget about state ownership and five-year plans. A global collectivist society is coming—and this time you're going to like it.

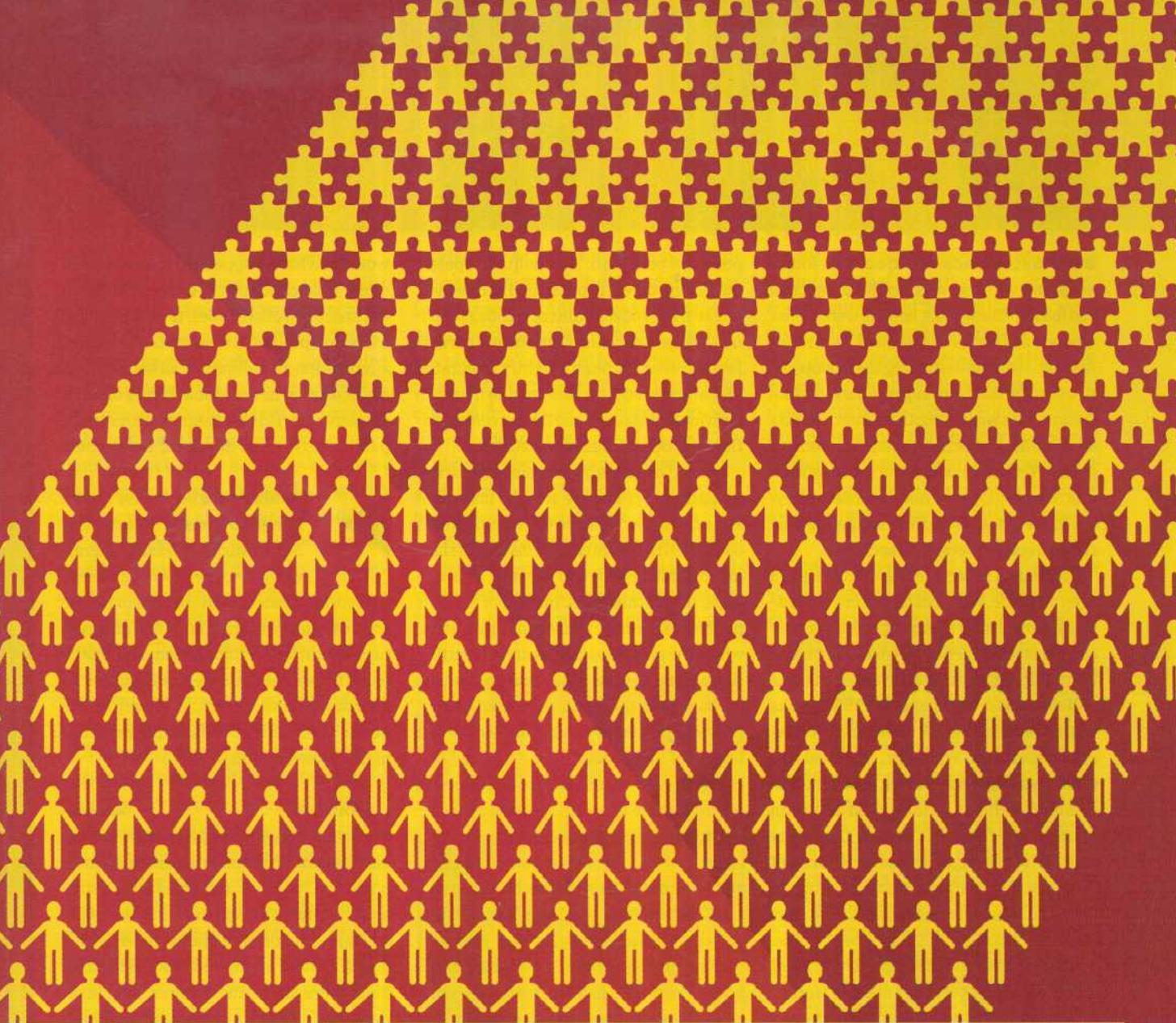
by KEVIN KELLY

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illustration by CHRISTOPH NIEMANN

• **Bill Gates once derided** open source advocates with the worst epithet a capitalist can muster. These folks, he said, were a "new modern-day sort of communists," amalevolent force bent on destroying the monopolistic incentive that helps support the American dream. Gates was wrong: Open source zealots are more likely to be libertarians than commie pinkos. Yet there is some truth to his allegation. The frantic global rush to connect everyone to everyone, all the time, is quietly giving rise to a revised version of socialism.

Communal aspects of digital culture run deep and wide. Wikipedia is just one remarkable example of an emerging collectivism—and not just Wikipedia but wikiness at large. Ward Cunningham, who invented the first collaborative Web page in 1994, tracks nearly 150 wiki engines today, each powering myriad sites. Wetpaint, launched just three years ago, hosts more than 1 million communal efforts. Widespread adoption of the share-friendly Creative Commons alternative copyright license and the rise of ubiquitous file-sharing are two more steps in this shift. Mushrooming collaborative sites like Digg, StumbleUpon, the Hype Machine, and Twine have added weight to this great upheaval. Nearly every day another startup proudly heralds a new way to harness community action. These developments suggest a steady move toward a sort of socialism uniquely tuned for a networked world.

We're not talking about your grandfather's socialism. In fact, there is a long list of past movements this new socialism is not. It is not class warfare. It is not anti-American; indeed, digital socialism maybe the newest American innovation. While old-school socialism was an arm of the state, digital socialism is socialism without the state. This new brand of socialism currently operates in the realm of culture and economics, rather than government—for now.

The type of communism with which Gates hoped to tar the creators of Linux was born in an era of enforced borders, centralized communications, and top-heavy industrial processes. Those constraints gave rise to a type of collective ownership that replaced the brilliant chaos of a free market with scientific five-year plans devised by an all-

powerful politburo. This political operating system failed, to put it mildly. However, unlike those older strains of red-flag socialism, the new socialism runs over a borderless Internet, through a tightly integrated global economy. It is designed to heighten individual autonomy and thwart centralization. It is decentralization extreme.

Instead of gathering on collective farms, we gather in collective worlds. Instead of state factories, we have desktop factories connected to virtual co-ops. Instead of sharing drill bits, picks, and shovels, we share apps, scripts, and APIs. Instead of faceless politburos, we have faceless meritocracies, where the only thing that matters is getting things done. Instead of national production, we have peer production. Instead of government rations and subsidies, we have a bounty of free goods.

I recognize that the word *socialism* is bound to make many readers twitch. It carries tremendous cultural baggage, as do the related terms *communal*, *communitarian*, and *collective*. I use *socialism* because technically it is the best word to indicate a range of technologies that rely for their power on social interactions. Broadly, collective action is what Web sites and Net-connected apps generate when they harness input from the global audience. Of course, there's rhetorical danger in lumping so many types of organization under such an inflammatory heading. But there are no unsoiled terms available, so we might as well redeem this one.

When masses of people who own the means of production work toward a common goal and share their products in common, when they contribute labor without wages and enjoy the fruits free of charge, it's not unreasonable to call that socialism.

In the late '90s, activist, provocateur, and aging hippy John Barlow began calling this drift, somewhat tongue in cheek, "dot-communism." He defined it as a "workforce composed entirely of free agents," a decentralized gift or barter economy where there is no property and where technological architecture defines the political space. He was right on the virtual money. But there is one way in which *socialism* is the wrong

word for what is happening: It is not an ideology. It demands no rigid creed. Rather, it is a spectrum of attitudes, techniques, and tools that promote collaboration, sharing, aggregation, coordination, adhocery, and a host of other newly enabled types of social cooperation. It is a design frontier and a particularly fertile space for innovation.



In his 2008 book, *Here Comes Everybody*, media theorist Clay Shirky suggests a useful hierarchy for sorting through these

new social arrangements. Groups of people start off simply sharing and then progress to cooperation, collaboration, and finally collectivism. At each step, the amount of coordination increases. A survey of the online landscape reveals ample evidence of this phenomenon.

## I. SHARING

The online masses have an incredible willingness to share. The number of personal photos posted on Facebook and MySpace is astronomical, but it's a safe bet that the overwhelming majority of photos taken with a digital camera are shared in some fashion. Then there are status updates, map locations, half-thoughts posted online. Add to this the 6 billion videos served by YouTube each month in the US alone and the millions of fan-created stories deposited on fanfic sites. The list of sharing organizations is almost endless; Yelp for reviews, Loopt for locations, Delicious for bookmarks.

Sharing is the mildest form of socialism, but it serves as the foundation for higher levels of communal engagement.

## II. COOPERATION

When individuals work together toward a large-scale goal, it produces results that emerge at the group level. Not only have amateurs shared more than 3 billion photos on Flickr, but they have tagged them with categories, labels, and keywords. Others in the community cull the pictures into sets. The popularity of Creative Commons licensing means that communally, if not outright communistically, your picture is my picture.



Anyone can use a photo, just as a command might use the community wheelbarrow. I don't have to shoot yet another photo of the Eiffel Tower, since the community can provide a better one than I can take myself.

Thousands of aggregator sites employ the same social dynamic for threefold benefit. First, the technology aids users directly, letting them tag, bookmark, rank, and archive for their own use. Second, other users benefit from an individual's tags, bookmarks, and so on. And this, in turn, often creates additional value that can come only from the group as a whole. For instance, tagged snapshots of the same scene from different angles can be assembled into a stunning 3-D rendering of the location. (Check out Microsoft's Photosynth.) In a curious way, this proposition exceeds the socialist promise of "from each according to his ability, to each according to his needs" because it betters what you contribute and delivers more than you need.

Community aggregators can unleash astonishing power. Sites like Digg and Reddit, which let users vote on the Web links they display most prominently, can steer public conversation as much as newspapers or TV networks. (Full disclosure: Reddit is owned by *Wired's* parent company, Conde Nast.) Serious contributors to these sites put in far more energy than they could ever get in return, but they keep contributing in part because of the cultural power these instruments wield. A contributor's influence extends way beyond a lone vote, and the community's collective influence can be far out of proportion to the number of contributors. That is the whole point of social institutions—the sum outperforms the parts. Traditional socialism aimed to ramp up this dynamic via the state. Now, decoupled from government and hooked into the global digital matrix, this elusive force operates at a larger scale than ever before.

### III. COLLABORATION

Organized collaboration can produce results beyond the achievements of ad hoc cooperation. Just look at any of hundreds of open source software projects, such as the Apache Web server. In these endeavors, finely tuned communal tools generate high-quality products from the

coordinated work of thousands or tens of thousands of members. In contrast to casual cooperation, collaboration on large, complex projects tends to bring the participants only indirect benefits, since each member of the group interacts with only a small part of the end product. An enthusiast may spend months writing code for a subroutine when the program's full utility is several years away. In fact, the work-reward ratio is so out of kilter from a free-market perspective—the workers do immense amounts of high-market-value work without being paid—that these collaborative efforts make no sense within capitalism.

Adding to the economic dissonance, we've become accustomed to enjoying the products of these collaborations free of charge. Instead of money, the peer producers who

create the stuff gain credit, status, reputation, enjoyment, satisfaction-, and experience. Not only is the product free, it can be copied freely and used as the basis for new products. Alternative schemes for managing intellectual property, including Creative Commons and the GNU licenses, were invented to ensure these "frees."

Of course, there's nothing particularly socialistic about collaboration per se. But the tools of online collaboration support a communal style of production that shuns capitalistic investors and keeps ownership in the hands of the workers, and to some extent those of the consuming masses.

### IV. COLLECTIVISM

While cooperation can write an encyclopedia, no one is held responsible if the community fails to reach consensus, and lack of agreement doesn't endanger the enterprise as a whole. The aim of a collective, however, is to engineer a system where self-directed peers take responsibility for critical processes and where difficult decisions, such as sorting out priorities, are decided by all participants. Throughout history, hundreds of small-scale collectivist groups have tried this operating system. The results have not been encouraging, even setting aside Jim Jones and the Manson family.

Indeed, a close examination of the governing kernel of, say, Wikipedia, Linux, or OpenOffice shows that these efforts are further from the collectivist ideal than appears from the outside. While millions of writers contribute to Wikipedia, a smaller number of editors (around 1,500) are responsible for the majority of the editing. Ditto for collectives that write code. A vast army of contributions is managed by a much smaller group of coordinators. As Mitch Kapur, founding chair of the Mozilla open source code factory, observed, "Inside every working anarchy, there's an old-boy network."

This isn't necessarily a bad thing. Some types of collectives benefit from hierarchy while others are hurt by it. Platforms like the Internet and Facebook, or democracy—which are intended to serve as a substrate for producing goods and delivering services—benefit from being as nonhierarchical as

## Socialism: A History

- 1516 → Thomas More's *Utopia*
- 1794 → Thomas Paine's *The Age of Reason*
- 1825 → First US commune
- 1848 → Marx & Engels' *The Communist Manifesto*
- 1864 → International Workingmen's Association
- 1903 → Bolshevik Party elects Lenin
- 1917 → Russian Revolution
- 1922 → Stalin consolidates power
- 1946 → State-run health care in Saskatchewan
- 1959 → Cuban Revolution
- 1967 → Che Guevara executed
- 1973 → Salvador Allende deposed
- 1980 → Usenet
- 1985 → Mikhail Gorbachev's glasnost
- 1991 → Soviet Union dissolves
- 1994 → Linux 1.0
- 1998 → Venezuela elects Hugo Chavez

possible, minimizing barriers to entry and distributing rights and responsibilities equally. When powerful actors appear, the entire fabric suffers. On the other hand, organizations built to create products often need strong leaders and hierarchies arranged around time scales: One level focuses on hourly needs, another on the next five years.

In the past, constructing an organization that exploited hierarchy yet maximized collectivism was nearly impossible. Now digital networking provides the necessary infrastructure. The Net empowers product-focused organizations to function collectively while keeping the hierarchy from fully taking over. The organization behind MySQL, an open source database, is not romantically nonhierarchical, but it is far more collectivist than Oracle. Likewise, Wikipedia is not a bastion of equality, but it is vastly more collectivist than the *Encyclopaedia Britannica*. The elite core we find at the heart of online collectives is actually a sign that stateless socialism can work on a grand scale.



societies allow some private property.

Rather than viewing technological socialism as one side of a zero-sum trade-off between free-market individualism and centralized authority, it can be seen as a cultural OS that elevates both the individual and the group at once. The largely unarticulated but intuitively understood goal of communitarian technology is this: to maximize both individual autonomy and the power of people working together. Thus, digital socialism can be viewed as a third way that renders irrelevant the old debates.

The notion of a third way is echoed by Yochai Benkler, author of *The Wealth of Networks*, who has probably thought more than anyone else about the politics of networks. "I see the emergence of social production and peer production as an alternative to both state-based and market-based closed, proprietary systems," he says, noting that these activities "can enhance creativity, productivity, and freedom." The new OS is neither the classic communism of centralized planning without private property nor the undiluted chaos of a free market. Instead, it is an emerging design space in which decentralized public coordination can solve problems and create things that neither pure communism nor pure capitalism can.

Hybrid systems that blend market and nonmarket mechanisms are not new. For decades, researchers have studied the decentralized, socialized production methods of

northern Italian and Basque industrial co-ops, in which employees are owners, selecting management and limiting profit distribution, independent of state control. But only since the arrival of low-cost, instantaneous, ubiquitous collaboration has it been possible to migrate the core of those ideas into diverse new realms, like writing enterprise software or reference books.

The dream is to scale up this third way beyond local experiments. How large? Ohloh, a company that tracks the open source industry, lists roughly 250,000 people working on an amazing 275,000 projects. That's almost the size of General Motors' workforce. That is an awful lot of people working for free, even if they're not full-time. Imagine if all the employees of GM weren't paid yet continued to produce automobiles!

So far, the biggest efforts are open source projects, and the largest of them, such as Apache, manage several hundred contributors—about the size of a village. One study estimates that 60,000 man-years of work have poured into last year's release of Fedora Linux 9, so we have proof that self-assembly and the dynamics of sharing can govern a project on the scale of a decentralized town or village.

Of course, the total census of participants in online collective work is far greater. YouTube claims some 350 million monthly visitors. Nearly 10 million registered users have contributed to Wikipedia, 160,000 of whom are designated active. More than 35 million folks have posted and tagged more than 3 billion photos and videos on Flickr. Yahoo hosts 7.8 million groups focused on every possible subject. Google has 3.9 million.

These numbers still fall short of a nation. They may not even cross the threshold of mainstream (although if YouTube isn't mainstream, what is?). But clearly the population that lives with socialized media is significant. The number of people who make things for free, share things for free, use things for free, belong to collective software farms, work on projects that require communal decisions, or experience the benefits of decentralized socialism has reached millions and counting. Revolutions have grown out of much smaller numbers.

• Most people in the West, including myself, were indoctrinated with the notion that extending the power of individuals necessarily diminishes the power of the state, and vice versa. In practice, though, most polities socialize some resources and individualize others. Most free-market economies have socialized education, and even extremely socialized

• **On the face of it**, one might expect a lot of political posturing from folks who are constructing an alternative to capitalism and corporatism. But the coders, hackers, and programmers who design sharing tools don't think of themselves as revolutionaries. No new political party is being organized in conference rooms—at least, not in the US. (In Sweden, the Pirate Party formed on a platform of file-sharing. It won a paltry 0.63 percent of votes in the 2006 national election.)

Indeed, the leaders of the new socialism are extremely pragmatic. A survey of 2,784 open source developers explored their motivations. The most common was "to learn and develop new skills." That's practical. One academic put it this way (paraphrasing): The major reason for working on free stuff is to improve my own damn software. Basically, overt politics is not practical enough.

But the rest of us may not be politically immune to the rising tide of sharing, cooperation, collaboration, and collectivism. For the first time in years, the s-word is being uttered by TV pundits and in national news-magazines as a force in US politics. Obviously, the trend toward nationalizing hunks of industry, instituting national health care, and jump-starting job creation with tax money isn't wholly due to techno-socialism. But the last election demonstrated the power of a decentralized, webified base with digital collaboration at its core. The more we benefit from such collaboration, the more open we become to socialist institutions in government. The coercive, soul-smashing system of North Korea is dead; the future is a hybrid that takes cues from both Wikipedia and the moderate socialism of Sweden.

How close to a noncapitalistic, open source, peer-production society can this movement take us? Every time that question has been asked, the answer has been: closer than we thought. Consider craigslist. Just classified ads, right? But the site amplified the handy community swap board to reach a regional audience, enhanced it with pictures and real-time updates, and suddenly became a national treasure. Operating without state funding or control, connecting citizens directly to citizens, this mostly free marketplace achieves social good at an efficiency that would stagger any government or traditional corporation. Sure, it undermines the business model of newspapers,

but at the same time it makes an indisputable case that the sharing model is a viable alternative to both profit-seeking corporations and tax-supported civic institutions.

Who would have believed that poor farmers could secure \$100 loans from perfect strangers on the other side of the planet—and pay them back? That is what Kiva does with peer-to-peer lending. Every public health care expert declared confidently that sharing was fine for photos, but no one would share their medical records. But PatientsLikeMe, where patients pool results of treatments to better their own care, prove that collective action can trump both doctors and privacy scares. The increasingly common habit of sharing what you're thinking (Twitter), what you're reading (StumbleUpon), your finances (Wesabe), your everything (the Web) is becoming a foundation of our culture. Doing it while collaboratively building encyclopedias, news agencies, video archives, and software in groups that span continents, with people you don't know and whose class is irrelevant—that makes political socialism seem like the logical next step.

A similar thing happened with free markets over the past century. Every day, someone asked: What can't markets do? We took a long list of problems that seemed to require rational planning or paternal government and instead applied marketplace logic. In most cases, the market solution worked significantly better. Much of the prosperity in recent decades was gained by unleashing market forces on social problems.

Now we're trying the same trick with collaborative social technology, applying digital socialism to a growing list of wishes—and occasionally to problems that the free market couldn't solve—to see if it works. So far, the results have been startling. At nearly every turn, the power of sharing, cooperation, collaboration, openness, free pricing, and

transparency has proven to be more practical than we capitalists thought possible. Each time we try it, we find that the power of the new socialism is bigger than we imagined.

We underestimate the power of our tools to

 The Old Socialism	 The New Socialism
Authority centralized among elite officials	Power distributed among ad hoc participants
Limited resources dispensed by the state	Unlimited, free cloud computing
Forced labor in government factories	Volunteer group work à la Wikipedia
Property owned in common	Sharing protected by Creative Commons
Government-controlled information	Real-time Twitter and RSS feeds
Harsh penalties for criticizing leaders	Passionate opinions on the Huffington Post

reshape our minds. Did we really believe we could collaboratively build and inhabit virtual worlds all day, every day, and not have it affect our perspective? The force of online socialism is growing. Its dynamic is spreading beyond electrons—perhaps into elections. 

Seniormaverick **KEVIN KELLY** (kk@kk.org) wrote about correspondences between the Internet and the human brain in issue 16.07.