The industrial model of wage labor is unraveling. The search for new sources of low-wage workers drives waves of dislocated production around the world, leaving high unemployment in their wake. Automation creeps up the labor value chain, eliminating all kinds of jobs that used to require human participation. The social contract with the younger generations is broken: even well-educated young people find themselves increasingly burdened with student loan debts and scant job opportunities to pay them off. At the same time, social production—leveraging open-source tools and data and ever more sophisticated techniques for self-organization—is redefining and reorganizing wealth. As the century unfolds, this new model of production will transform the wage-based consumer economy into a civil economy based on social production.

In less than a decade, the platforms and practices of social production have already begun to disrupt jobs and industries. Much faster than anyone expected, the technique that originated in open-source programming is spreading beyond a few narrow sectors to transform the template for producing goods and services. Underemployed “hackers” convene in intensive weekend meetups to find solutions to civic problems, displacing multi-month, million-dollar contracts. Citizen scientists create ad hoc laboratories and convene large-scale networks to fast-track both theoretical and practical discoveries. In neighborhoods and on the streets, people are figuring out how to share goods and offer services at micro-scales, altering the flows of time and capital in daily life.

At the same time, the youngest generation is learning the new workforce skills. Ten-year-olds use CADCAM and 3D printers—think Origo—to make their own toys. They can navigate the web and participate in social networks and virtual worlds before they start kindergarten. Kid’s programming sites like GameSalad teach them not only programming skills but also the template for open-source collaboration. By mid-century, this do-it-yourself workforce will be at the peak of their productive lives.

By the end of the century, their own children may no longer even think of themselves as a workforce. They may simply see themselves as citizens of the local and virtual ecologies they occupy. Already we see youth around the world gravitating toward jobs that promise social value and social connection. Shut out of wage-labor jobs, they are applying their energies to obvious and pressing needs across a range of scales from household to community to the planet and even beyond. They are evolving new kinds of institutions using the nascent models of social enterprises, B-corporations, even games.

The result will be a new fusion of these public and private sectors into what we might call a civil economy—one that blends the worker-consumer and the citizen taxpayer into a new brand of citizen-producer who uses micro-contributions and micro-investments to vote with their productive capacity.

—Kathi Vian
The Core Dilemma

Perhaps the most fundamental dilemma as we restructure the global economy and governance systems to avoid massive poverty will be the tension between the expectation that growing the economy will grow jobs and the emerging reality of jobless growth.

Dilemmas typically take shape when short-term benefits mask long-term costs—or when long-term benefits require short-term costs. These are particularly acute when one group experiences the costs while another experiences the benefits.

<table>
<thead>
<tr>
<th><strong>SHORT TERM</strong></th>
<th><strong>LONG TERM</strong></th>
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<tbody>
<tr>
<td><strong>Costs</strong></td>
<td><strong>Costs</strong></td>
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<tr>
<td>• Rapid hollowing of IP and income wealth in traditional industries as open-source strategies target ever more sectors</td>
<td>• Increasing debt burden of countries that try to grow their way out of poverty and unemployment</td>
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<tr>
<td>• Much higher costs to protect IP and private interests</td>
<td>• Failure of many currencies—including government-backed currencies</td>
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<td>• Continued loss of jobs as markets are restructured</td>
<td>• Slower growth for industrializing countries</td>
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<td>• Growth of organized crime as a source of “employment”</td>
<td>• Legacy environmental costs as “rust belts” spread worldwide</td>
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<td>• Accelerating cycles of growth and collapse</td>
<td>• Legacy health costs as a result of current poverty levels</td>
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<td><strong>Benefits</strong></td>
<td><strong>Benefits</strong></td>
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<tr>
<td>• Growth of wealth from innovation in private platforms for public good</td>
<td>• Growth of for-benefit organizations and institutions to meet social and environmental needs</td>
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<tr>
<td>• Unleashed capacity in the workforce for experimentation and innovation</td>
<td>• Redirection of productive capacity to specific needs of local communities</td>
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<td>• New kinds of employment opportunities in targeted sectors</td>
<td>• Low-cost structures for retraining and repurposing the workforce</td>
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<td>• Alternative employment opportunities for some segments of the unemployed</td>
<td>• Greater transparency of power structures</td>
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<td>• Widespread just-in-time civic engagement</td>
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<td>• New, more robust models of democracy</td>
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Battles for control of intellectual property

New measurements of value in open systems

THE PLATFORMS
Open vs. Private
- Consumer-focused platforms generate small income opportunities for many more players and very big income opportunities for a few.
- Ownership of personal data and personal content becomes a focal issue for social platforms.
- Open platforms continue to undercut legacy institutions in science, education, health, and civic services.
- New models for investment in for-benefit platforms and projects provide alternatives to traditional investment strategies.
- Open data creates platforms for local social commerce and civic engagement.
- Hacker techniques and hacker communities spread to all segments of the public and private sectors.
- New platforms build fungibility of value across quantitative and qualitative value-exchanges.
- Global organized crime networks become the major focus of global conflict.

MEASUREMENT AND MOTIVATION
Extrinsic vs. Intrinsic
- Tools for managing micro-earnings emerge.
- New forms of value exchanges drive new forms of banking.
- Governments crack down on alternative currencies, either outlawing or taxing them.
- Governments attempt to tax social exchanges.
- Game-based platforms, which generate a growing portion of GDP, use game metrics to manage flows of wealth and define new measures of GDP.
- “Friend” statistics shape access to jobs and entrepreneurial success.
- Insurance companies work new models for reducing the risk of social transactions.

CONTROL
Technological vs. Social
- Peer-to-peer monitoring refines personal and public security.
- Reverse monitoring of public and private security forces increases accountability but undermines law enforcement.
- The combination of sensors and large data sets creates feedback systems that redefine personal and collective well-being.
- Citizen reporting platforms become de facto platforms for participatory budgeting and legislation.
- Sensors create a new level of civic convenience that, at times, supersedes civil rights.

SIGNALS
3D toy making for next-gen workforce
Origo is developing the first desktop 3D printer, designed for use with the 3Dit modeling application for children who want to draw and then print their own toys.

Open social platforms
Among the open platforms seeking to unseat Facebook and give users more control over their data is Unthink, which attracted over 100,000 members in its first week.

Micro-enterprise platforms
Coffee and Power is a new social media site where freelance workers can offer their services—with recommendations from friends and ratings by those who buy their offerings.

Citizen reporting platforms
SeeClickFix is a citizen reporting platform that helps people report problems in their community—and set priorities by “liking” particular problems.
Today's global protests from the right and left cast restive shadows over the next ten years and foretell a decade in which economic unrest is as potent as political unrest. The emerging practices of social production in both the private and public spheres will take shape in the midst of this turbulence—and they will also shape it. Spreading rapidly in the coming decade, these practices will challenge the value propositions of both traditional commercial and government institutions. They will disrupt livelihoods, contribute to rapid cycles of growth and collapse of markets, and create new shadow governments that lay the foundation for a new kind of democracy—not without strenuous resistance from existing power holders.

THE PLATFORMS: OPEN VS. PRIVATE

Social production is platform driven, and the big battles of the coming decade will be between open and private platforms. With Apple iTunes as the iconic template for commercial success, investors will look for other killer platforms. Competition and innovation will be fierce, and platforms will evolve quickly. At the same time, open solutions will challenge private platforms that commercialize their members' data and restrict their rights of ownership. New entries like Unthink will rise up to challenge Facebook. Apache will continue to out-deploy Microsoft IIS. The way these platforms differentiate themselves from each other will give us a preview of the issues and strategies of the emerging civil economy. The moves by governments to control them will reveal the threats they pose to legacy leaders.

MEASUREMENT AND MOTIVATION: EXTRINSIC VS. INTRINSIC

Economics and governance are all about measurement and motivation, and the emerging economy of social production will shift the paradigms for both. Michel Bauwen of the P2P Foundation describes this shift in terms of extrinsic versus intrinsic levers. Where the consumer wage-based economy has mastered positive extrinsic motivations to create growth of GDP around the world, an economy of social production will leverage intrinsic motivations—personal satisfaction, social fulfillment, health, and happiness—to produce a new kind of engaged and productive citizenry.

Money, in the form of government-backed currencies, will certainly continue to be the core measure of extrinsic motivation through the next decade, and even open platforms will attempt to monetize intrinsic value as a way to measure individual productivity. Governments will also attempt to tax this value. But over and over, the value proposition of collaborative platforms that promise economic benefit will shift to more intrinsic values such as friendship, community, and well-being. The NeighborGoods experience will be duplicated: its founders discovered that the real value of a sharing platform is in the relationships that neighbors evolve rather than the exchange of goods. This shift of value, repeated over and over among social platforms, will give rise to the illusion that social production is merely a fringe story—until it is so pervasive and has subverted so much of the monetary economy that money actually becomes the fringe motivation.

CONTROL: TECHNOLOGICAL VS. SOCIAL

Even as the rules of social production and civic engagement are evolving, the tools for monitoring and enforcing those rules are proliferating. A critical question over the coming decade will be the extent to which controls are automated—using the platforms of social production as platforms of civic control. The opportunities for collecting data profiles for every citizen, including real-time location and biometric data, will be vast. So will the opportunities for imposing technological restrictions or automating legislation. As communities struggle with collapsing economies, legacy institutions, and the uncharted territory of social production and participatory civics, the choice between technological and social controls will be a strident backdrop to almost every conversation.