

The New Commons vs. The Second Enclosure Movement: Comments on an Emerging Agenda for Development Research

Peter Evans

The relationship between property rights and development has always been a central concern for both theorists and policy makers. The growing role of information and communications technology in the economies of both North and South intensifies the salience of this issue. This commentary extends the discussion of the two visions of property rights that are introduced by Weber and Bussell (2005). In one, property rights are restructured along the lines pioneered by the open-source software community to create a “new commons” of productive tools; in the other, Northern corporations successfully defend their politically protected monopoly rights over intangible assets and even extend them through a “second enclosure movement” to an ever larger set of ideas, information, and images. Currently, the second enclosure movement remains dominant, but which of these visions is likely to predominate in the longer run depends on the interests and potential power of key actors and on the possibilities for alliances among them—not just Northern corporations, but Southern states and private entrepreneurs, as well.

Technological innovation is a potentially powerful source of improved well-being. Without it, well-being is a prisoner of the exploitation of existing resources, and the world’s citizens become victims of diminishing returns. In their introduction to this special issue, Boas and Dunning (2005) spotlight the unprecedented character of contemporary technological change. Revolutionary improve-

Peter Evans is professor of sociology and Marjorie Meyer Eliaser Chair of International Studies at the University of California, Berkeley. His research has focused on the comparative political economy of developing countries, particularly industrialization and the role of the state, as exemplified by *Embedded Autonomy: States and Industrial Transformation* (Princeton: Princeton University Press, 1995). He has also worked urban environmental issues, producing the edited volume *Livable Cities: Urban Struggles for Livelihood and Sustainability* (University of California Press, 2002). His current interest in the politics of globalization is reflected in his chapter, “Counter-hegemonic Globalization: Transnational Social Movements in the Contemporary Global Political Economy,” forthcoming in the *Handbook of Political Sociology* (Cambridge University Press).

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ments in our ability to process and communicate information create new possibilities for conserving resources, creating value and expanding human capabilities. As Nicholas Negroponte (1996) puts it, rearranging strings of bits rather than rearranging atoms is at the center of changes in modern production.

Information and communication technology (ICT) creates new opportunities for the global dispersion of entrepreneurship, as Saxenian (2005) highlights. Even for those who are users rather than producers, ICT products can be potentially transformative tools rather than simply consumption, as Cartier and her colleagues (2005) illustrate. But the most interesting transformative possibility hidden inside ICT may be its potential to lead to new definitions of "property rights." Economic historians like Douglass North (1994, 1990, 1981) have long contended that property rights lie at the core of the economic growth that has dominated the last 300 years of world history, but their analysis has assumed convergence on a relatively fixed set of "private property institutions" (cf. Acemoglu, Johnson and Robinson, forthcoming). Weber and Bussell (2005) suggest that the future evolution of ICT could challenge that fundamental assumption, and I will concentrate my comments on exploring this issue.

Both the rate of technological change and its impact on well-being depend in turn on the prevailing system of property rights. According to Weber and Bussell, two visions of property rights currently compete to determine what contemporary "bit-driven growth" might mean for global levels of well-being. In one, the Northern corporations that currently dominate global ownership of intangible assets successfully defend their politically protected monopoly rights while simultaneously extending those rights by transforming into private property an ever larger set of ideas, information, and images previously considered part of nature or a shared cultural heritage. In the other scenario, property rights are restructured along the lines pioneered by the open-source software community to create a "new commons" of productive tools which allows for both a more egalitarian redistribution of intangible assets and a wider, more effective engagement of human ingenuity for creating innovative solutions.

This stylized Manichean vision provides a nice frame for imagining the range of possible global futures. If one of these visions dominates, the implications for the future structure and dynamics of the global political economy are profound, influencing the depths of the gap between North and South, inequalities within the North and within the South, and the future course of innovation and growth. In reality, neither model will fully prevail; as Weber and Bussell make clear, the future will be some complex combination of the two. Nonetheless, these are useful ideal types. Which one of these ideal types the actual evolution of the global political economy most resembles will fundamentally affect the welfare of the world's citizens.

If the first possibility, which Weber and Bussell call "property rights imperialism" and James Boyle (2003) has called "the second enclosure movement," comes to dominate the globe's leading economic sectors, the immediate result will be an unprecedented expansion of the profits of the Northern corporations that appropriate the lion's share of the returns from the world's intangible assets, accompanied by a corresponding increase in their power to shape the political processes that determine the rules of the global economic game. There are really two halves to the second enclosure movement. The defensive side focuses on intensifying the en-

forcement of politically protected monopoly rights to exclude others from using information that has been defined as private property. The offensive side of the agenda involves taking information that has been considered part of “nature,” or the common cultural and informational heritage of humankind, and transforming it into private property.

If both halves are successful, the “second enclosure movement” will constitute a global redistribution of property comparable to the eradication of the commons that ushered in agrarian capitalism in Western Europe 300 years ago. The original enclosure movement may have realigned property rights in a way that avoided the tragedy of the commons and set in motion a process of growth so powerfully productivity enhancing as to compensate for its negative distributional effects. The second enclosure movement is much less likely to have growth as a positive by-product. It is a recipe for global monopoly that is likely to stifle innovation at the same time that it concentrates wealth, an invitation to what some caution could be a “New Dark Ages” (cf. Lessig, 2001).

The “new commons” alternative is attractive both because of its distributional implications and because of its potential for raising the rate of innovation and value creation. Redefining “ownership” to focus on the right to distribute, rather than the right to exclude, creates the new commons. Unlike the old commons, shared property rights do not create a problem of overuse. Expanding the number of people using the new commons does not deplete it; rather, its value increases. Using the open-source software movement as a paradigm, Weber and Bussell liken the innovative potential unleashed by the new commons to what might have happened if steam engines had been available to anyone who wanted to use them during the early phases of the industrial revolution.

Expanding the new commons would be redistributive in two ways. First, in both North and South, it would reduce returns to existing owners of intellectual property by creating new competition for their products, while expanding the returns to human capital by giving people more intangible assets to work with. Second, because ownership of existing intangible assets and the returns these assets generate are highly concentrated in the North, whereas workers in the South have less access to intangible assets than their counterparts in the North, expanding the “new commons” should shift assets and incomes from North to South,

How much “economic space” is each of these two ideal types destined to occupy as our incipient “digital revolution” matures? The articles in this special issue point toward a research agenda aimed at answering this key question. They make it clear that any answer must begin by identifying the interests and potential power of key actors, and the possibilities for alliances among them. Delineating the alignments and relative power of the innovators, entrepreneurs, and established corporations who control “bit-based assets” would be a start. States are important actors, as well. The crucial importance of political enforcement of monopoly rights to intangible property gives national and global regulatory machineries a key role. At the same time, state investments in infrastructure and education are important in enabling full exploitation of the new commons.

Weber and Bussell focus primarily on innovators, entrepreneurs, and their battles with established corporate powers, but they also touch on the potential role of states, especially states in the global South. Saxenian deepens and complicates the analy-

sis of entrepreneurship by emphasizing the emergence of a new social geography of entrepreneurship. States also figure in her analysis both as facilitators and impediments to entrepreneurial strategies and as mediators of the larger social effects of entrepreneurial success. Cartier and her co-authors (2005) bring in ordinary users of new technologies, pointing out that they also have strategies and that those strategies create opportunities for entrepreneurs and reshape the consequences of the state's efforts to mold the course of the digital revolution. In the commentary that follows, I will focus primarily on Weber and Bussell's analysis of the likelihood that the new commons might play an expanding role in the new global political economy, but will end by considering the clues offered by all three articles regarding the implications of current developments in the ICT industry for growth and well-being in the global South.

Weber and Bussell make a good case for the possibility of expanding the new commons. The skeleton of their argument has three steps: (1) the economic viability of open-source software—a.k.a. free and open-source software, or FOSS—has already been proved in key applications in the North; (2) powerful corporate allies have emerged in the North, making more plausible the possibility of a new international property regime that will open space for the South to take advantage of the new commons; and (3) the South has realized that FOSS is in its interest and has begun to defend and utilize the new commons. Obviously, Weber and Bussell can't fully elaborate and substantiate this argument in a single article. Nonetheless, they give us a good sense of what would be required for a full elaboration.

A more complete elaboration would have to begin with an analysis of the software market. How large a portion of the software market does the open-source model apply to? A skeptic might argue that most of the software market is actually structured in ways that don't lend themselves to exploitation via the new commons. First, there is the market for "shrink-wrapped" brand name products sold to technologically unsophisticated individual users. Marketing power and demand creation is the key to these markets, and successful competition with established corporations would be correspondingly difficult. The other end of the market is more about systems and service than about products per se. Large organizations need complex customized information systems and dependable long-term relationships with sophisticated service providers that will guarantee maintenance and performance.

In this vision of the software market, FOSS can really only survive in a niche where users are sophisticated enough to find and use it but still have sufficiently generic needs so that they don't require a multi-faceted, long-term service relationship with the provider. The devil's advocate version of this argument might go further and say that this FOSS-friendly slice of the market is actually relatively small and that the "FOSS-resistant" slices are not only larger but also more profitable. FOSS producers will remain interesting niche players but can't really play a transformative role. Some open-source products will survive, just as some small retailers survive in a world dominated by Wal-Mart, but the economic rules of retailing will still be written (and enforced) by Wal-Mart—or, in the case of ICT, by Microsoft.

Whether this negative vision is more accurate than Weber and Bussell's more optimistic one is an empirical question. The possibility of distributing consumer software over the Web may drastically reduce the share of the consumer market that requires shrink-wrapped marketing power. On the other end, many of those large

users that require customized service relationships are public institutions. Unlike corporations, they are local or national, not global. They may strongly prefer service relationships with organizations that operate at the same geographic and political level that they do. Being able to put together complex information management systems out of open-source building blocks could make FOSS-based local organizations fully competitive with global providers offering expensive proprietary systems. In short, we don't know the answer to the question, "How much of the software market is 'FOSS-friendly'?"

This brings us to a second, broader question: Does the open-source model work outside of software? Or, put another way, how much of the world of intangible assets can be transformed into open source? It is not hard to imagine that more and more people will find ways to consume the images that form the assets of Disney or Sony without paying tribute to their owners, but the question is whether property rights can be rearranged to facilitate creation and innovation in the way that the open source does without requiring the same old system of monopoly property rights that keeps capital accumulating at Disney. The people who run Creative Commons (<http://creativecommons.org>) certainly believe that such rearrangement is possible, but this is another key question for empirical investigation.

Perhaps the most politically crucial sector is the one that involves strings of bits describing relationships among molecules rather than computer instructions. The pharmaceutical industry is an archetypal beneficiary of politically protected monopoly rights. Our first instinct is to assume that drugs cannot be produced by a system analogous to open source and that the Big Pharma companies will continue to be the vanguard of the second enclosure movement, hand in hand with the big agro-chem companies that are most vividly turning the biological commons into private property engineered for profit maximization. Weber and Bussell suggest that this may be a failure of imagination and that strategies such as releasing a molecule under a general public license might enable the construction of a system of pharmaceutical property rights analogous to FOSS. The fact remains that, in contrast to software, in which we can see the effective operation of different systems of property rights, the operation of the new commons in other sectors remains only a hypothetical possibility.

Weber and Bussell could lose the broader sectoral argument and still win the war by convincing us that the productive and transformative power of software is unique among the various forms of intellectual property, that it is the determinative source of "steam engines." Indeed, there is a fundamental difference between Mickey Mouse and Windows that seems to support this argument. Nonetheless, it is hard to imagine a real revolution in intellectual property rights that involves only software, if only because the mass of corporate power aligned against such a change would be overwhelming. And, this, of course, brings us to another key research question: Is it possible to imagine the construction of a sufficiently powerful political alliance to establish a new commons?

Using IBM's recent decisions to put some of their software patents in the public domain as their case in point, Weber and Bussell argue that a subset of powerful corporate actors has an interest in changing the property rights regime and is trying to do so. Basically, IBM sees itself as earning more through "steam engine operation, maintenance, and repair" than from "steam engine production." By collabo-

rating in the free distribution of steam engines, they expand their market. In other words, the kind of basic and generic software that represents the bulk of FOSS is not a sort that will make them a lot of money. Their profits will come more from selling and servicing complex custom software to large organizations (perhaps along with some hardware). Making sure that the building blocks for this kind of software don't become the exclusive property of Microsoft or Oracle is in their interests. This argument makes sense and is completely consistent with the scenario of the divisions in the software market that I laid out above.

Since which set of rules governing property rights prevails is ultimately a political question, we need to have a better sense of what proportion of companies might have IBM-like interests as opposed to Microsoft-like interests. IBM turn out to be an ally of the new commons, but pushing through what would be a dramatic change in property rights would require a broad coalition that was both economically and politically powerful. Overcoming inertia is the first part of the problem. What is the likely knee-jerk reaction of most corporate elites? Probably "My property rights are good; everybody's property rights should be protected; expand the enforcement of property rights."

The second problem in building a coalition has already been mentioned. There is no equivalent to the IBM strategy for Disney or Sony or other owners of images. They will fight the erosion of their rights tooth and nail. Indeed, they already are. Again, pharmaceuticals could be a bellwether. While there is the possibility of a Pfizer vs. Merck split in pharma that parallels the IBM-Microsoft split, it seems more likely that pharmaceutical companies (not to mention Monsanto and the agrochem giants) will side with Disney and Sony. And, of course, we haven't mentioned Coca-Cola and others who are likely to see a close connection between protecting monopoly rights to software "steam engines" and protecting their own formulas and images.

Looking at this correlation of forces, the political power of the second enclosure movement seems unbeatable, but so far we have considered only a very limited set of actors—basically Northern "intangible asset barons" versus entrepreneurial yeomen technologists. Southern states, and entrepreneurs who are based in the South, must be brought into the picture.

Weber and Bussell see the South as the natural ally of those who are on the side of the new commons in the North. This makes sense. It is certainly in the collective interests of the South to push politically for changes in the global property regime and to expand the market for FOSS software. If there is a split among corporations and entrepreneurs in the North, and if the South has the perception and will to take advantage of it, the South could make a real difference. Weber and Bussell's argument that the South has understood that FOSS is in its interests and has begun to defend the new commons focuses on states and public institutions. They have some nice examples of public-sector technocrats in the South starting to jump on the FOSS bandwagon. They have documented the rise of legislation backing FOSS in the more technologically advanced countries of the South. They also suggest that FOSS is gaining in the private sector in the South, using the expanding role of Linux in China as an example. The data on private-sector adherence to the FOSS banner in the South, however, are very thin. We need to know more about whether participation in the production side of FOSS is growing in the South. An environ-

ment in which people were participating in production would make a projection of more sophisticated utilization in the future more plausible. For example, a local analogy to Red Hat that could help out users with on-site Linux training in Brazil or South Africa would be an encouraging indicator of future support for the new commons.

Are corporate users in the South (those who are not subsidiaries of Northern transnationals) more likely to choose FOSS than their counterparts in the North? Are bit-driven entrepreneurs in the South more likely to side with Northern corporate defenders of property rights or with the Linux crowd? Are there enough of them with sufficient political clout to make a difference in any case? India's recent amendment of its patent laws to make them more compatible with WTO standards¹ suggests that the local expansion of high-tech industry may increase pressure for conformity to Northern property rights rather than expand the ranks of allies of the new commons. We need to have a much clearer sense of the divisions among private-sector entrepreneurs in order to know whether support for the new commons will remain a public-sector project in the South or become a politically powerful public-private coalition.

In giving us a better sense of what bit-driven private entrepreneurship might look like in the South, Saxenian's paper makes an invaluable addition to this debate. While Saxenian doesn't address the issue of whether the second enclosure movement will prevail over the new commons directly, she offers important insights into the rapidly changing character of bit-driven entrepreneurship in two key economic powers in the South. Saxenian's story of the extent to which IT entrepreneurs in China and India have managed to become technologically cutting-edge players in their home markets (and to a lesser extent in export markets) is impressive. Reading her descriptions, it seems clear that the concentration of the power to generate software innovation in the Silicon Valley and the North more generally is already being challenged by Asia. But will it lead to a challenge of the current Northern property rights regime?

The "new commons/free steam engine/ownership as the right to distribute" model of property rights would seem congruent with the likely competitive advantage of Asian entrepreneurs, both in their domestic markets and in broader global markets. Yet what makes these new Asian entrepreneurs effective is precisely their immersion in the entrepreneurial culture of Silicon Valley and their continued ties to Northern firms and entrepreneurs. Thus, rejection of standard Northern property-rights protocols is certainly not to be taken for granted. Such networks' ties might, of course, include connections to open-source projects, which, as Weber and Bussell point out, are becoming increasingly common within the conventional corporate sector. Yet, it seems more likely that conformity with the traditional system of property rights, which is still dominant in the Northern core of these networks, would be a prudent choice for those who wish to remain network members in good standing despite being attached to politically and geographically distant bases. Saxenian sensitizes us to the complexities and ambiguities of the new Asian technological entrepreneurship, but leaves the question of its impact on the global property-rights regime unresolved.

Saxenian's paper also complements Weber and Bussell's work in defining an agenda with regard to the even more challenging underlying issue: How much can

technological entrepreneurship, with or without new forms of property rights, contribute to the transformation of levels of well-being in the global South? Weber and Bussell underline the negatives of Northern monopoly returns. They make the point indelibly by suggesting that the Northern ability to enforce monopoly rents on anti-retroviral drugs constitutes “weapons of mass destruction” as far as Africa is concerned. Saxenian complements the negatives of monopoly rights with the positives of diffusing technological entrepreneurship. One can certainly argue that the recent rapid growth of the Chinese and Indian economies, which has been associated with their recent ICT successes, is evidence that entrepreneurial networks in ICT are, in fact, contributing to a globally redistributive shift in patterns of growth. The spread of technological entrepreneurship to these countries is one reason why the incomes of their citizens have been increasing relative to those in developed countries.

On the other hand, one can also argue that the existence of new South-based entrepreneurial networks does not directly challenge the proposition that Northern corporations will continue indefinitely to extract monopoly rents from their control over global intangible assets and that this will ensure that Northern corporations continue to dominate global wealth. Given effective enforcement of the current property-rights regime, can technological entrepreneurship in the South change the global distribution of the returns from bit-driven growth over the long term, or will it only cut in a few Southern entrepreneurs while helping to legitimate the disproportionate flow of returns to the North, in effect solidifying monopolistic control by Northern corporations?

Distribution of returns among the countries of the South is equally important. Are India and China models that other countries will emulate? Or are they exceptions with unique advantages impossible for countries without the combination of large technically-trained diasporas and massive internal markets to replicate? Saxenian (2005) argues that even seemingly promising candidates like Korea have not enjoyed the right combination of conditions that would facilitate this pattern. Saxenian is also agnostic, but skeptical, on the question of distributional effects within countries. In the case of India, she suggests that failure on the part of the Indian government to make the kind of infrastructure investments that are the essential complement of entrepreneurial networks will limit transformation to enclaves, rather than enabling a truly national version of “IT-South.” Using Silicon Valley as an example, she emphasizes that continual investment in public infrastructure of all kinds is the necessary complement to entrepreneurship, not just to stimulate spread effects but to sustain entrepreneurship itself (cf. Newman, 2002).

Cartier, Castells, and Qiu’s (2005) contribution adds an additional dimension to the question of spread effects by focusing on the ways in which consumption of information technology can improve the lives of non-elite groups, especially if local entrepreneurs are alert to their needs. The adaptiveness of local Chinese entrepreneurs has given the urban Chinese “have-less” products that are not just affordable consumption but a means of improving their living standards as well, helping them to communicate and to gain access to economically valuable information.² The have-less themselves have been entrepreneurial in exploiting new technological possibilities.

Are these advantages sufficient to serve as “mobility multipliers,” boosting the

productivity of the have-less and generating real upward mobility? Or are they only marginal improvements in difficult lives that still leave the have-less without much prospect of becoming real participants in the new Chinese version of the good life? Cartier and colleagues make no claims to be able to answer this question. If we juxtapose their analysis with other portrayals of the lives of marginalized urban workers in China (e.g., Hurst, 2004), it is hard to imagine that access to “Little Smart” technology compensates for the disappearance of more than fifty million stable industrial jobs over the course of the past decade.

In combination, these articles spell out nicely the circumstances that connect technological change and redistribution. The major determinant of distributional effects is the system of property rights, but even while the new commons is limited to niche markets, positive distributional effects are still possible. When bit-driven growth is combined with exceptional entrepreneurial networks spanning the North-South divide, as in the case of India and China, it has the potential to contribute to changing inter-country income distribution, even under the current property-rights regime. Continued public commitment to infrastructure investment improves the possibility for regional spread effects within countries, and attentiveness of local entrepreneurs to the special needs of less-privileged consumers offers at least minor mitigation of class differences.

While they point out the possibilities, these articles also make the obstacles to real distributional effects, either across the North-South or within countries, painfully clear. Weber and Bussell leave no doubt as to the political obstacles that stand in the way of global changes in property rights. Saxenian shows how the special circumstances that enable technological entrepreneurship in India and China are hard to replicate elsewhere in the South, and how much else is needed to ensure that the effects of these entrepreneurial successes aren't restricted to enclaves. Cartier and her collaborators explicate the limited mobility effects open to even the most entrepreneurial disprivileged consumers.

Taken together, these articles are benchmark contributions to an essential research agenda. They are, of course, only a beginning, and make us covet more definitive answers. As Boas and Dunning make clear in their introduction, we remain victims of the owl of Minerva's habitual procrastination. Only future generations of scholars can be expected to really explain what is happening to us. These articles can't tell us whether the new commons will be politically and economically capable of challenging the second enclosure movement. Nor can they provide a definitive assessment of the extent to which technological entrepreneurship will contribute to transforming levels of well-being in the global South. What they *do* provide are trailblazing exemplars that will serve as a point of departure for future scholars.

Notes

1. See D.G. McNeil, “India Alters Law on Drug Patents,” *New York Times*, March 24, 2005.
2. It is worth noting that while Cartier's cases are not exactly examples of the new commons, they do echo Weber and Bussell's insistence on the positive distributional effects of a more open model of technological change in which products are shaped by relationships with users rather than efforts to preserve monopoly returns.

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