The new free software model and the hacker ethic

The hacker ethic is not a truly new thing in history. We can recognize it in the moments of originality in science, in the first engineers of the Industrial Revolution, in the great personalities in physics, economy, medicine… but the new hackers appeared not long before the precise moment in which information, technology, and creativity would become the majority of value produced. At this moment, large scale would begin to reveal "negative returns on scale" in the management of intellectual capital.

Born in electronic media around universities and connected with activism through electronic privacy issues, the hacker movement evolved rapidly towards an alternative organizational system for self-organized researchers in different fields.

Hacking is using knowledge we have about a system of any type to develop functionalities for which it was not originally designed, or to make it work towards new objectives. In the press, they're called "IT geniuses," or even "pirates," but the new hackers are, in fact, much more. The sociologist Pekka Himanen showed in a famous book[2] how hackers, to create value, need free access to knowledge and their peers.

For hackers, knowledge itself is a motivation for production, and in general, for life and work in community. They don't learn to produce more or better, they produce to know more. Because learning is their goal, their life can't be divided up between work time and "free" time. Time is always free, and as such, productive, since a hacker practices multispecialization as a way of life. Freedom is the principal value, as the materialization of personal and community autonomy. Hackers make no demands on others—governments or institutions—to do what they think should be done; they do it for themselves directly. If they make any demand, it's for the removal of barriers of any kind (monopolies, intellectual property, etc.) that prevent them or their communities from doing it.

In this framework of values, free software's first great victory was born: the construction of a complete free operating system—Linux. Never again would the hacker movement be part of the underground. A new electronic commons appeared before millions of people's eyes. It would quickly but profoundly and permanently change the star industry of the

[2] *The Hacker Ethic and the Spririt of the Information Age*, Pekka Himanen, 2001, several editions in English, Finnish, Spanish, etc.

previous decade. It would go from a few large-scale businesses to a far-reaching system with many small groups, projects, and businesses, that rested on a unique, but multiform, diverse, and dynamic commons.

Not long after that, the cycle and the structure of the production of free software, would appear in other fields. Not coincidentally, the production of immaterial cultural objects—music, literature, and audiovisual creation—had taken advantage of P2P technology before others. But, by the same token, it had also suffered an attack from new intellectual property laws pushed by the large-scale culture industry.

And not many years ago, when the large-scale systemic crisis was at its weightiest, the same P2P production cycle and structure took their first steps into the manufacture of physical objects. Today, we can build more efficient, cheaper, and more attractive cars, free from intellectual property, in any small workshop, thanks to projects like Wikispeed.

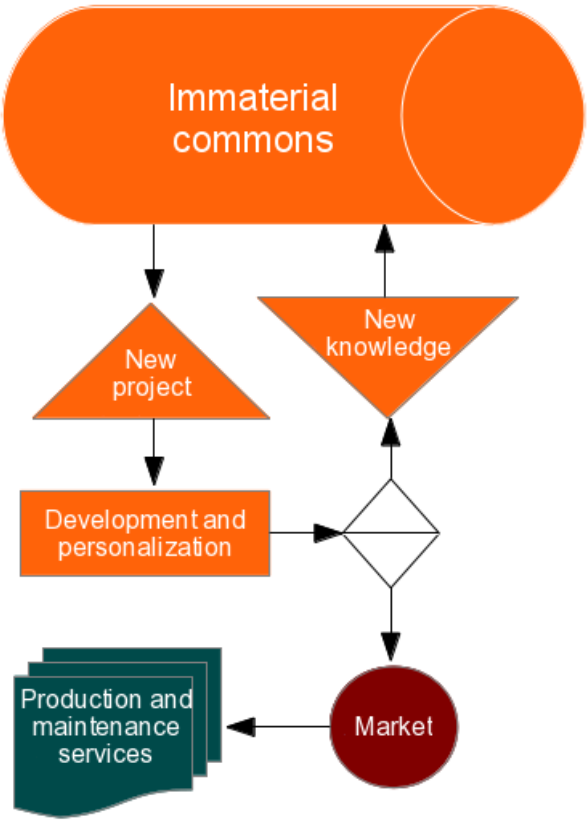
In the last three years, there's been a large increase in the number of industrial manufacturing projects based on the possibilities of high productivity on a small scale, based on a commons of technical knowledge. The "Open Source Ecology" project alone is working on the design of forty basic industrial machines, from a wind generator to a tractor to a brick-making machine.

But what is the P2P mode of production? What is the P2P production cycle?

The center of the cycle is the knowledge commons: intangible, free of cost, and free to anyone to use. It's the characteristic form of capital in production between peers. From this starting point, new projects are born. Because there's no central authority, they can be evolutions of earlier projects in the commons—even customizations for concrete needs—or they can try to meet different, truly new, objectives. This way, new knowledge is produced as projects materialize and develop.

New knowledge is incorporated directly to the commons, the center of P2P accumulation, but also goes out to the market, where it can be incorporated into customization, production, and maintenance services sold by small-scale businesses.

It's important to point out that, in the P2P mode of production, market and capital are defined fundamentally differently from the current system. The key to understanding it is the concept of "economic rent." Rent, in this context, is any extraordinary benefit, generated outside of the market, because of the place occupied by the business. "Natural" monopolies (normally created by over-scaling), legal monopolies (like intellectual property), and State favors are the most common sources of businesses' rents. It's also, as we saw before,


Immaterial commons
New project
New knowledge
Development and personalization
Production and maintenance services
Market

the main motive for over-scaling organizations, and the most common argument for Big Capital's "need" for new industries.

All these rents disappear in the P2P production system. Only one rent remains: the one produced temporarily by innovation. Whoever creates new technologies or products has a short time to take advantage of their uniqueness in the market before the new knowledge enters the commons, allowing others to offer it, and "dissipating" the innovation rent for its creators… which starts the cycle all over again.

Because the market will only bear the value of the labor contained in services, businesses need to innovate constantly to win short, temporary rents from successive innovations. That's why the P2P mode of production is truly a machine for making abundance, which accumulates in the form of an ever-growing and universally usable knowledge commons. All without needing central control, hierarchy, or large-scale organizations.