

## P2P Production

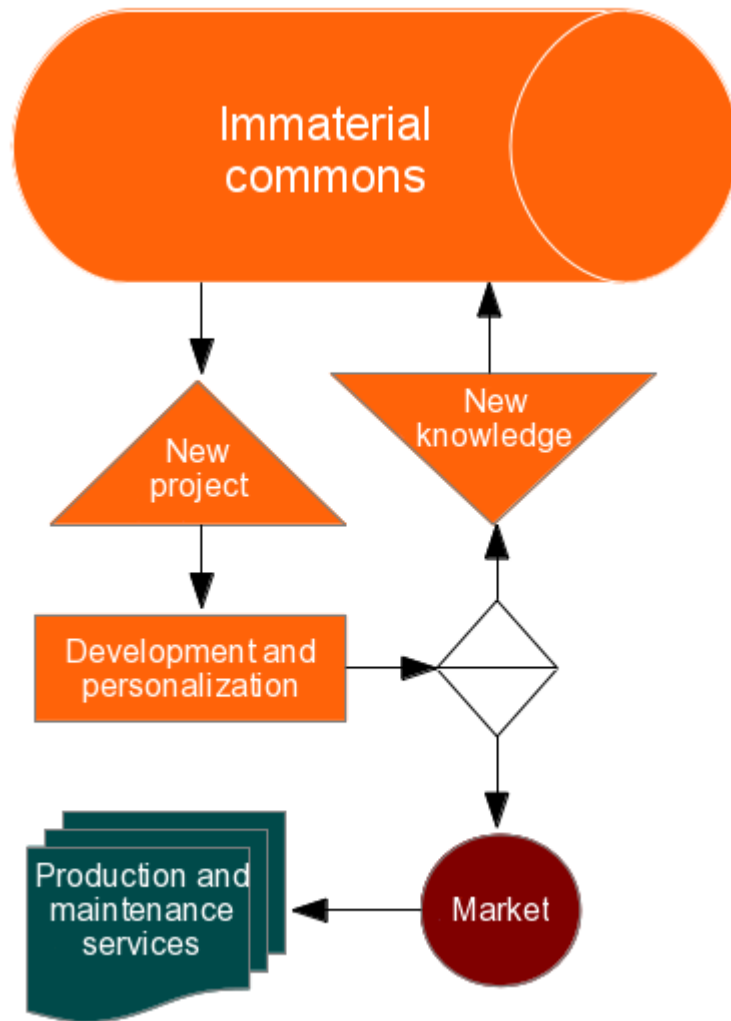
Looking back now, it seems clear that the P2P mode of production started to take shape at the end of the '90s, when the emergence of Linux turned free software into a social and productive phenomenon of the first order. At the time, however, few would have gone so far. Most people were focused on something which was also important, and which links it with the logic and ethics of abundance: its origin in the hacker movement.

For hackers, knowledge in itself is a cause 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 motivation, their life can't be divided up into working time and "free" time. All time is free and therefore productive, because hackers defend multispecialization as a lifestyle. Freedom is their main value, as the materialization of personal autonomy and community. Hackers don't demand that others—governments or institutions—do what they consider must be done; they do it themselves, directly. If they demand anything, it's that obstacles of any kind (monopolies, intellectual property, etc.) that prevent them or their community from addressing production be removed.

In this framework of values, the first major victory of free software took place: building a complete free operating system, Linux. Never again would the hacker movement be part of the underground. A new electronic commons appeared before the eyes of millions of people. Soon, profoundly but quickly, this forever changed the hottest industry of the previous decade. It went from a few large-scale businesses to a far-reaching system with many small groups, projects and companies that rested on a unique, but multiform, diverse, dynamic commons.

Not long after that, the cycle and the structure of free software production would appear in other fields. Not coincidentally, the production of immaterial cultural objects—music, literature, and audiovisual creation—took advantage of P2P technology before others. But for just that reason, it had also suffered attacks from new laws on intellectual property called for by the large-scale culture industry.

In this model, the center of the cycle is the knowledge commons, which is immaterial, free, and freely usable for all. This is the characteristic form of capital in production between peers. From this starting point, new projects are born. Because there's no central authority, there can be evolutions of previous projects in the commons—including customizations for concrete needs—or, different, truly new objectives can be spelled out. This way, new knowledge is produced in the process of its materialization and development.



Each new contribution incorporates directly to the commons, the center of P2P accumulation, but also enters the market, where it may possibly appear incorporated into customization, production and maintenance services sold by small businesses or individuals.

It's important to point out the extent to which the market and capital are defined in a fundamentally different way in the P2P mode of production from the current system. The key to understanding it is the concept of "rent." Rent is all extraordinary benefit, created outside of the market, by the place occupied by the business. "Natural" monopolies—normally created by over-scaling—legal monopolies (like intellectual property) and deals for regulatory favor are the most common origins of business rents.

All these rents disappear in the P2P production cycle. As Juan Urrutia had predicted, only one rent remains: the one produced temporarily by innovation. Anyone who creates new technologies or products has a short time to take advantage of their solitude in the market before the fact that the new knowledge has entered the commons allows others to make offers based on it, "dissipating" rents from innovation for its creators and starting the cycle once again, without any advantages for anyone.

Because, at the limit, the market only pays the value of the work contained in services, the businesses need to innovate constantly to win short temporary rents from successive innovations. That's why the P2P mode of production is a true abundance-producing machine, which accumulates in the form of an ever-growing and universally usable knowledge commons. And all without any need for central control, hierarchy or large-scale organizations.

Ten years ago, talking about designing and producing objects without being a captain of industry would have sounded like madness or a symptom of over-exposure to science fiction novels. In a world that was enjoying the first glimpses of abundance in intangible goods after the digital revolution, the very idea of physical production felt like a throwback to an era that felt outdated and limiting; something that, while it kept functioning, it was out of the simple need to provide everyday objects: cars, computers, and appliances of all kinds.

In 2008 two teams, one at the University of Bath in the United Kingdom, and other in Las Indias, competed to complete the development of the "RepRap," a machine capable of printing objects, up to and including replicating itself. Soon, the repositories of free knowledge also began orienting themselves towards the world of production. At first, limited by the machines themselves and the materials they use, pieces of small size proliferated: figurines and models for board games were the most popular objects of the first repositories.

With the "RepRap," the first step was taken towards the factory at home. Quite naturally,

3D printers would turn hardware and design into natural allies of free software. In fact, the most important thing is that the new field replicated—for goods closer and closer to industrial production—the cycle of P2P production.

It's not just that a new mode of producing is being consolidated, it's that it's sustained by the great economic and technological trends of our time, which it also drives. This whole immaterial commons maintained on the Internet will accelerate the reduction of the optimum scale of production more and more, until it turns the 3D printer into the symbol of a future of very high productivity and very small scale, which can already be sensed.

The possibility of using free knowledge—with a starting price of zero—substantially reduces the capital necessary to launch a company. Software, patents, technical training... all things that were substantive parts of the business plan of any SME in the '90s, and which justified a good part of the investment, simply begin to fade. One of the main obstacles to starting a project of industrial production, capital, decreases substantially. What Marx had thought of as the basic “trap” of capitalism—the impossibility of turning salaries into capital—is less and less a problem. In an era where average qualifications are higher than they have ever been before, the substitution of monetary capital with direct knowledge puts it within reach for groups as small as a real community to produce for themselves.

Simultaneously to the reduction of the optimal scales of capital, smaller scales of production also become viable. Traditionally, short runs mean higher unit costs. Also, with a small volume of production, distribution becomes a nightmare, and negotiations with traditional channels becomes impossible. The product is limited to nearby markets.

And here's where the Internet and virtual communities come into play. As conversational communities based on lifestyles and similar preferences form, what before were “statistical leftovers” in market studies, begin to become buying groups. The Internet is replacing scale with reach. The “long tail” begins to be talked about, and the idea emerges that “there are no big markets, but rather, unserved niches.” Soon, these communities of users participate in the design and conceptualization of products, finance them on crowdfunding platforms, and will be the main way word spreads about them. We're still in the world of the direct economy which, as we saw, is fed by free software and networked collaboration. But in turn, as the direct economy colonizes new markets, it carries with it the seeds of the transition to P2P production.

From the point of view of a designer or a company, a direct-economy project is attractive, among other things, because the risks are reduced drastically. The different mechanisms

of pre-release sales and crowdsourcing allow promoters to finance the costs of the first production with sales practically guaranteed.

From the user's point of view, the experience of buying becomes discovery, a story that you share with those around you. Many people participate in the financing of a project for the pure pleasure of supporting the creation of something nice, or that interests them. Two decades ago, it would have been unbelievable for someone to decide to support someone else's business launch without asking them for a share or hoping for a cut of the profits, but it's true. It could be called pride in belonging, understanding collaboration in a broader sense, or a willingness to contribute to economic development. The issue is that the essence of financing a business project has been modified, in the most revolutionary way, and almost production itself: now, for hundreds of thousands of people, it has to do with the development of their identity and their community more than with the monetary cost-effectiveness that a microinvestment offers them.

While in the old consumerist culture, identity was defined by consumption, which is why one bought, in the direct economy and P2P production, it's the reverse: exercising one's own identity is participating in production. **Production goes back, by a new path, to being the center of what defines people.** At the same time, the possibility of designing and producing directly is more accessible than ever, and that's why communities begin to emerge that, after having been "niche" suppliers for others, "take the leap" for themselves into production, starting from the commons and adding new ideas, improvements, and product lines.

The P2P mode of production is already opening the door to a society of abundance. You can stop being a consumer. You can stop being passive and letting the things you buy define your identity. You can switch sides and produce, get involved a little or a lot in others' production, and enjoy what's been created together, from creating your own design to supporting someone else's proposal with an advance purchase.

Don't look in the store when you need something, from a cell phone to a razor or a computer for your nieces and nephews. Look for projects that are underway. None of them convince you? Propose your own, learn on the net what you need to do it, find your community in the search, become the owner of your life and of the material world around you. Become part of the freedom allowed by the new times we live in. Enjoy the emerging abundance.