Interview/
Yann Moulier Boutang
The issues at stake for intellectual property

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Olivier Assouly: How do the different ages of capitalism differ? To what extent can we talk about immaterial economy?

Yann Moulier Boutang: The three ages of capitalism differ mainly in terms of the substance of economic wealth, the mechanisms used to extract this wealth and the main players.
For mercantile capitalism (14th – 18th century): wealth was produced through trade and exchange, so the commercial profit that resulted essentially created links between zones that had been cut off until then. It also created the technical instruments that enabled those involved to take on the risks inherent in this type of trade (letters of change in Genoa in the 14th century, spin-off products like hire purchase, maritime insurance companies, colonial Companies with shareholders in the 17th century). The main players were the merchants, the state and the slaves. Financial capitalism took over the earth and revolved around the production of "earthly" goods (wood, gold, diamonds, sugar, coffee, indigo, cotton). The main problem was ensuring the availability of the merchandise. In 1550, there were four main obstacles: the limits of the conquistadors' gold and silver pillaging, an overall labour scarcity, piracy (meaning multiple levels of resistance) and, at the centre, the poor being forced to work with the creation of property rights based on limitless transferability. So the "Company" economy changed into a production economy in the colonial enclaves relying essentially on slave labour while the modern state emerged in parallel.

The advent of cognitive capitalism in 1975 (the end of the boom years) saw a simultaneous change in almost all of the components of the previous type of capitalism. The main economic wealth-creating product became knowledge based on other knowledge, or the "living" through the "living". Design and innovation became the elements which enabled the diversification of markets faced with increased competition. This knowledge can be split into two parts: explicit or codified knowledge fed by information, calculable data, the use of which requires co-operation between brains linked by computers; this implies a level of attention and skill-accumulation through constant learning and therefore implicit knowledge, the second part. The characteristic interface of this production is computer activity which can be split into four components: the material (hardware), software, the cerebral (wetware) and the network (netware). The second element is the change from the mechanical clock productivity model with, at the most, 10 000% returns, to biological models where the replication of the living is mastered by biotechnology. In the "living", produced by the "living" we go from a few cells to two or three billion cells.

This type of capitalism produces "immaterials" (services, knowledge-based goods, information) even if to do so consumes energy (in particular the enormous invest-

ment in digital networks), and the material economy. The emergence of the digital (computers, digitalisation, computers with faster processors and more and more memory, the broadband revolution) has turned the material economy upside down. Under industrial capitalism machines came to replace physical strength, so the economic resource became the co-ordination of physical work. With computers, the repetitive aspects of mental activity are incorporated in data and formal treatment processes (software). The core value is now non-repetitive cerebral activity, that which saves time in terms of organisation, innovation and memory. It also enables collective organisation and mental co-operation. In short, the implicit knowledge that comes with brains linked by computers co-operating. In this type of capitalism the immaterial aspect of the production (patents, brands, author's rights, services, skills, organisation, in short what the accountants refer to as the "intangibles", or more generally the positive externalities) become much more important. The store price of a Nike shoe corresponds to only 20% of its production cost, the other 80% is the cost of the brand, a condensation of resources that are difficult to evaluate, but nonetheless very important, for example the quality of the subcontractor's and sales networks or the opinion and trust of the customers. In the year 2000, the fixed assets at Microsoft represented barely 10% of its market value. At Cisco the ratio was 5%[1].

One last characteristic: that which makes extracting economic wealth possible is a common opinion shared by a large group of people. It is not just the subjective utility (like the old objective theory of the value of work) as seen by the neo-classic marginalists, is it is the common opinion that becomes the measure of time. We do have noble, almost constitutional versions of this transformation, one advertising agencies and marketing departments have long understood. Democracy measures power by the possibility to access the management of public money by bringing together the most people. The company CEO gets his power (his scope of economic action) doubly from the common opinion (of his shareholders to keep him or fire him), of his shareholders who determine the fluctuations of stock exchange capitalisation that condition his capacity to borrow from the banks.

O.A: In that case, in what way does what you refer to as the "capitalism of knowledge" directly influence intellectual property?

Y.M.B: If the transformation that we have just described is exact, then that means that most economic wealth comes from the intangibles. However, as their name suggests the intangibles are just that, hard to grasp. How can they be evaluated? A physical quantity can be outlined, divided, replaced with certainty. It does not include the dose of the arbitrary that the "immaterials" carry around with them. All those who work in artistic jobs, in design and fashion, in short all those who are involved with the public (and not just the average consumer from a micro-economic model) know that the public is fickle, changing, unpredictable. Success based on taste can not be commanded. It is not enough to have a good product, you have to capture the attention of the consumer, make them loyal, be constantly innovative and even then, do a lot of flirting for very little payoff. This high level of uncertainty leads investors to increase the liquidity of the economy. As you may imagine liquidity means you commit quickly and get out quickly. It is what is known in French as 'financiarisation'. It doesn't matter what you manufacture or how, the only thing that matters is the quick turnover of the capital invested and the profit made. And this is when we come to the issue of intellectual property rights and the problems they pose. "Immaterials" as hard to gauge as innovative potential and company start-ups, and the organisation and intellectual capital of human resources, were harnessed in three ways under industrial capitalism: the patent measured the innovation, author's rights

covered creative work and the brand channelled the trust suppliers and consumers had in the organisation as it was supposed to supply pertinent information on the product or service and above all to enable the consumer to buy the next one with his or her eyes closed.

But we must take into account three factors that make these three solutions more and more difficult to adapt in a world where interaction (and therefore the external effects that the economists refer to as "externalities") now plays a growing role and where the most economically rich part of production is made up of assets of knowledge and living assets:

– Intellectual property rights (IPR) are still, in relation to the secret (to non-disclosure) a compromise. In exchange for the social benefit of the revelation of an invention (patent), of an art work (author's rights), of stable product qualities (the brand), the inventor, author, brand owner is given an artificial, temporary monopoly (an exclusivity that will enable them to make their goods marketable) without which, these assets of knowledge can not be produced in the market sector. They should be financed by a tax that would be solely dedicated to paying artists/creators. If, as is now mainly the case, creation and innovation are financed by taxes (for example, research in France is state-subsidised to the tune of 1.5% GDP and companies stall at 0.5%) the social compromise tends to demand more "revelations" to the public than in the opposite case (where the private sector directly finance over half the research effort). This is without a doubt one of the main reasons why the idea of the free market is less acceptable in France and Europe in general than in the U.S.

– A private property agreement is, like any social agreement (unlike a natural or quasi-natural norm), largely dependent on its acceptance by society (and as such, by the consumer, but also by the citizen or, in a capitalism that relies on knowledge, by the learners, creators and producers of knowledge). However, knowledge needs a growing amount of free interaction and disclosure in order to be created and invented in the first place (before being valued in a marketable way)[2]. The collateral drawbacks of the establishment of a tighter fence around the intellectual domains by patents, author's rights and brands are growing in size and are less and less accepted by consumers, the citizens and actors of the "noosphere" (schools, universities, training institutes, research centres).

– There is a third factor to be considered. The three lines of defence of exclusive property (temporary or renewable by the brand) of intellectual property rights, that have been difficult to enforce since the 19th century[3], were able to rely on the technical obstacles to the reproduction of the materials used to publish immaterial works: printing, photography, analogue copying in film, television or VHS recording. Indeed, in the universe of analogue reproduction which formed the basis of the development of the industrial world and innovation (as opposed to the singular unique character of the one-off work of art), a copy is never as good as the original. On the one hand, it loses quality and, for the most part the materials wear out through use (ex. The grooves on vinyl records worn down by diamond or sapphire heads). However, the digital revolution has removed practically all of the technical obstacles to easily and perfectly copying and transporting digital files. A digital copy is as good as the original. The initial recording material that is kept in case of accidents (DVD, hard disk) enable the almost indefinite reproduction of discs, films, all digital files. The obstacles of time, the cost of the rapid disclosure of information and assets of knowledge are under threat and will be more and more so given the growth in the processing power and memory of computers and increasing bandwidth availability. A digital world where the entire collections of the MOMA, the British Museum or the Louvre can be stocked in a few seconds with one click is fast approaching. A world of interactive objects also. The

"merchandisation" of capitalism relied on the rarity of goods. The possible abundance of assets of information and knowledge has brought to light what Pierre-Noël Giraud[4] called "the spectre of gratuity".

In fact, the huge campaigns by the media giants and cultural industries against the free downloading of peer to peer files, as if the world was turning into an interactive library pooling existing resources, reveals a true crisis in patents, author's rights and brands. The growth in fake fashion brands relies essentially on brands, the high tech industries rely on patents for the most part, and the free downloading of music, films and books is proof of this. The Internet constitutes an unparalleled means of network development and transmission of material goods (books printed on paper) and, as such, the "merchandisation" of everything but at the same time, is a powerful agent for the "de-merchandisation" of immaterial goods. This is of course the difference between the battle that has arisen with the passage to cognitive capitalism and the battle fought at the end of the 18th century, which was preceded by a few much bloodier episodes involving the inculcation of the property rights of material goods during the passage from community-based societies to "hot" societies.

Lets take a few more recent examples which illustrate the crisis in each one of the traditional sections of intellectual property.
The generic drugs affair and the mandatory licences for developing countries (especially Africa) illustrates the difficulty to maintain patent legislation and the obligation of developing countries to obey the rules of the WTO (as outlined in the Marrakech agreement of 1995 stating that developing countries had ten years in which to comply with copyright laws) on anti-retroviral drugs. The Doha agreement legitimised a limitation on the respect of IPRs by allowing obligatory licences (a sort of requisition) for States having decreed a "public health emergency".
The case of industrial counterfeiting in south-east Asia, especially China (which explains why Western countries were in such a hurry to get China to join the World Trade Organisation) is wide-ranging. But in the more "immaterial" areas, we have seen the troubles of those captains of industry who refused partnerships to share knowledge in electronics or software: the French firm Wavecom which specialised in mobile telephony was confronted with a classic case of retro-engineering of its programmes and was forced to abandon the sector to fall back on making micro-chips for onboard car electronics.

O.A.: Can one take the question of intellectual property in its entirety or must one carefully divide the different sectors? For example, the technology transfers in the pharmaceutical industry are not of the same type or consequence as in the design industries like fashion.

Y.M.B: My answer to that is simple: one must have an overall understanding of the crisis that is currently affecting IPR's (meaning putting it into the perspective of the advent of cognitive capitalism) so as to be able to respond in an appropriate and intelligent manner, adapted to each sector. It is clear for example, that certain mechanical sectors such as the heavy chemical industry are not undergoing a crisis on the same level as the pharmaceutical or information technology sectors and that the high-tech sector represents three quarters of the staggering inflation in patents we have seen since the American legislation came into place (The Chakrabarty case and Bayh-Dole Act of 1980).
If we don't have an overall theory of the dynamics of capitalism, we run the risk of developing a retrograde and unproductive attitude. Indeed, we have to be extremely aware of the impact of the ongoing digital revolution with the passage to the post-silicon era of stocking information atomically on matter and the digital invasion of the domain of material production. Today, subcontracting brings together the most advanced computer CD (which spreads

knowledge once codified) and the specialist knowledge of a non-mechanic workforce, that used to be traditional skills (what economists refer to as idiosyncratic exchanges, meaning one-off). We always come back to the question of the "immaterials" or the intangibles and their historical conjunction with the universal measuring and communications tool that is the computer.

O.A: Does the question of counterfeiting force us into a resolutely industrial, material approach to intellectual property issues?

Y.M.B: The very term counterfeiting seems at first to refer back to the handmade, industrial division of tasks. But in fact the accusation of counterfeiting always goes back to the transgression of a norm which referred to intellectual property before it even existed and the author or creator was not yet even an individual. Thus in the Middle Ages when a "compagnon" (craftsman) was not given a "chef-d'œuvre" (meaning the equivalent of a diploma that gave them the right to practice as a Master and, as such, hire other "compagnons" and apprentice craftsmen according to corporation rules), he worked on the black market as a "free" worker (free, here meaning free from the corporation's rules). Those who broke the rules were called "chambrellans" and they were subjected to a campaign of repression that is quite reminiscent of today's repression of illegal immigrants without whom huge swathes of economic activity would not exist (not to mention the regular work that depends on this irregular work). So non-agricultural work, outside of the corporations soon represented half of the basically industrial work of craftsmen[5].

The counterfeiting or copying of a material object (plagiarism for a literary work) needs a "body" for the infraction, thus an object, but it is the non-respect of the exclusive monopoly given to the inventor or producer (even if collective when the notion of the individual was not legally outlined) that constitutes the heart of the question. So, we must not attempt to reconstitute a material correlation (that is more and more arbitrary) in the digital universe of copying and counterfeiting, but we should try to rethink the conflicts of intellectual property rights in the industrial era by examining the type of "immaterial" that was at stake.

Lets take the most obvious and painful case in history, one that ended up becoming a founding part of the modern industrial era: the "counterfeiting or copying" of the divine word – the reformation under the renaissance in Western Europe. In the beginning there was the Christian church, the Catholic church that had managed, with difficulty, (see the fight against paganism and then heresy) to impose the monopoly of the Christian word. The interpretation of this word (or "gospel", meaning good news) was ensured by a clergy subject to strict rules in the transmission of vocation and catechism. The back-up material for the dogma was, of course, a limited number of hand-copied manuscripts of the gospel and the Old testament, but above all the interpretation of the faith (the confession recited by the faithful in the symbol of nicée or Credo). The organisation of the Catholic church, meaning the clergy and the material substrates of its workings (from the rites to the archives of the administrative texts of canon law) was much more important than the primary historical source (the Bible). But this monopoly of Christianity (as seen through symbolic acts such as baptism) was thrown on its head by the invention of printing by Gutenberg. The availability of thousands of copies of the bible opened a gap in the interpretative monopoly of the clergy. If the believer has access to the source of faith, the personal interpretation of belief, the conformity of his actions to the word appears as the foundation of his faith much more so than the authority of tradition and the mechanism of collective training to obey a dogma. The modern individual is born, with all of the consequences of religion's model of organisation, its relationship with political power and finally the model of the political city.

First of all, from the birth of the "grand schism" some essential vectors of symbolic exchange for example, relics of the saints and indulgences (currency that gives time off purgatory), were seen as less credible. Then the very principle of a cult of the Saints as models of collective identification, the very authority of the Roman church, and finally its very principle that was called into question. The reactions of the Catholic church against the Reformation it deemed to be a counterfeit, (that the Catholic Church will always refer to as a "so-called reformed" religion) aimed to re-establish a dogmatic monopoly by limiting access to the bible, by a specification of the Catholic bible as opposed to the Protestant bible, by the regulation of the conditions of interpretation that had to be carried out under the authority of clergy members, not to mention the more repressive methods like the excommunication of the faithful, the *suspensio a divinis* (which forbade priests to practice their faith) and physical elimination.

In fact, the question of the protestant "counterfeit" that could be compared to standards of access to the particular trade that is "the business of eternal life" or the "salvation of the soul" was to be answered by the number of faithful who sign up (meaning users or clients of this particular service). It took three centuries and much tumult in Western Europe to get to a stage of coexistence and cohabitation between different norms and freedom of choice in terms of religion (including the particular religion that entails not having any). This example may seem artificial. But you only have to replace Gutenberg and the printing press with digital technology, and the Catholic church with the authorities in charge of protecting another type of particular exchange that is intellectual property (an immaterial that is not far from human "creation"), to ask yourself if we should not be learning from history. It is fascinating to see that the digital revolution first took place in countries of protestant tradition, even though it is also those countries that, Protestantism and individualism oblige, were the first to outline a theory of private property and the treatment of immaterial resources though the mechanism of a concession of a private temporary monopoly.

Let us leave aside this limited but instructive example to get back to counterfeiting or fakes in the fashion industry. Fashion is not unique in industry as it relies, as does all industry, on the reproducibility (or replication) of goods, services, a habitat (very complex and general behaviour like a way of being, standing, eating, consuming) and, today, a life experience (Rifkin and Lazzarato). But, unlike the material industrialist perspective, it must be closely linked to a support that, by definition is not unique (unlike a prototype or haute couture), something artistic that can be characterised according to the canons of beauty, a style, but more according to the public's taste (and not just the consumer or user). This public taste, like public opinion, is intrinsically variable, unpredictable, (G. Tarde) and constitutes the element that differentiates products and services. It makes the difference between what is validated as an innovation (that is to say, imitated, repeated and therefore a potential market) and a discovery, an eccentric curiosity or a unique work that is still in search of its public. For a banal phrase, style is the measure of its difference, what creates the gap between it and the way the words have already been used, images, colours, tones and a public that validates it or may validate it in a unsettling short period of time (the famous "short cycle" that short-circuits industrial, market-capturing strategies by its variability, its volatility).

Emulation and contagious imitation are at the source of fashion and other industries that rely on a rapid expansion of public and clientele. This exists in the conception, invention and production of the innovative characteristic, as much as the spring for its expansion. The invention of the new shape relies on research, metaphorical pillaging with inspiration gleaned through walking through town, observing collective behaviour, photographing window displays, and

the actual pillage of student designer's press books during their interviews or internships. Thousands of almost imperceptible variations are needed for a "find" to emerge whose actual creation will involve technical potential, capacities for different production units to work together, but also the capacity to take advantage of metropolitan location, meaning the numerous positive externalities offered by urban life and social inventiveness[7].

Plurality, imitation and differentiation through style constitute the heart of the fashion industry. Methods used to protect intellectual property borrowed from traditional industries with much longer product cycles, based on technical innovation and not on taste, are both ineffective and above all could end up being destructive to the very flow of innovation and creativity. Protection of author's rights on the original creation of an artist, of a motif on a fabric for example, that of a brand in general, or that which is seen on a particular item are not part of the imitative and naturally plagiarist universe of artistic creation. Digital scanning methods, the criss-crossing that exists between all media prevent any attempts to quantify traditional counterfeiting or copying misdemeanours. The solution that has been adopted in mechanical and electronic industries, that is patenting or registering small, modular elements, can not be used here. However, a coming together of brands around a territorial ensemble like an "appellation contrôlée", seems much less constraining and more importantly, more appropriate given the nature of style. If the innovative or creative character of a fashion that takes over or is renewed depends to a great extent on the positive externals captured locally, the name or collection of brands located in a geographical territory in one culture have a chance of working, in other words to get approval or validation from a public that is glad to be represented as such; like the inhabitants of the Bordeaux region who consider Bordeaux wine to be a positive representative of their region.

In addition, instead of multiplying the IRPs on elements of one brand, or to try and patent or protect design in its early stages, and therefore getting into the messy area of patenting ideas, we should look at the percentage of economic profit that is made on spin-off products that are less contestable. Lets take the example of a product that necessitated a very high level of investment like the film Star Wars. We should note that even if the film did do huge box office, it brought in even more through spin-off products: DVDs of course, but especially selling the figures of characters from the film. In this case, one that is more and more common, (for example the TV rights to football, basketball, sports gear with a club's colours), piracy (for a film, a DVD copy or download[8]) constitutes a most effective promotional tool for the spin-of products. The producer loses some of his paying audience (not always), but if he managed his spin-off deals well, he can make it back on the sale of products as varied as drinks, gadgets, toys and postcards.

O.A: How can companies and brands make a positive contribution to the issue, one that isn't repressive?

Y.M.B: That would depend largely on what I mentioned in the two previous answers. Fashion companies, like a large number of companies whose basic job relies on the capture of social value (that which is formed from a life and knowledge process), can only transform this value into economic wealth because they are set up in territories that are rich in positive externalities. The urban area has been defined by economists as a fertile territory for positive externalities. The city brings people, knowledge, products into contact with one another, and the synergy of these processes encourage creativity. But these positive externalities incorporate a considerable quantity of free activities, of "wageable" work that is carried out without any recognition of its utility and its contribution to the global productivity of the factors. The production of these positive externali-

ties is not very often an integral activity in companies that have more of a tendency to practice out-sourcing and sub-contracting. However, more involvement from these companies in the existing or future organisations, more intellectual capitalisation of territories, spreading of techniques and innovative models is essential. French industry does not participate enough (there are some exceptions) in the research effort. It needs to multiply its efforts by three on a global scale. But to offer to let it organise the interface with education, training and research organisations will lead to failure. Industry doesn't have the time nor the skills needed to carry out these tasks. We need organisations that can recruit project evaluators, finance training courses, internships, doctorates, projects. So fashion, graphic art, design students, should have access to much more financing so that companies can feed off their positive externalities instead of the current predator/victim situation that doesn't question the collective conditions of its reproduction.

The best defence for brands is not the "fake police" that can be essential in some cases, but are nonetheless quite rare and hard to contact. For example the extent of fakes and counterfeiting in South East Asia is directly related to the level of exploitation of the workers. The generalised corruption that is needed for industrial copying to happen, enables a small number of people to cream off 0% to 30% of the profit from this traffic, but we should not forget that most of the revenue generated is often redistributed in countries where social redistribution is practically non-existent. The effective defence of a brand depends on the community of clients, user and defenders of the brand. The popularity of a brand depends largely on its patronage on its civic, environmental and ethical involvement. The way Benetton managed its advertising budget is very instructive. However, it would appear that a "mutualisation" of brands that would create a collective defence shield to protect not one brand or another but French fashion in general or Paris as a fashion capital (no longer the only fashion capital in the world), is a solution to explore faced, for example, with the level of Chinese ambition.

O.A: Does the capitalism of knowledge offer a new public space?

Y.M.B: Recently I defined cognitive capitalism as the production of different types of public/consumer[9]. This means two things. First of all it is not possible to produce the new chain of economic wealth without the underlying formation of a shared human, communicational, linguistic, cultural and bio-political foundation, what I refer to as the "noosphère" and the "biosphère", that is dominated by diversity and the imperative to preserve this diversity if we wish to see new combinations emerge. These new common, virtual assets are the basis of the extraordinary productivity of the digital society. In other words, it is public, common. To have a public space and not just a multitude of common spaces, then Nation States would need to go beyond their vision of sovereignty and its political correlate, the People, to create what François Fourquet referred to in his famous work *Les Equipements du pouvoir*[10], as the equipment, the immaterial infrastructure of the new productive workers. This equipment which supposes new rights for the many agents competing in digital and cognitive production, new functions of public action, require investments that until now have only been understood by Nordic countries. Take the example of Norway that finances research by allotting all of the profits made from public gambling (racing, lotto) but also the private games sector(taxation of digital games).

This public space that doesn't yet exist, either in a legal sense or in terms of training agents of the state, was highlighted during the December 2005 debates on author's rights and other rights in a digital society. 10.5 million homes in France have an internet connection and over 7 million of those have broadband. Peer to peer downloading between Internet users now concerns such a

large number of Europeans that the legislation planned both in the 2002 European Directive and its application in France is out of date before even being ratified. And lets be clear: this is not the romanticism of freeness, it is the much more crucial question of the survival conditions of an innovative economy and its transformation into contemporary capitalism and, as such, the real jobs of tomorrow.

O.A: In the cultural industries, in the guise of the defence of author's rights, we have seen the use of a broad legislative arsenal destined to restrain the possibilities for copying and sharing works. What do you think of the commitment of Northern countries to eradicate copying?

Y.M.B: Digital Rights Management is the result of the mechanical application of intellectual property rights established under industrial capitalism by attempting to put the power of the digital to work as a fence around the rights to use digital goods. It brings to mind what the outlaw Procrust used to do to his victims, we are stretching and mutilating the consumer's legs to make them fit into the old industrial bed. In particular as all digital files (a series of 0s and 1s) are very easy to copy identically regardless of size, we can trace users and put their PC under permanent surveillance to check that what they have downloaded is legal in terms of intellectual property rights (software included). On the other hand, they equip DVDs and CDs with anti-copying files. George Orwell could never have imagined such a level of surveillance of the individual, the notion of privacy that is an integral part of civil liberty is gaily sacrificed. Stallman showed quite well[11] that the logic behind the application of author's rights on software could lead to a ban on lending books, or lending ones computer and wrote a sinister short story describing the lives of students in universities with such laws. As we cannot admit to the consumer, especially if he or she is a programmer, that they are the enemy, the instructions are encrypted. As a result this back door (a way into the computer unknown to the owner, known only to the manufacturer) enables the intrusion of viruses. A very recent example can be seen with Sony's anti-copy technology on its most recent game software. The infection of 106 000 computers by a virus led to a product recall while the consumers sued the company. In a more general way, quite independently of the question of protecting basic civil liberties, the philosophy behind DRMs that consider the consumer to be public enemy nº1 and presumed guilty of fraud before proven innocent, is totally contrary to the loyalty building process among the public that is at work in cognitive capitalism that puts the emphasis on positive interaction with innovative end-users and not a relationship of passive subordination.

The commitment in Northern countries to the fight against copyright infringement is highly likely to remain fruitless, a hollow promise, to which only believers are committed, while in countries in the South and in developing countries (the five small Asian dragons, the Chinese dragon, India, Brazil and Mexico) will be a long way from respecting job standards of their unqualified workers. As I mentioned above, the profits from a part of the industrial and wholesale copying (that which hurts the most as the others are more like calling cards for the real brands) pay the underpaid workers of the south a little better. The best arm against copyright infringement and fakes would be a strike in the South and a resulting pay rise for the workers. For all of the southern countries (including the less developed countries in Africa that have very few transformation industries), the problem of IPRs paid mostly on services and high tech products is that they constitute yet another form of unfair trade: the royalties that are involved totally eat up the profits made from the late opening of markets of agricultural and industrial products in the material economy.

O.A: In the textile industry, what are the issues at stake and the life expectancy of a

model that assigns the control of design and creativity to the North and the production to China (among others)?

Y.M.B: I mentioned earlier the Chinese ambition to "move up" the supply chain to the segments that incorporate qualified work and innovation. In particular, the Chinese authorities are not hiding the fact that they intend to use their hegemony in the silk industry (that relies for the time being on the very low prices paid for cocoons to the growers and for spinning) that will not last forever, to make Shanghai into a fashion capital on a level with the world's other fashion capitals. On a more general level, I think it would be dangerous to think that the current Chinese role as simply the world's manufacturing workshop, will last much longer and to count on the long life of this state of affairs to ensure the survival of the textiles, manufacturing and ready-to-wear industries. The issues at stake for the survival of the French textile industry depend on its reorganisation Europe-wide and in the southern Mediterranean states (Morocco, Tunisia, Egypt) towards more innovation adapted to a shorter cycle. We must examine the future needs that will emerge from a cognitive society, which will correspond to cognitive capitalism. By this I mean the incorporation of chips and cyber equipment for example. We also know that garments, shoes, belts that monitor health are already being produced. We can imagine clothing that reacts to levels of pollution for example. But it is above all the new activities, the new forms of leisure that invent garments. A perfect example of this is bathing suit lines for surfers.

Another point: we must prepare for technological partnerships (with transfer) with countries like India, China, and Brazil and get away from the neo-colonial attitude that gives the impression that we see these countries as simple manufacturers from another age. If we treat them as enemies or rivals, we are in for a rude awakening. I would also add that technological transfers can work both ways: I would not be surprised if the Chinese, whose commercial aptitudes are well known, have lots to teach us, including in software service.

O.A: To what extent are these measures compatible with the "de-merchandisation" movement due to the profusion of copying techniques?

Y.M.B: As I said earlier, these IPR enforcement or reinforcement measures taken all together look like (I am not saying that some measures are not justified in some cases) a new Maginot line. The gains to be made are weak but that is not the worst part. They add to the growing notion that globalisation is a bad thing, that it is a game that cannot be won (that gains on one side can only mean losses on the other). However, in the transformation that is happening, property rights will be profoundly modified in a way that is compatible with growth and not the opposite. The private and public/collective property agreements require a minimal consensus, and fulfil the role of facilitators for the establishment of a stabilised cognitive capitalism regime. The application of intellectual property rights according to the 19th century model (hegemony of integral transferability of the ownership of active immaterials through the attribution of a temporary monopoly) does not correspond to the interests of capitalism, nor to its most advanced sector. In Ricardo's *Principles of Political Economy and Taxation* (1919) the issue was property rent. Today, our problem is different in terms of the content but not in terms of the problem: we need today to get rid of the industrial "rent" linked to material production and energy economy if we wish to enter a new era with an economy of innovation and intelligence.

Yann Moulier Boutang

1. B. Lev, *Intangibles, Management, Measurement and Reporting*, The Brooking Institution, 2001, p. 31.
2. See Paul A. David "The Economic Logic of 'Open Science' and the Balance between Private Property Rights and the Public Domain in Scientific Data and

Information: A Primer," in National Research Council, *The Role of the Public Domain in Scientific Data and Information*, Washington, D.C.: National Academy Press, 2003.

3. The United States did not recognise the copyright of books printed in England for almost all of the 19th century. The Netherlands refused to give any patents for a time. Communist countries recognised neither patents nor author's rights between 1917 and 1991.

4. P.N. Giraud, « Un spectre hante le capitalisme : la gratuité », *Le Monde*, May 5th 2004,http://www.lemonde.fr/web/ recherche_articleweb/1,13-0,36-363592,0.html

5. See our *De l'esclavage au salariat, économie historique du salariat bridé*, PUF, 1998, chap 10-11-12.

6. This refers to a particular type of trade. Religion, (from its etymological meaning "a link") ruled by sophisticated theology manages a constant exchange between asymmetrical and immeasurable agents (God and his creature).

7. M. Lazzarato, A. Negri, G. Santini, *Des entreprises pas comme les autres, Benetton et le Sentier,* Paris, PubliSud, 1993.

8. In French the expression peer to peer is translated with a maritime metaphor. The idea of "bord à bord" comes from the practice of two ships exchanging their cargoes directly at sea without passing through a port.

9. Yann Moulier Boutang, « La viabilité d'un capitalisme à la fois porté par la dynamique des connaissances et le développement de la finance », Université de Toulouse I, LEREPS/ GRES, Isys-Matisse/7 June, Toulouse (2005).

10. *Les équipements du pouvoir : villes, territoires et équipements collectifs*, UGE, 1976.

11. See the first text from the anthology by Florent Latrive and Olivier Blondeau, *Libres enfants du numérique*, Editions l'Eclat, 2000.