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The Dynamics of Authentication and Counterfeits in Markets

*Christian Bessy & Francis Chateauraynaud**

Abstract: »Die Dynamik von Authentifizierung und Fälschung«. Uncertainty often arises around objects concerning the relevant qualities that determine their value in different markets. The existence of conventions of quality allows to reduce this uncertainty but these conventions can be used strategically. So, other resources must be mobilized to authenticate objects relying on sensed experience. In this contribution, we present first our model of expertise and we then adopt a historical perspective questioning the plurality of regimes of authenticity. This plurality depends on the conception of copying and on the different ways of attributing authorship between law and social norms. These sources of variation have changed the resources mobilized in authentication and thus its mode of organization and legitimation. The growing importance of scientific and legal guarantees in the current exchanges of high-value goods reflects the creation of a market for authentication and raises the question of its regulation.

Keywords: Conventions of quality, expertise, authentication, market, intellectual property rights.

1. Introduction

Uncertainty often arises around objects concerning the relevant qualities that determine their value in different markets. Thus people develop systems of coordination allowing the production of agreement on the relevant qualities of objects. During the 1980s, the French approach of economics of conventions (in short EC) has particularly studied the genesis and transformation of conventions of qualities. Beyond codified rules that organize the markets, there is a place for more implicit rules to define the qualities of objects that we can call "conventions." But among the multiple perspectives developed by the EC approach,¹ one has emphasized the tensions between different conventions when people have to justify their action. This was particularly the case of the

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¹ See in particular the "production worlds" perspective developed by Storper and Salais (1997).

sociological theory developed by Luc Boltanski and Laurent Thévenot, subsequently translated under the terms of “economies of worth” or “theory of justification” (2006). By modeling forms of justification the authors have tried to identify relatively stable modes of action and judgment, with an emphasis on explainable operations and the production of agreement and coordination regimes. One of the original points of this analytical framework is that it stresses the role by different kinds of objects (including physical objects) in the justification and the coordination of action. A strong, but implicit, hypothesis of the authors implies that objects cannot be manipulated. But what happens when objects are counterfeit by anticipating conventional criteria? What kinds of resources are mobilized other than conventional representations?

In fact, this original scheme of thought lacked a crucial dimension, which our inquiry into authenticity testing has provided: we have integrated the process of attentiveness to things, and all the modalities of feeling shaped by practice, essential to anchor the ordinary forms of vigilance and awareness in everyday interactions. By studying a series of counterfeiting cases at the beginning of the 1990s, we certainly emphasized the strategic use of conventions by counterfeiters but we were also trying to characterize the process by which people dealt with identification problems, including characterization and assessment procedures (Bessy and Chateauraynaud 2014 [1995]). In order to describe the procedures of expertise, the notion of authenticity has been understood as the expression of a real concern for signs of presence or absence, at the core of sensitive and perceptive activity. In other words, troubles with objects can be considered as the reflection of a sense of anxiety at the intersecting points, or overlap, of different ways of attesting to reality. Following this perspective, we have distinguished between authentication by evidence (cross-referenced indications) and authentication by presence (perceived by direct experience).

Today, it is worth reformulating, enriching, transposing, and complexifying the analysis made of authentication tests in the early 1990s, given the continuing deployment of these issues in the public sphere, sometimes to the point of saturation, through an endless succession of affairs involving fraud, forgeries, counterfeits, fakes and scams, with, each time, surprising new twists and turns arising from the new configurations produced by the technological and normative transformations of ordinary activities. It has been a long time since fakes and counterfeiting were a matter only affecting brand names and luxury products: fakes, fraud, and patent infringements have moved successively into drugs, computers, airplane parts, and even nuclear power plants, while the recent dispute between Apple and Samsung brings to mind a similar trade war, in the early 1990s, between Microsoft and Apple... Lies, scams, deceptions, plagiarism, hoaxes, misrepresentations, and even piracy and hijacking have all been anticipated in theory by protection and control systems that make them illegal – but never completely impossible. For example, when the new Europe-

an currency was introduced in 2002, the new euro notes were allegedly forgery-proof. It was the same feature with payments through the Internet, which were supposed to be perfectly secure. And yet, the production of counterfeit euros has steadily climbed and digital security is an increasingly intractable problem for organizations. So, as the production and functioning of these control systems develop new variants, they generate themselves new possibilities of bypassing.

In the steadily expanding list of fraud and forgery cases since the 1990s, a salient feature of the new casuistry at work is its strong international dimension, or rather the transboundary nature of the processes that has made it real and tangible. This internationalization is not new in itself (Appadurai 1986). The way in which contemporary affairs have been emerging reflects not only contemporary transformations of capitalism, but also a new system of production and circulation of goods and knowledge (Hibou 2012). We also witness the development of new authentication technologies and of difficulties encountered by official regulators and experts in dealing with increasingly intense flows of commodities and the ever-multiplying and heterogeneous links of a “network world.”

Before analyzing, in this text, the transformations due to economic globalization and new technologies, we first propose to come back to our model summarized under the expression of “sense of things” (*la prise* in French). In a second movement, we draw attention to a few historical and anthropological variations on the theme of authentication.² Then we analyze the changes concerning the resources mobilized in authentication, its mode of organization and legitimation, in particular with the emergence of new legal rules and new technologies. In conclusion, one wonders if these changes contribute to the building of a market for authentication.

2. The Sense of Things' Model

When, in the early 1990s, we began to take an interest in the status of authentication tests, we had no idea of how far-reaching the problems that we were uncovering in the vast collection of processes studied would prove to be: through forgery cases and infringement suits, expert disputes and claims to originality, a whole continent of theoretical difficulties emerged, up to and including the question of separating truth from falsehood. Through a process of comparative analysis, the many configurations we collected gradually lost their

² Beyond the presentation of our model of expertise, most of the arguments are extracted from the postface to the second edition of our book *Experts et faussaires* (Bessy and Chateauraynaud 2014). This postface is entitled “*Being attentive to things: pragmatic approaches to authenticity.*”

uniqueness and began to reveal much more ubiquitous forms of social dynamics. But what name could we give to the movement that stems from tests of authenticity? As the ideas put forward in *Experts et faussaires* (Bessy and Chateauraynaud 2014) began to develop a new pattern of language around the vocabulary concerning the concept of “sense of things” (*prise* in French), they opened up a very wide-ranging agenda for investigations and discussion. These are the questions that accompanied what would eventually become known as “the pragmatist turning point” in the Francophone social sciences, and which left an imprint that is still perceptible today.

Intellectual fashions notwithstanding, the practical context of empirical research has changed enormously in these twenty years. It has changed also since our first investigations among fraud inspectors and, later, auctioneers, in 1991 and 1992 (Bessy and Chateauraynaud 2014). Our main motivation was to support theoretical thinking at the point of intersection between philosophy, sociology, and economics: what is the status of objects in the shaping of agreement and disagreement among people and groups? Does referring to objects that are detachable from people suffice for experiences and judgments about a shared reality to converge? Although not really new, the idea that objects, instruments, and material arrangements act as supports for social relationships, and sometimes even as their foundations, was becoming a salient feature in many studies.³ The notion of “*dispositive*,” borrowed from Michel Foucault,⁴ is used to account for the regularity of interactions between people and their socio-material environment. What still needed to be understood was how these supports or apparatus (*dispositifs*) can suddenly crumble, by looking into the disturbances caused by objects and the processes used to resolve or mitigate them. This is what led us into such a variety of different spheres.

Our starting point has been the strategic use of conventions of quality. This notion of “quality convention” allows formalizing the processes by which product characteristics are defined (Eymard-Duvernay 1989).⁵ Although the conventional aspect of product properties serves to limit uncertainty about the behavior of agents, the EC approach lacked a crucial dimension: that of attentiveness to things and the ways of attesting to reality, of authenticating. From a corpus of counterfeiting cases and claims to originality in different setups, we have shown that counterfeiters of products slip into this conventional economy through the gap between conventional representations and perceptual abilities.

Using the issue of perception, understood in its phenomenological meaning (Merleau-Ponty 1962), our main task was to investigate modes of learning and

³ See the volume entitled *Les objets dans l'action* edited by Bernard Conein, Nicolas Dodier, and Laurent Thévenot (1993).

⁴ See the work of Gilles Deleuze (1989) who also emphasizes the heterogeneity of *dispositifs* that combine material and non-material elements.

⁵ For a recent presentation of the EC approach, see Rainer Diaz-Bone and Robert Salais (2011).

of acquiring expert evaluation skills. By doing so, an attempt has been made to supplement the examination of quality conventions by the role played by perception in the authentication of objects. We have therefore elaborated the central notion of “sense of things” (*prise* in French, which could be also translated by “grasp,” “grip,” or “hold”) from the analysis of how people identify, authenticate, and appraise objects. In particular we have observed expertise sequences and estimations made by auctioneers (*commissaires-priseurs* in French) in which they look for purchase points that insure the linkage between the perception of the material properties of appraised objects and the evaluation of their qualities in reference to different circulation spaces or conventions of quality.

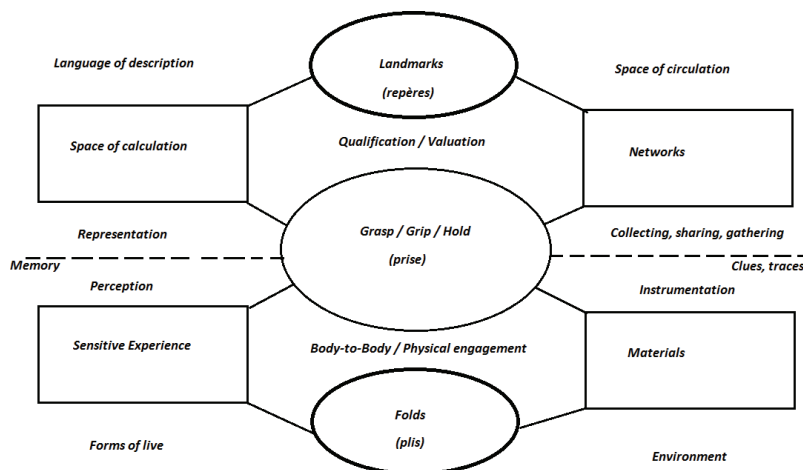
As our field investigations proceeded, our auctioneers and fraud inspectors were joined by customs officers, patent lawyers and experts on counterfeiting, antique dealers and collectors, archaeologists, philologists and art historians, agronomists and oenologists, then by bargain hunters, flea market stallholders and municipal lost property officers, and even investigative journalists and seekers after the occult and the paranormal. The activities of all these people, all clearly endowed with a sound grasp of reality, brought us to question the analytical frameworks that sociologists, anthropologists, economists, or lawyers use when they think about the continuous construction of a common sense of things in the world.

When he/she looks at an object or a device to identify or authenticate it, a skilled expert must be able to overcome four forms of tests, by associating them through a generative process:

- 1) The *qualification* test of the object. The expert addresses a conceptual space containing a set of definitions oriented towards conventional characterizations of the object. This relies on taxonomic rules, directories, and codes. Case studies show that he/she shares with the audience a more or less rich language of description.
- 2) Through the exploration of the *network* within which the object has circulated, the expert can bring it to a collective of things, a *collection* useful to trace its genesis. The object points to a host of actors and resources, which includes, in a distributed way, knowledge that experts need. However, the network is not only composed of human beings: the chain of witnesses should be extended to inscriptions, traces, devices, and the institutions in which the object was defined and valued.
- 3) The technical *instrumentation* on the physics of the object provides the salience or, in the words of James Gibson, produces the relevant *affordances* (Gibson 1979). The difficulty lies in the making of a metrological space and in controlling relations of the object to the environment. This physical event commits the border of the visible and the invisible. The reference to the sensible world is more directly assumed by the body of the expert but via a detour: the materials are expressed through instruments whose reliability is in turn put to the test.

4) The *sensory experience*. Because it is supposed subjective, this test is often downgraded in the hierarchy of evidence, to the benefit of the technical instrumentation. The commitment of the senses would not have sufficient stability to forge an agreement and grasp reality and factuality. Nevertheless, this test works also and above all as a mode of certification – according to Merleau-Ponty’s (1962) famous axiom of the “primacy of perception.” Thus the authenticity and the quality of a judgment is underpinned by perceptual experience, in continuity with the form of “being in everyday life.”⁶

Figure 1: Sense of Things' Model



The articulation of these four tests is represented by the concept of “sense of things” (see Figure 1 illustrating this concept). The relevance of the proof implies a harmonious combination between interpretations and materials, between reference points and the shapes of the material, between “landmarks” and “folds” (see Figure 1), which presupposes sharing of perceptions during a collective learning process allowing the creation of shared opinions on the matter. The process of authentication is facilitated by the collection of similar objects, considered as a gathering device (*dispositif de rassemblement* in French), giving to collectors a privileged position in the authentication process. Indeed, collections play a decisive role in the emergence of the social forms and standards based on an analogical conception of knowledge (Foucault 1989). They

⁶ This primacy of perception is also at the heart of the theory of knowledge advanced by Tim Ingold (2007).

mediate between the perceptual level and the level of representations deployed through the language (Bessy and Chateauraynaud 2014, 164).

With this model, we have sought to analyze the conditions under which experts come to agree on the qualities of objects, in particular by sharing the “switches” that make possible the connection between the level of perceptions and the level of representations. This model of expertise obviously does not eliminate the imposition of judgment by some dominant experts, as argued by Bernard Lahire (2015) in his book on quarrels about attribution. In each historical context, there are some actors monopolizing the power to define the criteria of authenticity.⁷ However, by relying on the day-to-day nature of the processes of attribution, the performative power of an expert is likely to be short-lived if he fails to share his views during the course of a shared learning process, including with lay people. This does not mean that attribution remains untouchable, as a change in the state of affairs and the people involved in making the expert opinion can always modify it, but a pragmatic analysis shows that it does not depend only on the word of experts.⁸

In this regard, Lahire denounces the position taken by some journalists in questioning how a form of collective hypnosis can continue when the deception concerning a picture is obvious. According to this author, journalists do not see the symbolic importance of expert’s judgment, especially when he or she was, at least for a while, subjugated and deceived by a forgery or a copy. We do not question the idea that it is difficult for a newcomer to question the epistemic authority of an accredited expert. But such reasoning can essentialize a strong asymmetry of influence between the most accredited experts and the others. The latter would have no reason to doubt the authenticity of a painting once the expert judgment had been rendered and the canvas was hanging in a museum. More generally, by tightening the boundary between experts and lay people, this kind of approach does not really address the variety of authentication regimes and thus underestimates an important possibility of bifurcation: shift in trust and belief occurs when actors activate a regime of authentication by presence, which does not rely on a mode of evidence embedded in a status or an authority and therefore is reserved for experts and their esoteric criteria.

⁷ In this book, Bernard Lahire offers a general analysis of the sacralization of art and artists, beginning with the processes of attribution and authentication. This perspective is based on the performative power of experts and thus on a form of hierarchical relationship between experts and laymen. The particular history of Nicolas Poussin’s painting of *The Flight into Egypt* is examined in order to show what is involved in the different stages of attribution, particularly with regard to the relationships of domination that are part of the power of experts to impose an attribution. For a critical discussion of this book, see Christian Bessy (2016).

⁸ In this perspective, see the affair of the Egyptian statuette of the Pharaoh Sesostri III, analyzed by Francis Chateauraynaud (2011, 227-32). In particular, the author shows how the initial consensus of experts of the milieu was progressively called into question.

On the other hand, if Lahire underlines the work of forgers considered as great manipulators of beliefs, knowing how to twist representations to their advantage, he does not foresee that they also respond to expectations (likely to deceive the best experts) based on the incompleteness of the (art) collections. The most astute production of great forgers is a kind of answer to the previous cataloguing work which creates the idea of missing works.⁹ These social dynamics between experts and forgers are an idea that has begun to spread among historians since the publication of Anthony Grafton's (1993) book on apocryphal texts, which can be generalized to all artistic productions. The existence of forgeries and counterfeits is an opportunity for historians because it forces them to improve their investigations on the different accreditation processes that could be used by future forgers.

Finally, our model of expertise allows to characterize different regimes of authentication underlying the activities of the players, from dominant ones to those acting on the margins, without considering at first the subjective conceptions of authenticity. Although highly nested in our model, the four tests can be separated and conducted in a way by different actors. We have already highlighted the privileged position of the collectors in the exploration of the network within which the examined object has circulated, or the role played by historians or specialists in a field in the definition of taxonomies used as support to the qualification (test) of the objects. Otherwise, with the sophistication of technology, test on the physicality of the objects is more and more the privilege of scientists. Only the sensory experience is accessible to all the amateurs of a field, after a minimal period of learning. In this perspective, this is the most democratic test, which can be nevertheless relegated in favor of technical instrumentation.

3. Historical and Anthropological Variations on a Theme

One of the most frequent starting points in historical studies is the status of imitations.¹⁰ This is illustrated in studies by historians who show how the work of "copyists" has not always been treated as "servile imitation," since it stems from a commonly held conception of technical apprenticeship giving the copyist's work a socially useful function. It was only later, from the Romantic period, that copying was denigrated in the name of originality and creative genius (Labrot 2004). Also at issue, of course, in the production of copies, is

⁹ This process has inspired the "collection form" of valuation of things analyzed by Luc Boltanski and Arnaud Esquerre (2017) in their attempt to distinguish different conventional forms of valuation. By valuing the things of the past, this conventional form increases the constraint of authenticity in order to warrant the stable enrichment of the collectors.

¹⁰ See Gérard Béaur et al. (2006).

the value of objects, insofar as imitations of art or craft objects can be made of less noble or less costly materials (glass instead of precious stones, synthetic instead of rare materials, etc.). But reproduction techniques are constantly inventive, as illustrated by copying machines like the Collas machine, which could make multiple replicas of unique objects.¹¹

Imitations could of course be made fraudulently, for purposes of deception,¹² but also for less mercantile reasons, for example to serve as historical illustrations or to shape a collective identity. Before the French Revolution, reproduction developed as a whole new art form and manufacturers of objects “in the style of” could even be rewarded with privileges, particularly when the purpose was not only to produce, to the best professional standards, but also to reproduce examples of virtuous conduct (in imitation of Jesus Christ) – according to the main meaning at the time of the verb “to imitate.”¹³ Although the idea of imitation did not have the negative connotations it has today, the question of authenticity was nevertheless pervasive, particularly with regard to the use of new materials, the heart of the matter where reproductions and restoration are concerned. The controversies that arise over the use of form and substance express different doctrines on authenticity, in which the question of education is particularly prominent. It is particularly true since the main thrust of one of the arguments in defense of authenticity lies in linking the risk of losing meaning with the impossibility of transmitting what is authentic. There is a sort of doctrine creating a mission for members of the elite, invested in avoiding the proliferation of all kinds of worthless imitations. In order to do justice to these tensions that are inherent to authenticity, authentication tests and all of the ways in which copies and other kinds of reproduction are made acceptable or legitimate have to be treated symmetrically.

Like Alois Riegl in his investigation on ancient monuments, Manuel Charpy (2012) highlights the emergence, around 1850, of a new authenticity regime based on the past of objects. He reminds us in passing that the verb “*authentifier*” (to authenticate), originally a legal term, came into common parlance in France in the 1860s to refer to the appraisal of objects, particularly

¹¹ Achille Collas developed a machine in 1834 that could reproduce coins, medals, and other reliefs, create engravings while tracing a drawing, produce five engravings simultaneously from the same drawing and make engravings from the same direction as the original instead of in reverse as in the usual method.

¹² The 19th century saw an increasing number of publications on the art of detecting fakes (*L'art de reconnaître les fraudes*), written for amateur or professional collectors. These handbooks, whose historiography would be well worth researching, also gave a more sophisticated grasp of their trade to the most skilled forgers, whose expertise increased with time. These publications may be likened to the documents produced by luxury brands as a guide for customs officers, and also for consumers.

¹³ On this question see Corine Maitte (2009).

those put up for public auction. There are several possible interpretations of this widespread appetite for “authenticity” among the bourgeoisie: as an effect of class rivalry; with its subtle subdivisions, through endless quarrels over the dictates of good taste, which were no longer the sole preserve of the aristocracy, or as the beginning of a cult for marketable rarity, which started with a veneration for relics of every kind. Beyond the various configurations of action in the interests of distinctiveness or, conversely, mimetic desire, we find the reason for admiration. And in the late 19th century, amateur and professional collectors were expressing their own admiration for the technical feats achieved to create reproductions, at a time when they served the cause of historical value.

The question of authenticity assessments is a main issue of the anthropological studies book *“The social life of things”* edited by Arjun Appadurai (1986). These studies are based on analyses of the many ways in which objects and their uses circulate in different cultural and social circles. Appadurai highlights not only a variety of “value systems,” but also the multiplicity of policies on authenticity and authentication arising from the fragmentation of knowledge following the movement of goods across worldwide markets. This type of reflection owes much to the work of Igor Kopytoff (1986, in the same publication) on the career of objects and the different kinds of status they acquire along the way, especially as “merchandise,” whenever their tradability with other things becomes socially relevant.

Brian Spooner’s study (1986, published in the same book) on what makes an oriental carpet authentic illustrates this point. The author acknowledges that the idea of authenticity raises definition issues and must not be confused with the idea of “quality.”¹⁴ What is important, according to Spooner, are changing “standards of authenticity” that are not based on objective criteria alone (such as age or manual production, which are themselves constructed criteria), but also and especially on the work of experts, through which authentic objects are selected and identified. Their work brings forms of knowledge and positions of authority into play, and also implies cultural choices, such as the attraction that western societies have for “the Other,” or the need for some pre-established order anchored in the past, or for a social mechanism that drives the quest for distinctiveness or personal expression – in other words, differentiation in some form or another.¹⁵

¹⁴ Although authenticity may be a criterion of quality, an object considered to be of high quality may be not authentic, as in the case of a copy of an original in a museum collection.

¹⁵ The link with the kind of sociology favored by Pierre Bourdieu is obvious, and Brian Spooner draws a parallel with fashion phenomena in cultural industries, in which the main investors – vendors, producers, publishers, and collectors – are the leaders of opinion when it comes to the ever-changing mysteries of authenticity.

Thus, the quest for authentic objects appears to coincide with internal transformations in western societies. This is not to say that the question does not arise in Turkish society, for example, but the conditions are not really the same: if we follow the author's reasoning, the search for Turkish carpets has an effect on those who make them and inhibits the local symbolism that sparked the quest for authenticity in the first place. What follows, among western carpet enthusiasts, is a process of growing frustration nourished by their own appetite, and among the Turkish craftsmen, an effect of alienation from their own aesthetic expression. In other words, the result is that ethnicity and culture become tradable commodities.¹⁶ This tendency is only partly counterbalanced by heritage policies and measures for the defense of cultural rights, of indigenous peoples in particular.

In a somewhat different vein, studies on collectors of African objects show that they have a variety of motivations, from a search for objects entirely exempt from any external influence to the aesthetics of primitive art, like the African masks that inspired the cubist painters, or an ethnographic interest in the ritual role of these objects.¹⁷ On this point, many debates revolve around the same arguments: is the authenticity of objects tied to the way they are, or were, used by indigenous peoples, or is it indexed to the history of their successive journeys, from the cabin trunks of colonials or ethnographers whose interest they attracted, to collectors' drawing rooms or antique dealers' showrooms, in readiness for a final journey through the portals of museums? It is clear that these controversies are unlikely to be resolved, and also that what they reveal is, especially, the constructed nature of assessments of the authenticity of such objects (Bonnain-Dulon 2006; Lambert 2012).

Appadurai shows how, in the course of history, the question of exclusivity, which translates in economic terms into the acquisition of high-priced goods by an elite, has been overtaken by that of authenticity. Due to mass production techniques, luxury goods are no longer the preserve of the few and have thus lost their power of distinction. According to Appadurai, for these goods to maintain their quality as luxury items, the authenticity criteria have to be made more complex by introducing the idea of originality and singularity, now tied to the artist's or craftsman's signature. The question of authenticity, expertise, and appraisal is obviously not new, as in the example of the traffic in relics described by Patrick Geary (in the same publication). But the cultural regime governing authentication was different in the middle ages. Expert knowledge was the prerogative of the clergy, whose overriding concern was the popularity

¹⁶ The pattern is the same as for well-known artists who, to hold on to their market position, in a sense become forgers of their own work.

¹⁷ Appadurai takes the example of the complex links between authenticity, taste, and politics that result from the consumer-producer relationship in the area of what anthropologists refer to as "ethnic and tourist arts."

of rituals whose effectiveness was enhanced when the associated relics were certified as original. Appadurai, on the other hand, is primarily interested in these objects as signs of the distinction conferred upon their owners, so that he sees the authentication process founded on an “original” or a “standard” as a secondary issue. This process involves the examination of material properties and cannot be seen as merely a procedure for certifying or attesting what is “in good taste” or what, as it gains in value, confers value on a person.¹⁸

Having said this, addressing the question of authenticity through the prism of value analysis raises the question of the different authenticity regimes. In *Experts et faussaires* (Bessy and Chateauraynaud 2014), one of the main arguments concerns the distinction between authentication through proof (cross-referenced indications) and authentication through presence (sensed experience). Making this distinction enabled us to grasp a great many references to the flair or intuition of experts, as an expression of a regime of understanding that links the use of techniques with the physical experience of things. But it did not enable us to theorize on the relationship between value and authenticity, the displacement created by the work itself to place it at a distance from immediate explanations based on market forces or the constitution of collections whose value builds up over time.

From this point of view, another study should be considered in our discussion. Published in 1996 by Jean-Pierre Warnier and Céline Rosselin, this work is entitled *Authentifier la merchandise*. It also offers a critical anthropology of the quest for authenticity that characterizes contemporary societies. The paradox of “authentic merchandise” (from *Poilâne* loaves to “100 % solid oak” furniture) results from the relationship between personal appropriation of an object and the collective estimation of its monetary value, where market forces become all-pervasive in the pattern of production. This context forces the authors to distinguish between authentication dynamics according to degrees of institutionalization, since these dynamics range from the domestication of objects, as in do-it-yourself activities, to legal and regulatory procedures, which are particularly strict where heritage policies are concerned.

The patterns discussed in *Experts et faussaires*, although without delving into the problematics of “imagination,” show the development of similar kinds of mediation between representations and bodily involvement. But what our “sense-of-things” model (“*prise*”) brings out above all is the compelling force, in seeking a basis for judging authenticity, of authentication through presence,

¹⁸ This is the point he makes in mentioning, in the context of western contemporary art, the competition-cum-cooperation between art experts, gallery owners, producers, academic authorities, and consumers to define the political economy of taste (with references to Jean Baudrillard and Pierre Bourdieu).

which comes into play regardless of the extent of institutionalization and the technical sophistication of procedures for appraising objects.

4. The Transformation of Authentication Resources

Authenticity is above all a legal concept. In the section on “literal proof,” Article 1317 of the French Civil Code defines as “authentic” a deed received by “a public official authorized to act in connection with that deed in the place in which it was drawn up and with the requisite formalities.” The amended version adds that the deed “may be drawn up by means of an electronic medium provided that it is established and archived under conditions laid down by a Decree of the Council of State.” Applying this formality to products or activities of every possible kind has constantly raised problems. As goods travel daily on a massive scale over ever longer distances, knowledge about them between the points of their production, distribution, and consumption has fragmented considerably – thus steadily increasing possibilities for counterfeiting, so that issues of authenticity and expertise, particularly for specialists in competition law, have become increasingly acute. But as Appadurai also shows, knowledge about goods and their technical, social, and aesthetic properties is itself becoming a marketable commodity, in the same way as services. This process is contributing to the transformation of the regime governing property (rights) and raising the stakes over intellectual property across the world.

In Europe, measures against counterfeiting received a serious setback with the Directive on intellectual property rights of April 29, 2004. This directive was transposed into French law by the Act of October 29, 2007, which aimed to speed up civil proceedings (with the creation of high courts of justice dealing specifically with these cases) by linking information obtained on counterfeiting networks with compensation of the losses sustained by victims. This new legislation follows a long-term trend of public authority intervention in this area.¹⁹ This is now coordinated at the EU level, and is also a response to the increase in counterfeiting via the Internet. With a little hindsight, the possibility for the injured party to receive, if they so request, a fixed compensation amount (the minimum being the amount of the royalties that should have been paid to the rights holder) reflects the increasing frequency of infringement suits and the parallel development of a whole legal engineering industry that encourages the instrumentalization of the law, not only among intermediaries working on behalf of businesses but also within the public administration, a trend that can be attributed to the increasingly frequent referral of disputes to courts of law.

¹⁹ The trend can be traced back to 1994, when the Longuet Act made counterfeiting a criminal offence and authorized customs officers to seize counterfeit products.

As in other legal areas, uses of intellectual property law for strategic purposes can involve legal action over purely formal legal compliance: these would be cases of actual “counterfeiters of law.” Usually, however, the idea is to put together subtle interpretations based on combinations of often incomplete legal statements from different legal sources, following the tried and tested methods of large corporate law firms.²⁰ These strategies operate away from the circles where the activities and practices actually take place and where those concerned regulate their exchanges and coordinate their actions according to different standards, which they consider to be perfectly legitimate even if they are problematical in the eyes of the law or in view of the regulations. At the same time, the rising power of the legal arsenal exacerbates the tensions between experience and representation, thus nourishing further cycles of misconduct and illicit practice.²¹

The dynamics driving increasingly sophisticated imitation processes as counterfeit detection tools improve, which we described earlier, have had successive impacts in the last few decades. In an article published on December 13, 2008, which indirectly relays the position of leading luxury firms on the “significant shortfall” in their turnover and the risks to their brand image, *Le Monde* portrayed a representative of leading luxury brands (described as a “professor of counterfeiting studies” for the occasion) providing training sessions for French customs officers with the help of a “large shopping bag full of items from his latest collection,” including as many authentic items as fakes collected by a “worldwide network of private economic intelligence investigators.” The educational method is not new, but the on-the-job training sessions for customs officers in state-of-the-art counterfeiting reflects their new responsibilities in this area and their close cooperation with the members of the Colbert Committee – which is made up of the 70 leading brand names in French luxury goods. The Chair of the Committee who, at the time, was full of praise for the “excellent cooperation” between the private and public sectors, spoke of the resources devoted by leading brands to the fight against counterfeit goods, but also of the importance of the public funds supporting the work of a market

²⁰ The interpretative activities of professional lawyers sometimes produce versions that contradict the actual intent of the law. Some lawyers have developed considerable know-how in this area to the point where they alone have the requisite expertise. They are capable of translating the legal rules by projecting them into the considerations, principles, and values (such as efficiency or profitability) that are most important to those that the legal rule is intended for in the first place. It thus becomes hard to distinguish, in the compliance models they develop, between what is the specific logics of the context, what is the logics of law, and what is purely a matter of promoting professional interests. On these questions, see Lauren Edelman and Mark Suchman (1997).

²¹ It provides an explanation of the discovery, in 2013, of illicit horsemeat in beef-based food products. It was a complete surprise, since the European food industry, thanks to the Community-wide traceability system in place since the “mad cow” affair (1996–2000), was supposed to be totally transparent.

policing force that would inevitably become international. Although presented as entirely natural, this kind of cooperation is by no means straightforward. Studies by historians have shown the long history of lobbying efforts devoted by luxury industries to enlist public law enforcement agencies in their strategic planning of future infringement suits (Béaur et al. 2006). But the distinctions between “authentic products” and “counterfeit products” are hazy to say the least, and highly dependent on the measures in place against unfair competition, on health and consumer protection policies and, more generally, on the recognition of innovation as sometimes an individual matter and sometimes a collective process.

In a common interpretation, each innovation cycle is associated with a new counterfeiting cycle, a process reinforced since western manufacturers have moved the production to emerging countries. The profound changes in the world economy have propelled the intellectual property regime into turbulent waters, where claims based on rights are clouded with doubt and uncertainty and very quickly hinge solely on the balance of power: and is there any doubt that the scales of justice always tend to tip in favor of whoever is backed by the best legal resources? One illustration of the instrumentalization of intellectual property rights (IPRs), long denounced in academic circles, is the rise of “patent trolls” in the US: these are companies that put together portfolios of patents, which they then cash in by charging licensing fees and, especially, obtaining damages through infringement suits. These legal maneuvers are mounted against start-ups that do not have the resources to stand up to highly aggressive “repeat players” who accuse the start-ups of infringing the patents they hold. For fear of having to close down production should they lose, small companies will usually make a deal rather than risk getting caught up in the legal machine. The irony here is that these “patent trolls,” even as they talk about “convergence” in the innovation process, will also point out that the company incriminated should have had the legal foresight to apply for a patent.²²

The worldwide “patent troll” boom has occurred concomitantly with the rapid rise of large law firms specializing in intellectual property, which play a key role in the definition of new standards, traditionally in relationship with the World Intellectual Property Organization (WIPO) and more recently with the World Trade Organization (WTO). Since the 1990s, the balance of power, or rather of economic power, has clearly shifted in favor of the agreements and treaties developed by the WTO and aiming to establish laws based on international standards. As we know, the WTO is one of the main targets of criticism from the alternative globalization movement, which has grown considerably since the Seattle Summit in 1999. In response to political criticism, the WTO

²² On this question, see Bertrand Sautier (2009).

attempted to keep to a purely technical and legal line by formalizing agreements such as TRIPS (Trade-Related Aspects of Intellectual Property Rights) or ACTA (Anti-Counterfeiting Trade Agreement). ACTA was intended as an international multilateral agreement to strengthen intellectual property rights and was central to negotiations between some forty countries from 2006 to 2010,²³ but the ratification process, which requires parliamentary approval from the signatory nations, was suspended in many countries due to heated controversies over the agreement itself.

Following the negotiations over such agreements and the patterns of opposition would make up a research program in itself, all the more complex as TRIPS covers not only patent infringement but also counterfeit goods, generic medicines, and copyright on the Internet. More than ever before, counterfeiting and infringement is a point of multiple tensions specific to the market economy, and the controversies and scandals that arise effectively concern the entire body of international competition law. This suggests, at the very least, that we have reached a major fork in the road: although trade was already highly internationalized in the early 1990s, it was still possible to follow disputes and describe how systems worked at the national scale; today, however, the issues cannot be grasped without entering the international arena.

The other salient trend is the development of new authentication technologies, the use of DNA being an obvious example but also sophisticated instruments and equipment for analytic expertise of heritage artefacts (synchrotron, neutrons, ion beam analysis, etc.) accompanying both the constitution of scientific archives from museum institutions and the growth of tourism and cultural industries. But, the phenomenal growth of New Information Communication Technologies (in short NICTs) has undoubtedly created the greatest gulf by far between the early 1990s and today. Networked digital technologies have not only become new sources of counterfeiting that are recognized as such by the law (pirating of digital versions, plagiarized software, sales of counterfeit goods),²⁴ but also opportunities for anyone capable of exploiting the potential of digitization, especially in cultural industries, or of setting up discussion forums.

To illustrate the way NICTs have contributed to the redefinition of intellectual property rights, we will briefly discuss the Napster affair, which clearly brings out the performative effect of economic analysis. In this case, the judges found in favor of the copyright holders, on the basis of the market losses sus-

²³ Version 1, ACTA1, was signed in October 2011 by the United States, Australia, Canada, South Korea, Japan, Morocco, New Zealand, and Singapore, and in January 2012 by 22 EU member countries including France, Italy, and the UK but not Germany. Brazil, China, India, and Russia were not involved in the negotiations.

²⁴ From this point of view, cases that have arisen from eBay make up a particularly interesting corpus for analysis.

tained in relation to the investments made.²⁵ They could have made the reverse case based on a different economic argument, that of the inherent benefit to consumers of opening up the market. The outcome, in favor of the IPR holders, reflects an instrumentalization of the law, since one of the arguments made in defense of digital intermediaries focused on the implicit licensing agreement from the big record companies (who had brought the lawsuit) that resulted from their encouragement of MP3 file exchanges over the Internet. This argument means that certain “claimants,” including Warner Music, were attempting to forge a network of alliances to restrict Napster’s share of an emerging market. Seeking to gradually control the market, they pulled out all the stops, through a series of mergers and acquisitions, to conquer a dominant role. Rather than committing fully to the potential new market, the strategy used by the big record companies was to find different ways of gaining control gradually, including by initially ignoring pirating operations that could prove useful to their own development.²⁶ The failure of this takeover bid, mainly because of abuses that had not been anticipated for lack of sufficient hindsight over potential uses of the web, compromised the possibility of coming to an advantageous agreement with Napster, leaving only the option of a lawsuit based on copyright law for the illegal use of copyrighted music and its distribution to third parties.²⁷

This reflects the tolerance of “creeping piracy” found in the field of “free access” software. Many economic models have been promoted showing how it is not always in the best interests of innovating companies to seek sanctions against those “pirating” their software if its usefulness increases with the number of people using it to exchange files easily across networks.²⁸ When the networking effect is particularly strong, non-protection of the software anticipates on the establishment of a standard. Furthermore, because sophisticated

²⁵ Napster was created in 1999 as part of the wave of new forms of access and distribution of artistic works triggered by the possibility of downloading digital files. The company had to close down its software development activities in 2002, following the lawsuit brought by the big record companies.

²⁶ It was not until Apple’s iPod came on the market that a licensing agreement was signed with a big record company. This case highlights the lack of cooperation, globalization notwithstanding, over licensing agreements between those primarily concerned, which may be attributed to a failure on the part of professional bodies in cultural industries and in innovative activities in general. On the lack of consideration in economic analysis of the role of these organizations in technological licensing agreements, see Christian Bessy (2006).

²⁷ An almost identical case occurred in December 2008 when Warner Music Group breached its licensing agreement with Youtube, which had authorized users to create and freely publish (mainly musical) content from WMG’s full library. See Domen Bajde et al. (2013).

²⁸ On this point, see Oz Shy and Jean-François Thisse (1999). Using a “duopoly” model, the authors modeled the optimum behavior of two competing software designers in terms of protection and price-setting for their product, distinguishing between consumers depending on whether or not they were interested in the related services provided to optimize the use of the software. The most expert users in any given field saw little value in these related services and could therefore easily pirate the software.

software requires a long period of specific training, demand needs to be encouraged by helping web users to master the tools. The process is reinforced by the fact that “software pirates” (often referred to as “home consumers”) can not only train new users themselves but can also help to improve the quality of the software. Not to mention the fact that the user network can generate advertising revenue or income from sales of related products – a source of profit that has become central to the availability of digital social networks. This “pirating paradox” is not new: it has been a feature in every sector with very short product renewal cycles. A good example is the fashion industry system, where larger sales volumes correlate with shorter obsolescence times (Raustalia and Sprigman 2012). Copies and more or less creative interpretations contribute to the dissemination of fashion trends that will structure each season’s activity by driving coordination between innumerable manufacturers and designers.²⁹ This is not a simple matter of the “first-mover advantage,” since it has the same positive effects as the adoption of a “technological standard” – as also illustrated by the Apple/Samsung affair.

It is clear that the pattern that has become established since around 2000 is mainly characterized by the “open systems” that have produced a shift from the proprietary logic towards the logic of common goods, reflected in the field of software by the “creative commons” movement and “open source licenses.” Ideally, the continuous production of shared knowledge and data, sustained by multiple players, creates the necessary conditions for technological standards to stabilize without a long period of rivalry between proprietary firms. The open source model is nevertheless under tension, and in open conflict, with the world of proprietary software, in which Microsoft is cast as the capitalist ogre. The collaborative principles whereby players collectively own the building blocks are completely opposed to the appropriation and ring-fencing strategies developed by economic operators. Gradually moving away from its roots in the alternative globalization movement, this pattern of production of technological standards is becoming dominant in the world economy and, as it does so, redefining the traditional uses of intellectual property rights – hence the innumerable arenas in which discussions and negotiations are setting the rules and frameworks of a new kind of international (self) regulation of economic activities. States, supranational bodies and multinational firms now have to deal with players that had previously been excluded from the negotiating agenda, or never expected to participate (start-ups based on open source software, academic circles and public services, NGOs, dissident user groups, etc.).

The hydra-like growth of digital social networks has vastly increased the possibilities for usurping names or damaging reputations, which in turn has

²⁹ On the construction of trends in textile fashion based on an analysis of the “*Première Vision*” salon, an umbrella scheme for innovators in the fashion world, see Diego Rinallo and Francesca Golfetto (2006).

spawned an “e-reputation” market peopled by lawyers, agencies, and insurance companies covering risks of personal and corporate identity theft.³⁰ On this point, it must be remembered that digital social networks, because they abound with personal data that are used to define new signs of (digital) identity and new techniques of identification, especially used by recruiters, have raised new authentication challenges because of the vast increase in false identities. With the proliferation of networked media and systems, the digital economy has opened up many new fronts, including, for example, new forms of plagiarism, which has become much easier, and is used on a massive scale, thanks to “cutting and pasting” and endless recombinations of partial borrowings from different media.

It is worth noting, on this point, that this phenomenon has given rise to a new kind of software engineering with an economic model that is fairly similar to the classic virus-antivirus model. Instruments of proof involving automatic recognition algorithms using words, phrases, and even stylistic markers are thus becoming commonplace. Concerning the scientific universe, this software engineering designed to fight against plagiarism create an asymmetry between easily identifiable deviant practices and continuous and inconspicuous operations of misappropriation of unpublished scientific work.³¹

More generally, the scientific contributions can be considered as a dynamic process inscribed in “scientific work arrangements” in which the actors involved separate the individual and the collective, the scientific and technical support, important and accessory elements, novelty and imitation. That raises the issue of attribution conventions (Pontille 2016). In this context, the signature attests to the allocation results and the prioritization of contributions. As in artistic creation, the work produced by assistants under the gaze of the master is not less authentic, introducing degrees of gradation of authenticity and recognized as such by legal categories (Guichard 2010).

In short, the advent of the web has spawned a whole new set of identification and authentication problems, which were quickly brought to light and pulled apart in the discussions around the Humpich affair.³² These changes

³⁰ On this point see Constance Georgy (2013).

³¹ See Christian Bessy and Francis Chateauraynaud (2015). By analyzing the emergence of new regulation concerning plagiarism in connection with the organizational changes affecting education and research environments, we examine different kinds of tensions in academic world. The authors focus on the paradox created by the attempt to implement good practices into a universe more and more subject to the logic of predation and competition, while players always defend the values of intellectual collaboration and knowledge sharing.

³² In 1997, Serge Humpich detected a “security flaw” in the bank card system, which allowed cards to be made that would be accepted by automatic cash dispensers without being linked to any bank account. Having tried, unsuccessfully, to negotiate his discovery with the bank card group, along with the “know-how” that made it possible, Humpich organized a demonstration in which he bought a book of metro tickets with one of the cards he had made. He was found to be criminally liable in February 2000 for “bank card forgery” and “fraudulent

have helped to establish a form of legal engineering that is seeking to equip new forms of intellectual property with tools to cope with the shifting landscape of digital networks that are regularly engulfed in affairs such as the case that closed down the Megaupload site.³³

The creativity of law to seize new objects and their identification is also evident in contemporary art with the dematerialization of artist's work. More and more authors must explain the intellectual form of their art project, their organizing principle. There is not only a necessity to coordinate with the other actors of the art world but also to contractualize the commitments of each party and the terms of presentation and circulation of works (Ickowicz 2013). Authenticity is thus contractualized as the use of free software with the model of copyleft. In the era of Internet, the creation of interactive artworks relies on the production of form of communication and exhibition which develop the loyalties of the public (Fourmentraux 2012).

5. Conclusion

To conclude our analysis let us go back to the constant interplay between experts and forgers: facing artifacts (including conventions) that can be manipulated and falsified, the actors are often subject to an attention deficit. We have interpreted this process in terms of strategic use of conventions following a spiral of authentication and counterfeit. More generally, this raises both the issue of the material embeddedness (anchorage) of quality conventions and the perceptual dimension of agreements.³⁴ But we can also wonder whether this spiral does not maintain a market for authentication with all its intermediaries, including legal professionals, whose profitable activities have much increased in recent years. We would therefore be in the presence of an advanced stage of commodification of knowledge as has been already anticipated Appadurai (1986) with the development of intellectual property rights. The expansion of this market for authentication is also linked to the generalization of heritage

introduction into a secure automated processing system." Despite the rallies organized in support of his case, he received a 10-month suspended sentence.

³³ Megaupload was created in 2005 by Kim Dotcom, and closed down by the US courts on January 19, 2012. Based in Hong Kong, the site offered a hosting service for video files using servers in the US, the Netherlands, Canada, and France that could store up to 25 Petaoctets of data altogether. According to recent press releases, Kim Dotcom has not accepted defeat and intends to reopen Megaupload, which has become "indestructible" thanks to an "on-the-fly" (OTFE) encryption system. The endless race between regulation and displacement among digital players obviously echoes the patterns described in *Experts et faussaires* (Bessy and Chateauraynaud 2014).

³⁴ We deal with this issue in Bessy (2012).

policies and the convention of valuation of the past on which especially the luxury industry builds on (Boltanski and Esquerre 2017).

In a recent book, Bernard Lahire (2015) confirms the growing importance of legal and scientific guarantees in the current functioning of the art market in order to ensure the authenticity of the works proposed for sale. This aspect calls into question the place of art historians or appointed experts (of an artist). The construction of big digital databases multiplies the possibilities of serializing the appraised objects. It produces a deep change in the nature of collections. In this perspective, we could analyze the emergence of private companies specialized in multispectral analysis (used to certify the colors in a work). It is referred to by Lahire in order to account for the relations of cooperation and competition between scientists and art historians. In our opinion, it also testifies to the establishment of a genuine market in authentication services, leading to conflicts of interest for experts circulating between the “public” and the “private” spheres, which are more and more in competition. The mobility of these experts raises the issue of the regulation of their activities, as it is the case for any market intermediary. The only way to avoid conflicts of interest is to permanently rebuild a critical arena of expertise in which any recognized position cannot take advantage of the establishment of the facts.

These ongoing transformations of the exchanges of singular goods illustrate the emergence of a new authentication regime based on state-of-the-art technologies, experimental protocols, and legal rules, which are not easily accessible to lay people, both for economic and cognitive reasons. This change puts at risk the regime of authentication through presence, which does not rely on a mode of evidence deriving from an authority and are therefore reserved for experts and their analytical criteria. That also raises the issue of a more horizontal model of expertise in which different modes of authentication can be confronted, as is shown by the controversies concerning the definition of typicality in the context of AOC wines and climatic changes (Teil 2014). More generally, our approach is based on different ways in which people and groups try to forge their own grasp on the physical and social world, through their own sentient experiences of phenomena, whether armed or not with a toolkit or instruments. This is not a neutral aim, because the idea is to gain a concrete grasp of the way faculties of adaptation, invention or movement develop, without which the social world would be impracticable, and probably uninhabitable (Chateauraynaud and Debaz 2017).

References

Appadurai, Arjun. 1986. Introduction: Commodities and politics of value. In *The social life of things: Commodities in cultural perspective*, ed. Arjun Appadurai, 3-63. Cambridge: Cambridge University Press.

- Bajde, Domen, Leonhard Dobusch, and Sigrid Quack. 2013. Erase or Educate? Contestation and Conversations over Regulatory Uncertainty in the Case of YouTube. New York: ASA Annual Meeting.
- Béaur, Gérard, Hubert Bonin, and Claire Lemerrier, eds. 2006. *Fraude, contrefaçon et contre-bande. De l'Antiquité à nos jours*. Genève: Droz.
- Bessy, Christian. 2006. Organisations intermédiaires et accords de licence de technologie. *Revue d'Economie Industrielle* 115: 71-104.
- Bessy, Christian. 2012. Institutions and conventions of qualities. *Historical Social Research* 37 (4): 15-21. doi: 10.12759/hsr.37.2012.4.15-21.
- Bessy, Christian. 2016. A hierarchical model of the artist and the expert opinion process, On Bernard Lahire's "Ceci n'est pas qu'un tableau. Essai sur l'art, la domination, la magie et le sacré". *Revue française de sociologie* 57 (1): 99-114.
- Bessy, Christian, and Francis Chateauraynaud. 2014. *Experts et faussaires, pour une sociologie de la perception*. 2nd ed. Paris: Pétra.
- Bessy, Christian, and Francis Chateauraynaud. 2015. Alertes et chuchotements; le plagiat universitaire entre disputes informelles, scandales publics et politiques managériales. *Questions de communication* 27: 189-204.
- Boltanski, Luc, and Laurent Thévenot. 2006. *On justification. Economies of worth*. Princeton: Princeton University Press.
- Boltanski, Luc, and Arnaud Esquerre. 2017. *Enrichissement, une critique de la marchandise*. Paris: Gallimard.
- Bonnain-Dulon, Rolande. 2006. Authenticité et faux dans les arts premiers. In *Fraude, contrefaçon et contrebande. De l'Antiquité à nos jours*, ed. Gérard Béaur, Hubert Bonin and Claire Lemerrier, 183-96. Genève: Droz.
- Charpy, Manuel. 2012. Restaurer le passé. Marché des antiquités et pratiques de la restauration à Paris au XIXe siècle. In *Restaurer les oeuvres d'art: acteurs et pratiques (XVIIIe-XXIe siècles)*, ed. Noémie Étienne and Léonie Hénaut 329-71. Lyon: ENS Lyon.
- Chateauraynaud, Francis. 2011. *Argumenter dans un champ de forces – Essai de balistique sociologique*. Paris: Editions Petra.
- Chateauraynaud, Francis, and Josquin Debaz. 2017. *Aux bords de l'irréversible. Sociologie pragmatique des transformations*. Paris: Editions Petra.
- Deleuze, Gilles. 1989. Qu'est-ce qu'un dispositif? In *Michel Foucault philosophe*, ed. Association pour le centre Michel Foucault, 185-95. Paris: Seuil.
- Diaz-Bone, Rainer, and Robert Salais, eds. 2012. Conventions and institutions from a historical perspective. *Historical Social Research* 36 (4). Special Issue. Free Downloads available at <<https://www.gesis.org/en/hsr/full-text-archive/2011/364-conventions-institutions/>>.
- Edelman, Lauren, and Mark Suchman. 1997. The legal environment of organizations. *Annual Review of Sociology* 23: 479-515.
- Eymard-Duvernay, François. 1989. Conventions de qualité et formes de coordination. *Revue Economique* 40 (2): 329-60.
- Foucault, Michel. 1989. *The order of things*. London: Routledge.
- Fourmentaux, Jean-Paul. 2012. Net Art – Créer à l'ère des médias numériques, *Revue française des sciences de l'information et de la communication*, online since July 6, 2012, <<http://rfsic.revues.org/179>> [Accessed November 14, 2014].
- Georgy, Constance. 2013. Surveiller et bâtir: enjeux de démarcations et de définitions au sein du marché de la réputation numérique personnelle.

- Communication aux journées d'étude "Vers une sociologie des réputations", January 24-25.
- Gibson, James J. 1979. *The ecological approach to visual perception*. Hillsdale: Lawrence Erlbaum.
- Guichard, Charlotte. 2010. Du "nouveau connoisseurship" à l'histoire de l'art. Original et autographie en peinture. *Annales. Histoire, Sciences Sociales* 65 (6): 1385-1401.
- Grafton, Anthony. 1990. *Forgers and critics. Creativity and duplicity in western scholarship*. Princeton: Princeton University Press.
- Hermitte, Marie-Angèle. 2013. *Le Droit saisi au vif. Sciences, technologies, formes de vie*. Paris: Pétra.
- Hibou, Béatrice, 2012. Economic crime and neoliberal modes of government. The example of the Mediterranean. *Journal of Social History* 45 (3): 1-19.
- Ickowicz, Judith. 2013. *Le Droit après la dématérialisation de l'œuvre d'art*. Dijon: Les Presses du Réel.
- Ingold, Tim. 2007. *Lines. A brief history*. London: Routledge Classics.
- Kopytoff, Igor. 1986. The cultural biography of things. Commodization as process. In *The social life of things: Commodities in cultural perspective*, ed. Arjun Appadurai, 64-91. Cambridge: Cambridge University Press.
- Labrot, Gérard. 2004. Éloge de la copie. Le marché napolitain (1614-1764). *Annales. Histoire, Sciences Sociales* 59 (1): 5-35.
- Lahire, Bernard. 2015. *Ceci n'est pas qu'un tableau. Essai sur l'art, la domination, la magie et le sacré*. Paris: La Découverte.
- Lambert, Aurélien. 2012. *Les Objets d'ailleurs, ici et là-bas. Perceptions, usages et significations des objets africains*, PhD diss., Université de Metz, France.
- Maitte, Corine. 2009. *Les Chemins de verre: Les migrations des verriers d'Altare et de Venise (XVIe-XIXe siècles)*. Rennes: Presses Universitaires de Rennes.
- Merlau-Ponty, Maurice. 1962. *Phenomenology of perception*. London: Routledge.
- Orsi, Fabienne, and Jean-Benoît Zimmermann. 2011. *Propriété intellectuelle et globalisation: des TRIPS au modèle open-source. Les exemples des médicaments et des logiciels*, <<https://halshs.archives-ouvertes.fr/halshs-00561477/document>> (Accessed August 8, 2018).
- Pontille, David. 2016. *Signer ensemble. Contribution et évaluation en sciences*. Paris: Economica.
- Raustalia, Kal, and Christopher Sprigman. 2012. *The knockoff economy. How imitations sparks innovation*. Oxford: Oxford University Press.
- Rinallo, Diego, and Francesca Golfetto. 2006. Representing markets: The shaping of fashion trends by French and Italian fabric companies. *Industrial Marketing Management* 35 (7): 856-69.
- Sautier, Bertrand. 2009. *Patent trolls: face à l'invasion des lutins, comment réagir?* Master's thesis, Law Faculty, University of Grenoble, France. <http://www.legalbiznext.com/droit/IMG/pdf/memoire_patent_trolls.pdf> (Accessed August 8, 2018).
- Shy, Oz, and Jean-François Thisse. 1999. A strategic approach to software protection. *Journal of Economics and Management Strategy* 8: 163-90.
- Spooner, Brian. 1986. Weavers and dealers: The authenticity of an oriental carpet. In *The social life of things: Commodities in cultural perspective*, ed. Arjun Appadurai, 195-235. Cambridge: Cambridge University Press.

- Storper, Michael, and Robert Salais. 1997. *Worlds of production. The action frameworks of the economy*. Cambridge, MA: Harvard University Press.
- Teil, Geneviève. 2014. Nature, the coauthor of its products? An analysis of the recent controversies over rejected AOC wines in France. *Journal of World Intellectual Property* 17 (3/4): 96-113.
- Warnier, Jean.-Pierre, and Céline Rosselin, eds. 1996. *Authentifier la marchandise*. Paris: L'Harmattan.