Quality: a debate

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Over the last 20 years, major innovations in the French social sciences emerged from focusing on *quality* and *qualification* (of work, of products, of technical and management tools, etc.). It opened new ways to conceptualize social and economic exchanges. Our journal offers a tribune for further elaboration, from different disciplinary perspectives. Christine Musselin and Catherine Paradeise present a brief review and raise three questions. 1) how are attributes of quality defined and evaluated ? 2) What types of intermediation link supply and demand and how far do both interact; 3) How is price set in quality-based economic exchange? Five social scientists provide personal answers to these questions. Two are sociologists (Michel Callon, Lucien Karpik), two are economists (François Eymard-Duvernay, Jean Gadrey), one is an historian (Alessandro Stanziani). Altogether, the file includes six contributions:

1) The concept of quality: a brief state of the art in the French social sciences and some questions (Christine Musselin and Catherine Paradeise);
2) Putting an end to uncertainty? (Michel Callon);
3) Qualifying goods (François Eymard-Duvernay);
4) Ten theses for a socio-economics of product quality (Jean Gadrey);
5) What is to be done with singularities? (Lucien Karpik);
6) Products, norms, and historical dynamics (Alessandro Stanziani).

The primary purpose of this debate is to stimulate constructive discussion. Other contributions may be sent to the editorial board (maximum 18 000 characters, spaces included).

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[1] This debate was first published in French in Sociologie du travail, as « Dossier-Débat : La qualité », composed of five papers published in 2002 and one in 2003: Musselin and Paradeise (2002). It has been translated by Amy Jacobs, Callon (2002), Eymard-Duvernay (2002), Gadrey (2002), Karpik (2002), Stanziani (2003).

1. The concept of quality: a brief historical review in the French social sciences and three questions (Christine Musselin[2] and Catherine Paradeise[3])

1.1. History of the concept

The notion of qualification first appeared in French sociological literature immediately after World War II. The word was part of the ordinary jargon of management as well as unions and State. It was meant to describe and evaluate labour. Common knowledge on the shop floor as well as collective agreements rated jobs and blue-collar workers according to their 'qualification' on scales rising from 'non-qualified' (non skilled worker = *ouvrier specialisé*) to 'qualified' (skilled worker = *ouvrier professionnel*). Collective agreements defined attributes to be ranked and weighted in order to build the right fit between a job, a worker and a salary.

Like words ending in -ion, qualification covers two different meanings, that analysis may keep separate or may bring together: (1) the state of who or what is qualified, (2) the process by which someone (a worker, for example) or something (a particular job, for example) is qualified.

The first meaning opens investigation on how productive capacities are developed through learning and socialization. Qualification stands for the set of occupational qualities incorporated by a person. It refers to occupational ability, identity and status. It is often used to argue that workers have so to say a natural right to hold jobs and get salaries that fit their capabilities. In that perspective, sociological research first used the notion of qualification to denounce the impact of Taylorism on workers' identities and statuses. Taylorism destroyed the relationship between acquired capabilities of workers and required capabilities of the jobs, that had been built and stabilized by history or tradition, by breaking down what used to be complete and meaningful jobs. The evocation of workers' *disqualification* points up the growing gap between incorporated qualities of workers and qualities required by the job they held. Georges Friedman, who initiated French empirical industrial sociology after Word War II used the term with this meaning. It started a long tradition, still echoed in recent studies, like the ones on how expert systems confiscate workers' know-how (Friedman, 1955, 1961; Freyssenet, 1990).

In direct contrast, P. Naville (Naville, 1961) took up the question of qualification from a proto-constructivist viewpoint. Qualification may be considered as a state, but not as a state of nature: qualification is a social construct, emerging from the bargaining between employees, employers, and possibly the state, on the required capabilities for a given job. Theorizing qualification involves a dialectical movement between constructing a person's qualification (his or her acquired capabilities) and qualifying a job (the capabilities required for performing it). This tradition was reactivated in the 1970s and 1980s : in a constructivist perspective on the one hand (Rolle and Tripier, 1979; Rivard et al., 1979), in a societal approach on the other (Maurice et al., 1986). Both approaches led to define qualification

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'spaces' and 'movements.' 'Qualification space' refers to the jurisdiction for a specific relation between acquired and required qualities; 'qualification movement' refers to the dynamics of the boundaries and content of such spaces. Both approaches consider that social recognition of personal *qualities* results from the social construction *of qualification* by the bargaining between groups that promote different definition of qualities and qualification. This type of approach helped tackling several sociological problems from the early 1980s on: socio-occupational nomenclatures (Bourdieu and Boltanski, 1975; Boltanski, 1987; Desrosières and Thévenot, 1996), unemployment (Salais et al., 1986; Salais, 1989), occupational groups and labour markets (Paradeise, 1988a). These studies were in turn based on various developments in the sociology of professions (Freidson, 1986; Abbott, 1988; Sarfatti-Larson, 1977).[4] All helped building what was later to be known as 'conventionalist theory'.

It was surely not by chance that François Eymard-Duvernay, the first French economist to transpose the idea of *quality* onto the study of product markets, was a labour economist who had been involved in the rebuilding of occupational nomenclatures at the INSEE[5] (Eymard-Duvernay, 1986). It has long been demonstrated (Kerr, 1954; Doeringer, Piore, 1971; White, 1981) that the balkanisation of labour markets is based on the non-comparability of qualification of occupational spaces. Just as well, markets of goods may be segmented by differentiating between several qualities of produces, that break the market's homogeneity, limit interchangeability and create economic niches. Management sciences had developed this idea long before its implications were fully explored in economic and sociological theory. Further developments of this idea suggested social interdependency between supply and demand, expressed by the notion of *co-production* of certain types of goods and services by producers and users. This led to distinguish between various types of product markets, depending upon the nature of products to be delivered and types of exchange relation obtained between producer and clients (Favereau, 1989a and 1989b; Salais and Storper, 1997; Boltanski and Thévenot, 1987).

Curiously, it was a sociologist who first hypothesized an "economics of quality" (Karpik, 1989, 1999). His original purpose was to renew an old question of the sociology of professions: why do monopolistic professions (here French attorneys) remain moderate in pricing their services, while they enjoy a strongly favourable information asymmetry with regard to their clientele—realities that should incline them to excessive profit-takings. The answer is found in the collective arrangements that warrant the client against abuses related to information asymmetry in economic exchange. Although informally, pricing is considered as submitted to collective arrangement. This approach opens up a much more realistic and diversified approach to concrete economic life, where standardized goods production and marketing appear just as one type of economic exchange. Such theory is highly needed in advanced countries, where anonymous exchange of standardized goods appears to decrease to the benefit of co-production of dedicated produces, which qualities cannot be defined outside of the relation between producers and clients.

In the 1990s this view worked to blur the borders between sociology and economics by linking together the collective arrangements and social mechanisms of production, inter-

[4] It should be noted that in both practice and theory the problem of occupational qualification intersects that of legal qualification of certified acts performed by professionals. Jurists as well as sociologists and economists logically participate in discussion and debate on qualification.

[5] Institut national de la statistique et des études économiques.

mediation, and exchange which standard economics had worked so hard to dissociate (Hatchuel, 1995). The approach also opened the way for exploration of intermediation functions as such (Cochoy and Dubuisson, 2000). It likewise provided a theoretical link between qualification and socio-technical networks (Callon, 1989; Callon et al., 2001). Sociological study of industrial certification was also fuelled by this approach (Cochoy et al., 1998; Neuville, 1997; Segrestin, 1997). It was highly stimulating for analysis of services and exchange of non-material produces (Gadrey, 1992, 1996), as well as of labour markets (Musselin, 1996; Eymard-Duvernay and Marchal, 1997). Interest in quality, qualities, qualification, and qualifications went hand in hand with efforts in the fields of ‘economics of conventions’ and ‘sociology of socio-technical networks’ to establish *contextualised* definitions of goods and products that specify characteristics of exchange and its regulation by the way products, producers and clients are related.

1.2. Questions

The approach in terms of quality brings to the fore a swarm of *correspondences* between many questions of sociology and economics. However, it can hardly be called a unified approach, one that enables researchers to advance together into unexplored territory. Behind the decidedly shared interests reflected in the similar vocabulary and attention to similar phenomena, there are differences to be explored and open questions. What are those differences, and how should they in turn be approached? These questions invite reactions by our five authors.

1.2.1. Uncertainty and qualities

Above and beyond correspondences, none of the studies briefly outlined above deals with the process of *identification* of qualities and that of their *evaluation*, processes which work together to facilitate mastery of the uncertainty involved in determining product, service, or personal capabilities. These studies therefore do not explore the interdependence among these two processes.

Identification involves constructing agreements, categories, conventions that in turn may produce contextualised definitions of a product/ service’s attributes and of a person’s capability. This process is at the heart of P. Naville’s precursory studies and later studies by Eymard-Duvernay (1986, 1989), Boltanski and Thévenot (1987), and, more recently Callon et al. (2001). For all of them, in one way or another, exchange is founded on the co-construction of the attributes of products/ persons. These attributes are neither unique nor immanent but rather multiple and constructed.

This first process is nonetheless not usually sufficient. Agreement on a product’s qualification-requalification makes it identifiable and singular but does not reduce uncertainty about evaluation (through judgment) of its defining attributes. This is the function of the second process, brought to light by L. Karpik. He has shown the determining role of personal and impersonal trust in the establishment of judgment and engagement devices that make exchanges possible (Karpik, 1996). In other words, the judgment constitutive of exchange cannot be reduced to qualifying a product or a person—that is, reaching an agreement on its/his/her defining characteristics.

Moreover, identification has a major effect on evaluation. In university department hiring, candidate qualification is constructed around three families of attributes: research activities, 'collegiality,' and teaching qualities (Musselin, 2002).[6] However, it has also been observed that the more importance a department gives to the second two attributes, the greater the uncertainty, since the available signs for evaluating candidates are fewer and more difficult to measure in a standardized way (Eymard-Duvernay and Marchal, 1997). In this case, greater use must be made of judgement and engagement devices in building final choice.

1.2.2. Intermediation

Exchanges can not occur without qualification and judgment. Both require *work*. This brings intermediaries and intermediating activity out of the shadows.

First, it brings to light the variety of market intermediaries. Historical study of the market shows how diverse intermediaries are in time and space (Chandler, 1962; Karpik, 2000; Cochoy, 1999). But it also brings to light a variety of collective intermediation arrangements - guides, rankings, titles or brand names - used to connect supply and demand and to understand their effects on each other. More broadly, these intermediaries allow the construction of agreements among heterogeneous actors (networks, forums). In affirming that processes for qualifying-requalifying goods increasingly occur outside the monopoly of economic actors in the market sphere and increasingly develop in hybrid forums, Callon et al. (2001) underscore a phenomenon that political scientists have also observed for public goods, in works on policy networks (Marsh and Rhodes, 1992; Heclo, 1978),[7] in the notion of forum as developed by Jobert (1995) and that of governance (Le Galès, 1995), and in the analysis of trends in local public management (Lorrain, 1993; Duran and Thoenig, 1996). Intermediation slips the grip of experts, who used to be perceived as the only legitimate intermediaries, the only legitimate intermediation producers.

1.2.3. Quality and price

Theorizing quality aims at filling some blanks of standard economic theory. It suggests that the match between supply and demand only rarely occurs spontaneously. Matching supply and demand requires collective arrangements and set-ups that build agreement on the attributes of products or services. But this theorization also maintains that exchange runs on quality (or qualification) rather than price. It therefore precludes any simple model for determining prices and interpreting price variation. The question of how prices are set must then be asked with greater acuity. How is value determined if not as the result of or as the basis for adjustment between supply and demand? Curiously, this question is not covered by most of the works mentioned. Moreover, contrary to what might have been expected, it is not raised by economists. Only Karpik (1989, 1999) addresses it directly, looking at how defence attorneys' fees are set after client and professional have met. Karpik uses Akerlof (1970) and economic theories for which uncertainty about quality is a problem of information asymmetry impacting on price setting.[8] He identifies the mechanisms and arrangements that prevent defence attorneys from abusing their power over laypeople and pre-

[6] These in turn can be broken down into more specific attributes, which we will here spare the reader.

[7] This question is also related to the general question of how agreements are constructed among heterogeneous actors. This was already the core of studies on shared regulating of labor relations (Reynaud, 1989, 1995).

[8] L. Karpik's demonstration is supported by Akerlof's renowned article on the used car market (Akerlof, 1970).

clude the practice of charging high fees for mediocre service. But can the 'economics of moderation' he brings to light be generalized above and beyond the law profession? Can we conclude, as Karpik's work suggests, that price setting (wages) is not entirely dependent on qualification-requalification of goods (products, persons, services), that it is governed by other mechanisms and arrangements, such as professional practices and controls? Or must the price (wages)-quality connection be entirely rethought, the first now conceived as an attribute of goods quality (of products, of persons)?

2. Let's Put an End on Uncertainties[9] (Michel Callon[10])

As C. Musselin and C. Paradeise rightly point out, the notion of quality has become omnipresent in the literature –in economics as well as in economic sociology. But its repeated and multiple uses in very diverse approaches and investigations show that it is still a under-conceptualised and fragile notion. I hence tackle here successively the two questions that the editors asked the contributors of this volume to discuss, in the hope of providing some clarification on these issues. But, although the topic of price fixing is key in this debate, it is too complex to be fully discussed in such a brief note, and I can just shed here a few thoughts and observations.[11]

2.1. Uncertainties and quality/ies

At least two intellectual traditions, which analyse in a very opposite way how people handle uncertainty, use the notion of quality.

The first tradition, which starts with Ackerlof's (1970) path breaking study, followed by Stiglitz' (1987) one, has produced by far the greatest number of contributions. In this tradition, authors relate the notion of quality to the existence of uncertainties on the quality of goods. The existence of such uncertainties challenges the basic assumptions of market competition. These uncertainties perturb the adjustment of supply and demand through price mechanisms. Hence, market mechanisms cannot lead to an optimal allocation of such goods. Authors hence make an implicit or explicit opposition between markets in which an agreement on goods and their characterization exists among exchange participants, and the markets in which such agreement is absent. In the latter case, the market runs into serious problems, since the very existence of coordination is challenged when no agreement can be found. L. Karpik's analytic framework is close to this perspective: he shows how exchange participants mobilize personal networks and trust in order to reduce the uncertainty on the quality of goods (Karpik, 1989; DiMaggio and Louch, 1998). This notion of quality is also central in the "economics of conventions," which considerably extend the understanding of

[9] This second section benefitted from a co-translation from Amy Jacobs and Grégoire Mallard.

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[11] I encourage readers interested in this issue to consider a paper by F. Muniesa and I, (Callon, Muniesa, 2003). In this paper, we develop an analysis of concrete markets as collective organized devices, whose function is to create compromises and agreements on the quality of goods and on price fixing mechanisms.

uncertainties. Authors indeed show that it is not only the quality of goods that is object of uncertainties (agents could reduce the uncertainty on the quality of goods if they could collect perfect information and if they could anticipate *ex-ante* the variation of prices), but uncertainties also originate from a lack of shared cognitive frames, which make it possible to get beyond singular and irreducible vantage points (Thévenot, 1989) that can threaten the feasibility of transactions.

In the second tradition, authors refer to the notions of quality and qualification without relating them to the notion of uncertainty. Although it is always arbitrary to identify a founding father for any tradition, E. H. Chamberlin's work on monopoly competition (Chamberlin, 1953; original published in 1933) might serve as the first touchstone of this second tradition. As F. Eymard-Duvernay notices (Eymard-Duvernay, 1989), Chamberlin develops the idea that all market transactions necessitate that exchanged good undergo a process of individualization.[12] When describing this process, Chamberlin uses the concepts of good and quality without distinction: the good to be exchanged is individualized in such a way that its quality is adjusted to fit its potential buyer. Chamberlin gives no general definition of what constitutes this quality. He relates both processes of qualification and singularisation to the specific context of exchange. To give an example, the process of individualisation might be acted upon by patents, brand names, special packaging or containers, style, colour, the convenience of the seller's location, his business practices, reputation for honesty, courtesy, efficiency, as well as "all the personal ties connecting client to seller and seller's employees." (p. 61) Chamberlin adds that: "to the extent that these factors and others vary ... the product varies, because those things may be of varying importance to buyers, who are actually buying *them* along with the merchandise itself." In this sense, market transactions require the individualization of goods, as such a process constitutes precisely the nature of the transaction.

From this assumption derives the idea that monopoly precedes competition. Following this idea, one has to describe each concrete market as a set of multiple singular monopolies, which all tie a seller to a client –or to a category of individualized clients.[13] Under these conditions, there is no reason to distinguish between markets characterized by uncertainties, and the ones without uncertainties: indeed, all markets are constituted of exchanged individualized goods, whose quality is hence not uncertain. Only the process of individualisation counts in the making of markets and transactions. F. Braudel reaches the same conclusion when he explains that the capitalist market emerged in its opposition with the principle of competition (Braudel, 1973).

This approach also intersects with the economic anthropology of transactions. In this perspective, transactions are described as follows: a buyer pays to become the *owner* of a good whose *properties* have been adjusted to his or her world, and which has thus been transformed into his or her *own* good. This anthropological tradition centres on the notions of attachments, ties and entanglements (Callon 1998), without referring to the notions of utility, judgment, and preferences. Chamberlin himself emphasised the significance of the buyer's connectedness to the seller. This logic of attachment applies to all market transac-

[12] Eymard-Duvernay speaks of singularization, though Chamberlin did not use this word.
[13] White (1981) takes this logic to its extreme with his hypothesis that the consumer is the mirror in which a firm sees its competitors.

tions, even to transactions of mass-produced and manufactured goods (under a Ford-like mode of regulation), or even to services in the web-economy. Even at times when the standardization of mass-production prevailed, Chamberlin thought that only individualised cars exist and that "a car," conceived *in general* terms, does not exist.

Chamberlin thus reverses the analytic status of the notions of competition and market. To him, concrete markets do not *a priori* necessitate the existence of competition. Concrete markets are just constituted by a network of ties attaching sellers to buyers.[14] In other words, the generality of the agreement over the quality of goods (and thus the existence of some competition between sellers) does not raise the most significant theoretical issues: instead, it is the existence of a process of individualisation of goods at work in concrete transactions. Indeed, understanding how different networks of exchange ties come to constitute concrete competitive arenas (that are usually designated by the fuzzy notion of "market") means to explain how individualised goods can become at least partly interchangeable –which proves that individualisation can go along with the establishment of rules of commensurability; and it does not mean to study how goods, whose qualities are uncertain, and hence whose homogeneity is not perfect, are individualised in concrete transactions. Indeed, what varies from one exchange situation to another, is not how uncertainty is handled, but rather how the individualisation of goods is constructed, and how singular connections between seller, good, and buyer are constructed.[15]

C. Musselin and C. Paradeise are right to point out that the labor "market" is a privileged site for studying such adjustments, as a recent work by F. Eymard-Duvernay and colleagues (Bessy et al., 2001) also shows. But markets of innovative goods offer another privileged site. In this case, the qualification and re-qualification of a good, which lead to its successful individualisation, can take very diverse forms in different settings. In some cases, individualisation can begin as early as when the design of the good is conceived; and in other cases, sales strategies can be privileged, as well as the mobilisation of social networks of clients, of some sets of collective arrangements and devices, and of collective arenas where the demand side is shaped and where the good is tested. All of these mechanisms participate in the individualisation of goods. The detailed analysis of these diverse mechanisms, and of their various configurations has not yet been largely explored, though many authors contributed, even not explicitly to this approach (Akrich and Rabeharisoa, 1989; Akrich, 1992; Dubuisson, 1999; Hennion and Meadel, 1989; Hennion and Dubuisson, 1995; Karpik, 1996; Licoppe, 2001).

To sum up, we can say that both traditions are concerned with the conditions that ensure felicitous market transactions. But in the first tradition, what might lead to the breaking down of the transaction is the very existence of the uncertainty on the quality of goods; whereas in the second tradition, the danger is that the individualisation of goods might not occur. In the first tradition, competition is the key notion; whereas in the second one, the key notion is the construction of a singular attachment between a specific agent and a specific good.

[14] Chamberlin insisted on the distinction between imperfect and monopolistic competition. The first presupposes qualifying a market in terms of what keeps it from being perfectly competitive, while the second implies recognizing monopolies as a central way of organizing markets.

[15] For a detailed analysis of certain mechanisms of individualization, see Cochoy, 2002.

2.2. Intermediation

This second re-conceptualisation of the notions of qualities and qualification has the merit to bring the goods to the forefront of the analysis, and to link the anthropology of markets to the anthropology of goods. This constitutes a complete change of perspective. Instead of starting the analysis with agents who calculate their utility with regard to a set of given goods, the analysis starts with goods and follows their metamorphoses, careers, qualifications and re-qualifications, from laboratories to marketing departments, to the consumer. The consumer himself becomes increasingly less the endpoint of the analysis, as the process of re-qualification of goods now more and more entails the recycling of goods, which hence change hands many times during their social lifetimes.[16] This new perspective, that we proposed to call the "economics of qualities," brings to light precisely those actors whom economic theory, with its catch-all categories of supply and demand, tends to relegate to the backstage of the market.

This perspective also centres on the professional qualifiers of goods (Barrey et al., 2000). Indeed, the individualisation of goods is conceived as the result of a process of qualification and re-qualification, which leads us to analyse the entire set of operations (conception, production, marketing, distribution, consumption) that are distinguished in more standard descriptions of economic activities. Here, the contribution of the economics of innovation and technological change is essential. Innovation is obviously an extreme form of the process of individualisation of products. This idea takes us back as least as far as to J. A. Schumpeter, who inspired many studies using the concept of "non-price competition," hence seriously questioning the standard theory of markets. Constructing a market for a new product mobilizes a whole series of actors and collective arrangements and mechanisms that go far beyond the ones that canonical descriptions of markets consider. Examples are academic or semi-private research laboratories, clients and users implicated in innovation conception, financial intermediaries (Lundvall, 1992). It even involves the intrusion of groups that are usually exterior to the market, such as patient advocacy groups, who can demand that their demands be taken into account and who hence can interfere with the conception and the qualification process of goods (Rabeharisoa and Callon, 1999). This kind of socio-economic analysis highlights the diversity of actors who participate in the process of attachment between what are at first indeterminate clients, and likewise indeterminate goods. Market transactions mobilize all these groups, which are invisible when the transaction is made, but without whom the attachment between the buyer and the then objectified and individualized new good could not have been tied.[17]

Focusing on innovation processes underlines the limits of the notion of uncertainty as it brings out the multitude and diversity of ways in which qualification processes can be organized. Uncertainty only exists if one accepts the classic *mise-en-scène* of the encounter between a subject (the consumer) and an object (the good). The economics of innovation

[16] On the productive aspect of following objects rather than people, see Appadurai (1986).

[17] In his introduction to the French version of Chamberlin's 1933 text, F. Perroux (Chamberlin, 1953; original published in 1933) underlined the diversity of the actors whose interventions Chamberlin grouped together under the heading "sales costs." (For Chamberlin, sales costs include all investments necessary to individualising goods. Perroux includes labor union negotiations, for example).

has debunked such a standard script, showing that the crowd of intermediaries who create connection and disconnection do not follow the standard story told by this fiction. It also emphasises the significance in the making of transactions of actors that are usually conceived as external to the "market" in the standard stories.[18]

2.3. Quality/ies and price

Once presented, this perspective opens up the question is: what is the relationship between qualities and price fixing? The question is extremely complex; thus I just shed some thoughts on this last topic.

It seems important to me to avoid using a simplistic dichotomy between abstract markets, regulated through price adjustment (like in economic textbooks), and markets where the coordination necessitates the process of qualification and re-qualification of goods. This dichotomy rests on the assumption that the notion of uncertainty is key in economic processes, an assumption that I tried to challenge. Indeed, such a dichotomous vision isolates abstract markets, where goods are known without ambiguity, where individual supplies and demands can be aggregated (the intersection of the two aggregated curves establishing market prices); and the other markets, where the quality of goods is uncertain, and where coordination is at work through qualification (or the establishment of conventions on quality) since this uncertainty means coordination cannot be left to prices. This perspective hence isolates calculation and economic rationality on side, judgment and social mechanisms on the other side.[19]

This dichotomy actually reinforces the vision of the market as an abstract institution, which organises a regulated competition between economic actors. The approach that I am suggesting liberates us from this constraint, and likewise from using the too general concept of coordination. Instead of assuming the existence of abstract markets, I treat the existence of the expression and aggregation of singular supplies and demands (along with their intersection) as an open empirical question. The famous abstract and anonymous market does not exist. Or rather, when it does exist, it is an unexpected result. As A. Kirman has demonstrated with regard to the fish market in Marseille, non-competitive microstructures can produce a competitive market that strictly follows the rules of the demand side economics, and vice-versa (Kirman, 2000).[20] All the studies (including some experimental ones) of how auctions or financial markets are organized confirm this point: the transition from individual transactions to what can be called "the market" or the market structure is an open question. And the answer to this question always implies developing complicated, usually evolutionary models –even, in some cases, full-scale laboratory experiments with real actors (Guala, 1999). We should therefore refrain ourselves entirely from speaking of

[18] Studies of innovation have the advantage to raise the question of market creation and market dynamics. This is probably why evolutionist thinking (Nelson and Winter, 1982), one of the only credible alternatives to standard economic theory within economics, originated in this field.

[19] The distance between economic calculation and social judgment is epitomized in Bourdieu's economic sociology. See among others Bourdieu, 1986.

[20] Not to mention M.-F. Garcia's excellent pioneering work (Garcia, 1986) describing all the investments necessary for constructing a purely competitive market.

"a" or "the" market if we do not simultaneously explain the mechanisms by which it has been aggregated.[21]

Besides, as soon as the individual transaction becomes the primary focus of attention, and as soon as its process is explained in terms of an individualisation of the good, this dichotomy no longer needs to be sustained. Reversing the analytic status of both notions of competition and monopoly leads to such a huge benefit. A monopoly is readily defined because it consists of fewer actors and goods; whereas a situation of competition never conforms to the analysts' models, except if they reconstruct it from the singular monopolies that compose it.[22]

Once liberated from this false opposition, and once understood that the market is not a frame but a result, it remains before us to analyse the construction of compromises between conceptions and values (or in other words, between the generally antagonistic and often vague conceptions of worth) (Stark, 2001; Thévenot, 1989; that actors sustain. And this compromise is supposed to lead to the fixing of one or several prices. How does the process of price fixing operate? The response to this complicated question necessitates that we look into the conditions that make products calculable in terms of price—the enterprise that C. Musselin and C. Paradeise propose us to lead.

Calculable products? The expression may seem odd, but the question is essential. In order for the value of a good to be assessed, it must be possible to submit it to evaluative procedures. Usual interpretations of this process of evaluation oscillate between two possible orientations: some authors explain it by referring to the good (to the characteristics of the good), whereas others emphasise the social aspect the monetary evaluation (referring to the actors' judgment on certain goods). To briefly sketch how authors understand how goods are classifiable, we can say that some have a realist understanding of this classification (it is embedded in things); others have a nominalist understanding of it (the good is defined by its position within a semiological system); and others try to combine both interpretations (both thing and sign) (Slater, 2002). In all cases, goods and actors are conceived as external to each other. The approach that I outline here seems to circumvent this tension, which reproduces all the dualisms sociology habitually butts up against. Since a good is an individualised product, its value corresponds to the strength of its attachment to its buyer's socio-technological world. No evaluation is possible without at least a somewhat successful process of attachment, without a process of interpenetration. Actors cannot measure the value of a good, cannot evaluate its qualities, and cannot engage in classification procedures without going through such a process. It is through this process that they measure the strength of their attachment (and the subsequent violence that a detachment would entail). This attachment cannot be reduced to the characteristics of the things, nor to the evaluators' purely symbolic system of meanings. Instead it is produced by a series of adjustments, a process of qualification that leads to the individualisation of the good. It is possible to

[21] The classic sociological solution equating the market with an institution (DiMaggio, 1994) is no more convincing than postulating the existence of aggregated functions. Indeed, studies of market microstructures have shown that no institutional framework can account for the singular transactions (Callon, Muniesa, 2003).

[22] It would be unimaginable to describe 'the Marseille fish market,' though it is surely one of the simplest markets there is, without using complicated mathematical models that would enable us to grasp the aggregation of supplies and demands.

describe such a process, as it consists of all the tests organized by all the actors engaged in the process of qualification-individualisation the good, which results in this attachment.

The creation of such ties and attachments is what allows a price to be determined, whose level will depend on the actors' calculative equipment and on the rules that they use to express and aggregate individual supplies and demands.[23] Price calculation is not possible without the work of attachment, which is hence constitutive of any transaction. Exeunt utility, preferences, and judgment. No evaluation without individualisation. One cannot actually distinguish the process of individualisation of a good, which is common to all market situations, and the transformation of products into calculable goods. How calculations are performed is another question, which remains to be studied.

One last remark: this approach intersects with evolutionary economics on various points. Both approaches postulate diversity and singularity, and for both of them, what must be explained is how partial and transitory orders are constructed.

3. Qualifying goods (François Eymard-Duvernay[24])

I first discuss the issues that qualification of goods (to which I contributed to in the late 1980s) raises for economic theory. Second, I present what I consider the main components of a research program for studying the matter (thereby responding to C. Musselin and C. Paradeise's questions). Lastly, I situate this program in relation to network approaches.

3.1. Why a labour economist became interested in qualification of goods in the late 1980s[25]

One of the concerns at that time was to extend research in the labour field to economics in general (Eymard-Duvernay, 1986, 1989). Though economists were willing to acknowledge that there are 'social components' to labour transactions, they persisted in thinking that this was not relevant to general **economics**. This compromise, institutionalised by the field of industrial relations, was highly unsatisfactory because it closed labour economics off in a ghetto, and used the general paradigm to reduce the field. It was therefore necessary to work in reverse, to lay claim, like 'mainstream' economists, to a general approach. This was done by showing that the critique of the dominant paradigm developing out of observation of labour relations could be extended to product trading and even financial market transactions. Some of the most innovative studies in institutionalist economics and economic sociology have worked in this direction (Segrestin, 1997; Cochoy et al., 1998; Tadjeddine, 2000; Licoppe, 2001).

The main aim of the approach thus developed was to emphasize the fact that there were multiple conceptions of product quality (and therefore of labour quality), and that this

[23] For a description of these mechanisms, which leads to describe markets as organized collective devices of price fixing, see Callon and Muniesa (Callon, Muniesa, 2003).

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[25] Callon and his co-authors (Callon et al, 2001) propose an interesting distinction between good and product. Here I'm using the notion of good transversally to encompass products (and services) as particular states of goods.

constituted a fundamental problem when it came to agreement. One and the same product can give rise to different interpretations of its quality, i.e., to several qualifications, a fact which in turn creates structural disputes about the best ways to organize economic activity. Coordination presupposes agreement on goods quality. As suggested in the introduction to this debate, this hypothesis goes well beyond the idea that product markets are segmented. It involves a political conception of the fact that modern societies are run through with recurrent disagreements due to multiple conceptions of a good. The result was a fundamental reformulation of the economic approach. Macroeconomic aggregates now appeared as complex montages involving several quality conventions, a reality which raises its own problems, as shown by J. Gadrey with reference to services: productivity measurement, a procedure linked to industrial qualification of goods, cannot be applied to services (Gadrey, 1996).

In some respects, modern economic theory amply confirms how worthwhile such approaches are: questions of quality—of labour as well as goods—are at the core of the new information economy. Most market dysfunction is imputed to uncertainty about quality and information asymmetry. But the fundamental question of plurality is completely absent from such analysis. The reason for this is readily understood: in its attempt to come close to positive science, modern economic theory purges its universe of all questions regarding value. Goods quality is seen as a natural property. The fact is that the pluralism inherent in modern societies is directly linked to a debate on values. Treating problems of rationality and cognition only, and excluding questions linked to individual and collective objectives of activity, makes it impossible to see the qualification operations at the centre of our approach. Even in approaches that focus explicitly on the multiple ways coordination is achieved (transaction cost economics), it is the market that is understood to determine the value of goods. Presupposing a plurality of modes for valuing goods *without* an overarching market is unthinkable in modern economic theory.

3.2. A research program for studying goods and labour qualification

It seems to me the authors contributing to this debate can agree on one thing: the fundamental activity of coordination is finding equivalencies (between or among persons, things, or between persons and things). To qualify is to establish equivalencies. The notion of 'investment in form' (*investissement de forme*)' is used to account for these operations (Thévenot, 1985; Eymard-Duvernay, 1986). Here my program is closely related to M. Callon's on socio-technological networking (Callon, 1991) and Boltanski and Thévenot's "Economies de la grandeur" model (Boltanski, Thévenot, 1991). These constructions emphasize the role of objects as bases for determining equivalencies. In economic theory, price is understood as a universal equivalency-determiner: all goods, the whole set of work performances, are thus evaluated on the basis of a single-measure scale. I criticize the radical reductiveness of this understanding. In my view, the notion of qualification is more general than price; price is only one way of qualifying. My approach enables us to think of price determination as only one link in a long series of equivalency determinations, one that cannot be detached from the series by deeming that it accounts fully for or 'sums up' the series as a whole. In some situations, equivalencies involve formats that are more relevant than prices ("I'm a social science researcher" rather than "my monthly salary is 5, 300 €").

To answer the question raised in the introduction, qualification is not in all circumstances preliminary to price determination. Moreover, what may be seen as the abusive extension of the notion of price should be criticized, since it establishes an equivalency between such disparate remunerations as honoraria for a liberal profession, salaries fixed in reference to a collective agreement, and hourly wages in an unstable job. These 'prices' involve varying determination modes that may coexist within a single occupation (Musselin, 1996). They are based on different justification modes, of which the market is only one.

Deepening this approach involves doing precisely what the introduction authors invite us to do: distinguishing between identification and evaluation. The cognitive dimension is not enough to account for judgment; a political vantage point must be introduced making it possible to select, from all possible equivalencies, those that everyone would consider legitimate. This is clearly the approach used in the economies of grandeur model: equivalencies are debated, arguments on value and justifications are exchanged in reference to a shared good (Boltanski and Thévenot, 1991). Such argumentation is framed by generality (or justice) constraints: the solidity of equivalencies thus constructed is due to respect for these constraints rather than power (or interest) balances. This program posits that actors are able of hiking up the level of generality. Like social science researchers, 'ordinary' actors are capable of integrating their actions into a general representation of the world so as to argue in favour of them or justify them. This hypothesis is closely tied to the justice constraint that circumscribes legitimate equivalencies. It is based on a method that, in the economies of grandeur model, consists of associating types of equivalency with political philosophies. However, academic representations are in fact subjected to a generality constraint that makes it possible to select equivalencies most likely to refer to a shared world. The methodology can take several forms: in a research with E. Marchal on modes of evaluating skills in hiring situations, we linked each way of interpreting skills to a social science theory rather than a political philosophy (Eymard-Duvernay and Marchal, 1997). This approach nicely reduces the distance of the generality hike (keeping to enterprise theories, for example, rather than theories about society at large) and better describes the area of controversy between different theories.

The static character of analyses based on general arguments is often criticized. Action constantly 'overflows' justification frames, to use M. Callon's fitting choice of verb. This is precisely what makes interactionist approaches to the market worthwhile (Paradeise, 1988b). In the economies of grandeur model, interaction is of course taken into account around the notion of test (borrowed from B. Latour). But qualification dynamics must also be examined. Innovations always involve creating new ways of qualifying, ways which necessarily stand in contrast to established valuation principles. More generally, action can never be reduced to general justifications, as has been shown by observers who go beyond the classic sociology interview method and focus on actions. Given situation unpredictability, it is often collectively advantageous to invent new forms of equivalence 'as you go.' We have shown that successfully coordinating a public housing administration office and its users requires local agents to rearrange general qualifications (Eymard-Duvernay and Marchal, 1994). Observing hiring employers in action also shows that tools as rigid as psychotechniques can be modified locally. The result at the level of action is that the various qualification types become much less salient. We tried to show on the basis of hiring situations that a 'balanced' judgment, one involving moves back and forth from one qualification ‘register,’ level, or approach to another, were fairer than judgments that keep to a single register (Eymard-Duvernay and Marchal, 1997). This approach makes it possible to show how rich and full the intermediary roles are: intermediaries are the actors most likely to move around among several judgment ‘registers.’

The fact that action cannot be reduced to justification does not invalidate analyses of general qualification. On the one hand, the point of observing action is precisely that it brings to light this tension, tension which can only mean (unless general qualification is understood to have no reality) that the other term is indeed being taken into account. Moreover, in the long run, extending new types of qualification means constructing normative frameworks that give them generality. It is therefore important to observe the dynamic between actions and justifications and not to limit analysis to one or the other term. It is from this perspective that I shall now look at network approaches, which occupy an important place in current social science thinking and offer innovative applications to the area of goods qualification.

3.3. Are qualifications dissolvable in networks?

L. Karpik’s path-breaking article (Karpik, 1989) is a clear illustration of an action-focused research program. The ‘economics of quality’ is marked by strong transaction opacity: Transactions occur in the absence of the type of equivalency systems that usually inform ‘market prices.’ Karpik solves the problem by posing that actors’ judgments are shaped by a coordination mode represented by the notion of social network. Emphasis is on the benefits of local forms of action. The information that circulates within networks is singular, and in contrast to standardized information, makes possible precise adjustment to personal attributes. Callon et al., (2001) use the paradigm of socio-technological networks in a text that rightly (to my mind) emphasizes product qualification and re-qualification strategies as carried out by means of socio-cognitive arrangements and mechanisms. Again, this research focuses on the local character of action, but market remains in the background as a general evaluation device in circumstances when the production process is socially tested with the result to qualify the good.

This kind of action analysis makes the mistake of projecting the tension between action and justification onto the excessively flexible notion of network. The local judgment that emerges from interpersonal relations cannot be understood without taking general qualification into account. In defence attorneying, the area studied by Karpik, it is the professional order itself that maintains consumer trust and underpins defence attorney’s very qualification as well as shared principles concerning criteria for establishing a ‘fair price.’ In his 1989 text, Karpik accorded much significance to the fact that over a long period attorneys had constructed valuation principles different from and constituting an alternative to market valuation principles. Likewise Musselin (1996) shows that behind the apparent opacity of evaluation of scholarly or scientific activities, actors are actually using general judgment criteria. The socio-cognitive arrangements and devices studied by Callon et al. (2001) increase actors’ cognitive abilities, but it is problematic to suppose that one can move uninterruptedly from cognitive to valuation (qualification) operations. These authors insist on the reflexive aspect of qualification processes; however, what their analysis shows are the obscure mechanisms of consumer attachment and detachment, mechanisms that are ‘embedded' in the socio-cognitive environment shaped by business. We are told that 'hybrid forums' provide the basis for public debate on goods qualification. But how are these forums related to the cognitive processes analysed? When we observe how qualification professionals guide consumers' perceptions by modifying their cognitive environment (a particularly remarkable example is playing with colours in such a way as to attract children's eyes and thereby shake up consumer's routinised values), it is very unclear how and where public debate could come into play. The authors do not mention asymmetries between companies, which control socio-cognitive arrangements, and collective arrangements and consumers, and they describe 'service providers' and 'beneficiaries' as if they were immersed in a universe where cognition was equally distributed and emotions shared. How can such analytic tools lead to a political, critical approach to the market? That the authors accept the market as the category encompassing all exchange makes it all the more difficult for them to take a critical view. They seem not at all to imagine that the 'market' form could be contested or called into question by other general modes of coordination for goods qualification.

What is ultimately at issue in these scientific debates is the question of whether a given market is democratic. How could the subjects of criminal investigations studied by Karpik find their way in a totally opaque defence-attorney 'market'? How could M. Callon et al.'s consumers find their way in a modern economy marked by plural conceptions of what a good is, by accelerating product re-qualification processes, and by corporate power?

The alliance between institutionalist economists and sociologists of the market, supported by current developments in the social sciences, should make it possible to put atemporal, universalistic conceptions of the market as a far-off, untouchable valuation operator definitively behind us. Actors spend time locally and in public forums qualifiying and requalifying goods (and work) and constantly debating valuation principles. The all-cognitive approach threatening the social sciences at present is incapable of giving more depth to the political dimension of valuation processes. What principles of goods quality does a society want to support? With what types of coordination arrangements? Business companies produce abundant responses to these questions—and act on them. But we have to be sure that the devices and arrangements they set up and use correspond to a democratic conception of society. The recent development of research in this area makes it possible to look into the different forums for debate on goods quality and examine them critically. Such research is in tune with the current period, favorable to reinforcing arrangements and devices for qualifying goods and to integrating environmental, developmental, and social questions and preoccupations. The connection being made between product qualifying and work qualifying in terms of social concerns is particularly promising.

4. Ten theses for a socio-economics of product quality (Jean Gadrey[26])

Contrary to the other contributors, I have never written specifically on quality, and in this short text my perspective is that of a user and adapter of others' concepts. The ten

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theses here presented correspond to my current way of understanding the issue. In the space available, however, I have not been able to support them by means of my recent field works.[27]

These theses concern the quality of various products, often, though not exclusively, services. Except in the last thesis, I do not distinguish between goods and products, despite M. Callon, C. Meadel, and V. Rabeharisoa's stimulating suggestion (Callon et al. 2001). Except incidentally, my analysis does not pertain to qualifying persons.

4.1. The context: producing and managing uncertainty in the post-Fordist period

Thesis 1: *The question of uncertainty about product quality is one of the most serious problems for conventional economics today* (by conventional I mean standard or extended-standard economics as conceived by Favereau, 1989a). This is not the only problem that faces this paradigm, but it is one of the most critical for its relevance, because the conventional theory cannot allow for the idea that protagonists could be radically uncertain about the very object of trade. *Such uncertainty is not intrinsic (tied to the 'nature' of the object), but socially constructed by actors*, who both produce uncertain situations and seek to manage uncertainty as well as possible, often with unequal management abilities and powers. In France the first studies by economists emphasizing these questions date from the early 1980s and a research program into 'how forms are invested,' associated with the names of F. Eymard-Duvernay and L. Thévenot, among others. In 1986, Eymard-Duvernay (Eymard-Duvernay, 1986) published a paper called '*La qualification des produits*,' and in 1989 Thévenot (Thévenot, 1989) produced remarkable analyses of 'critical uncertainty ... regarding goods definition.'

During what is known as the Fordist period, critical uncertainty was not highly visible. The quality of highly standardized, mass-produced goods was not continually disturbed by innovation, but rather marked by stable cognitive points of reference regarding traded products, relative scarcity of product 're-qualification' situations, and consumer 'detachment' (Callon et al., 2001).

Neo-Fordism also fits this framework, considering increasingly diversified goods are aimed at increasingly segmented markets. The list of goods is longer, but they remains largely standardized and can therefore be qualified by previous methods. Quality regulation can still be based on collective arrangements and devices for reducing informational asymmetry concerning quality characteristics can be understood as technological performance characteristics. However, the accelerating pace of innovations that lead to radical re-qualifications of products weakens this framework.

The relevance of this framework only became truly problematic with the sharp progression of 'singular goods' markets, and more generally with trade involving 'uncertain objects' ('uncertain' in protagonists' eyes). Such uncertainty can come from a good's singularity (no prior experience of it), the fact of continual innovation (which produces the same kind

[27] My current fields of research (in France) are retail sales, the hotel and restaurant businesses, banks and insurance companies, business consulting firms, family allowance welfare offices, La Poste, hospitals. International comparisons have been done in several cases, in collaboration with French and non-French researchers.

of uncertainty), or other factors, such as ambiguous and ambivalent user expectations and producer goals and commitments (example: is the result of a service provision an 'output' or as an 'outcome'?), the existence of several time spans for judging results (e.g. in education, health, consulting, and insurance), or the joint presence of several conflicting or incommensurate evaluation registers or criteria, this being the source of 'critical uncertainties' (Thévenot, 1989; Gadrey, 1996). In these conditions, unless appropriate collective arrangements and devices are in place, the instability of cognitive references for products starts to spread, together with distrust or suspicion regarding the properties said to make traded objects useful. This situation is linked in part to the powerful, ongoing advance of service activities,[28] more precisely those services most distant from Fordist industrial standardization logic: relational and professional services (namely health, education, culture, tourism, social services, business and personal services). In the last quarter century, these services have seen the strongest growth, whatever the measuring criteria used (production, job creation by industry or by occupation, consumption, etc.).

According to Karpik (1989, 1996, 1999, 2000), these types of economic production and exchange partake of a world that is radically different from the production and market world of standard theory. This world can be analytically defined as is the 'economics of quality.' Here the mechanism for coordinating or adjusting producers and clients is not the 'price-market' but the 'judgment-market.'[29] Judgment regarding quality is based primarily on personal networks and trust or confidence (personal or impersonal). Price determination also largely depends on personal networks and professional norms.

Theses 2 to 6 answer C. Musselin and C. Paradeise's questions regarding the scope of this model.

4.2. Five theses on the economics of quality

Thesis 2. *The approach to qualification processes operative in the theoretical model of the economics of quality and corresponding judgment market is very useful*, as are the modes therein referred to for adjusting protagonists to one another (norms, networks, personal and impersonal trust and confidence-generating arrangements and mechanisms).[30] Karpik (1989) mentions its possible use in analysing financial intermediation, insurance and tourism activities, as well as for certain durable goods. But I think its validity extends far beyond these examples, namely to the vast area of relational and professional services. This does not mean that the types of 'production networks' and 'trade networks' (in Karpik's terms) characteristic of defence attorneys exist everywhere. In each case it is necessary to identify the norms, networks, judgment modes and trust-building arrangements that make the market work.

[28] This thesis—'service activity as the basis for the economics of qualities'—is also supported by Callon and his co-authors (Callon et al., 2001).

[29] On the relation between uncertainty and judgment, and on F. Knight's crucial contribution to this research problem, see also Rivaud-Danset, 1998.

[30] See Karpik, 1996.

Thesis 3. *The defence-attorney market model (together with its French ethics of moderation) is obviously a highly particular one in the matter of price determination, as Karpik is the first to say*. It is likely that all quality markets are more or less specific in this sense. On management consulting markets, for example, behaviours pertaining to an 'economics of immoderation' may be sometimes observed. Jacques De Bandt (1994, p. 220) cites prices ranging from x to 40x for services 'defined similarly ... on the basis of what are in principle very precise contract obligations.' Musselin (1996) has shown that the mode of price determination in university hiring markets—judgment markets, it should be remembered—is very different from the one for defence attorneys.

Thesis 4. *It is advisable to analytically dissociate the analysis of adjustments concerning quality from that of price adjustments*. Price is not a component of product quality, nor of the quality of persons who are hired. Price can and often does function as a signal of quality, among other signals. Even more often, in social exchanges within the economics of quality, adjustments concerning quality are intertwined with price adjustments, namely through quality/price arbitration. But such arbitration is not between various attributes of quality of which price would be understood as one, but rather linked to economic constraints and certain actors' willingness to pay for certain qualities.

Thesis 5. *The blindspot in current socio-economics research into quality is its failure to take into account production costs as they concern quality* and production actors' strategies around the quality/cost balance. Quality adjustments and price adjustments always occur against a backdrop of structures, constraints and cost-related choices.

Products in the judgment market, for example, are also subject to constraints and cost-related choices associated with experimental assessing of clients' willingness to pay for high quality, which is never infinite. Even in situations where it would seem that clients are ready to 'pay any price' to obtain an extremely high level of quality, we know full well that this is a false impression. However, analysis of quality costs on the judgment market indicate that they, like quality itself, are difficult to calculate and predict. They tend to be assessed for major product families, as averages and orders of grandeur, with significant differences occurring within a single family.

Thesis 6. *The validity of the economics of quality extends beyond the competitive market sector.* Similar questions (judgments on the quality of uncertain products) are raised in the case of public monopolies operating in the market sector. Indeed, these questions are the point of departure for Hirschman (1970). Furthermore, singular services exist within the non-market sector (public education, public health, etc.) and some public administrations, which are marked by uncertainty, judgments on quality and quality/cost arbitration. In general, socio-economics of quality should be distinguished from socio-economics of competition, though the connections between them are often very strong.

4.3. Operational frameworks for a socio-economics of quality: four theses

The first thesis is a response to Musselin and Paradeise's major question about the distinction between processes of identification and evaluation, though I proceed on the basis of slightly different categories.

Thesis 7: *Abstractly, with the goal of developing socio-economic approaches to product quality, real processes involve three generally intertwined problems:*

- *The inscription of the cognitive and semantic content of descriptions of quality* in grammars or 'registers,' in various more or less formalized types: criteria, characteristics, quantifiable and non-quantifiable attributes, more or less elaborate literary (not to say qualitative) descriptions, reference values or 'grandeurs,' justice principles constituting more or less widespread or 'incorporated' knowledge. This cognitive (and political) content can be extracted from discourses, various documents, charters, verbal interactions. According to Boltanski and Thévenot, it could be analysed in terms of a limited number of value systems, paradigms, or conventions (see Thesis 8).
- *The social mechanisms and processes of adjustment,* coordination, and more or less conflictual validation of both the aforementioned conventions or values (the search for an agreement on general principles) and product quality as assessed by conventions (application of such principles). While the first problem is static (the goal is to identify 'grandeurs' within a given situation), this one is 'dynamic' and historical. It can also be said that quality norms and conventions represent resources for action. They are mobilized in actions and networks the dynamics of which can in turn lead to rehauling the initial framework. Analysis of the role of 'intermediaries' and 'prescribers' is relevant here. This has been explored primarily by sociologists, but contributions have also come from the French school of the economics of conventions.
- *The rationalization of quality*, the representations and actions by means of which producers (at times together with users) organize *economically efficient quality production* as regard to quality norms and conventions temporarily stabilized (problems 1 and 2). Obviously the diverse visions and rationalization modes can refer back to the diversity of quality conventions (problem 1) and result from social processes analysed in terms of problem 2. But this third problem is also distinct from the other two in that it is more concerned than the others with intellectual and organizational processes that 'produce' quality products which nonetheless obey economic constraints and not, as in problem 2, processes for validating products independently of this constraint (see Thesis 9).

Thesis 8 (referring to problem 1). Among the available theoretical references, *the most effective frameworks for examining the diverse 'registers' used with regard to determining product quality are to be found in the existing program of research on economics of conventions*, particularly the work of Eymard-Duvernay (1986, 1989, 1994), Thévenot (1986, 1989), Boltanski and Thévenot (1991) and Salais and Storper (1997). While not identical, all these frameworks are based on the hypothesis that plural, heterogeneous quality conventions exist. If they are to be used effectively for multifaceted evaluation of quality or sociological analysis of quality evaluation situations, they must be adapted and reinterpreted according to the issues and conflicts present in each field. This approach excludes the idea of folding everything down to a single synthetic dimension (price being the candidate usually chosen to effect the homogeneisation).

Thesis 9 (re studies problem 3). *Rationalization of product quality as representation and as action takes two polar-opposite forms that are generally mixed together in real processes: industrial and professional rationalization*. This distinction, which hearkens back to my previous analysis of service modernization (Gadrey, 1994), here applies to product quality and how it may be obtained or improved under the economic efficiency constraint.

Industrial rationalization of quality is analytic and aims at standardization. It involves breaking down quality into objectified 'characteristics' which have generally been identified previously (by means of surveys, complaint handling, etc.). It adds up or subtracts quality characteristics, or combines them differently. It also purports to calculate the exact economic costs of quality (with industrial management control methods), classify products of different quality in lists with clearly marked borders (product ranges), and carry out certified tests and measures of various characteristics. Callon et al. (2001) have shown that, whereas there are in fact complex social adjustments around such qualification processes, to agents of industrial quality rationalization, quality appears as a set of characteristics intrinsic to the product, characteristics which must then be 'sold' to consumers through information dissemination and *mise-en-scène*.

The professional rationalization of quality also has to describe potential or effective aspects of product and often service quality (in order to act on them), but those aspects are not characteristics in the previous sense, which is also the meaning the term has in economic theory based on K. J. Lancaster's work. I'm referring to intellectual problem resolution methods (with possible recourse to technology) and professional routines or 'recipes' that are partially singular and partially common throughout a given profession and in any case open to situation specificity. Product diversity is conceived in terms of types or families of cases, but diversity subsists within each family. Qualification of services can refer to certified or reputed intellectual skills or aesthetic, affective, ethical, creative, etc. skills, which can in some cases be interpreted with the help of Boltanski and Thévenot's concept of 'worlds' (Boltanski, Thévenot, 1991). Some of the aspects present in hiring operations as analysed by Eymard-Duvernay and Marchal (1997) may also be found there. A client's hiring of a professional service provider is indeed similar in certain respects to a company's hiring of an executive, both in terms of uncertainty about the result, importance attached to quality, and the fact that it is impossible to break skills down into calculable characteristics.

As it stands, this thesis establishes too strong an opposition between two types of logic that the same persons may in fact use simultaneously to rationalize the quality of the same products. The reason for this is simple: certain quality attributes of a great number of products, particularly service products, can be described by means of calculable characteristics; others on the basis of judgments not governed by calculation or technical norms but no less rational (argued, referring to principles and values assumed to be shared, etc.). This observed situation is not due to such products' intrinsic properties, but to the current state of quality evaluation conventions, as if confidence needed simultaneously to be based on calculation and analysis of product quality *and* more synthetic representations or representations calling upon non-calculable scales of grandeur. In situations where conceptions of rationalization and rationalizing actions are mixed, collective arrangements and mechanisms for managing uncertainty about quality are also mixed.

Thesis 10. *Goods markets, markets of individuals, organization markets*. When restricted to the most common situation in production and trade, adjustments involving product quality and price do not always focus on the commodity as such (Callon et al., 2001). Cognitive touchstones, references, sources of buyer confidence and loyalty, and producers' selling arguments can concern the good being sold, the individual producer or provider (personal trust), or the producing organization (reputation). In reality, these references are often combined, but in certain cases one or the other dominates. These distinct cases can be qualified as goods markets, markets of individuals, and organization markets,[31] with the understanding that real trade always concerns the product, but that each of the three market types designates the entity that polarises judgments on quality relying on confidence-generating arrangements and devices. Clearly the last two types of market display the conditions most favorable to the functioning of a judgment market, even though that market can also be relevant in certain goods markets.

5. What is to be done with singularities? (Lucien Karpik[32])

The "economics of quality" deals with commodities (goods and services) that are usually considered as differentiated products and yet differ from them by three combined characteristics : *multiple qualities*, *uncertainty of quality*, and *primacy of quality*. As a result of multidimensionality, these products are at least partially incommensurate with each other; quality uncertainty prevents the possibility of distinguishing good from bad quality and, linked to information asymmetry, it drives toward market failure, as Akerlof's model shows. Lastly, with primacy of quality, quality competition wins out over price competition. Obviously the separation between the two categories of differentiated products and " *quality products* " (or " *singular products* " or " *singularities* ", three notions I used interchangeably) involves interpretations that cannot be assumed to converge, not only because reality is ambiguous, but also because social actors may have different evaluation criteria.

Though the "market of singularities " is outside the relevant domain to which neoclassical theory applies, it can still be analyzed. Here, due to the lack of space, the analysis is devoted to the final phase in the economic co-ordination. I shall only allude to prior stages and mid and long-term transformations. This perspective is neither exclusively sociological or economic, but a particular combination of the two. The critical examination of the so-called universal validity of neoclassical theory, as well as of the work of Karl Polanyi, is the chosen way to identify the "market of singularities", a peculiar form of economic co-ordination that had not been perceived yet, and which justifies a theoretical construction making that particular reality not only intelligible but socially visible.

5.1. The limits and limitations of neoclassical theory

Neoclassical market theory amounts to price theory. The assumption of universality means not only that it proposes general laws but also that every reality involving exchange, however 'impure' and 'imperfect' it may be, can always be linked to the same theoretical framework. This universality owes much to the "Chamberlin Revolution", whereby differentiated products could be added to homogeneous ones without modifying the analytic apparatus (Chamberlin, 1953; original 1933).

Market theory remains price theory when a differentiated good is understood as a homogeneous good related to a specific market (with as many markets as differentiated goods),

[31] See Favereau, 1989a and Eymard-Duvernay, 1994.

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when close markets are linked together by substitution prices and the specific effects of product variety on prices have been identified. Universality is still postulated even though mainstream theory leaves out (unless by the use of reductionist practices), multidimensional and quality uncertainty products whose prices cannot be set by the usual economic tools.

Of the many works in the last twenty or thirty years that seek to push back these limits, Lancaster's theory is unique because it directly tackles the problem of reconciling multidimensional products and price theory. Each product is thus considered as a "bundle of characteristics" : characteristics are incorporated in good and value depends on the corresponding satisfied utilities (Lancaster, 1966). The circle seemed successfully squared.

Despite its ingenuity, Lancaster's theory elicits three criticisms, which I shall state but not develop. First, the notion of a "bundle of characteristics" transforms configurations of interdependent characteristics into sums of weighted independent characteristics. Second, the choice of the relevant characteristics of the multidimensional commodity is not at all clear: ordinary experience shows that it always divides social actors. Third, there is no reason to believe that the value of a characteristic, measured by the degree of satisfied utility, would be the same for every consumer, especially when we know full well that utility and preferences are varied and variable.

For these three reasons -- and the first one alone is sufficient --Lancaster's theory seems unacceptable. *The analysis of "singularity" exchanges remains an unsolved problem*. In fact, neoclassical economics fails to grasp the form of a market that its analytic tools prohibit it from observing and explaining.

5.2. The legacy of Karl Polanyi

Polanyi's contribution is twofold : it concerns forms of economic co-ordination and forms of market embeddedness. On the basis of historical and ethnographic studies, Polanyi identified three types of trade whose relevance seem truly general: reciprocity, redistribution, and exchange. The last one encompasses the " self-regulating market " (Polanyi, 1957). His theory is both essential and ambiguous: essential in that it makes it possible to question the universal validity of neoclassical theory; ambiguous because the author draws a line between, on the one hand, the " self-regulating market ", developed countries, and neoclassical economics and, on the other, "embedded markets", traditional societies, and traditional types of markets. The theory thus determines the conditions for its own success and failure: while standard theory becomes a regional science, K. Polanyi has no analytic tools for identifying and explaining the *possible pluralism of forms of exchange within developed countries*. After Polanyi, the issue could at last be formulated.

In *The Great Transformation* (Polanyi, 1944), Polanyi explained the economic and political catastrophes that punctuated European history from 1914 to 1945 by the development of a "*self-regulating market*" ruled exclusively by price and internal forces. But to avoid any misunderstanding, he explicitly affirmed that "a market economy separate from the political sphere is impossible". He supported this claim by means of detailed analyses showing that the free market could not have arisen and developed without systematic, continuous state intervention.

Shall one define the "self-regulating market " by the emancipation from society, or rather from state and administrative intervention ? Polanyi refused this alternative. He believed instead that *the modern market can only appear as non-embedded (self-regulated) because it is embedded*. The difference between traditional and modern markets lies not in the embedded/disembedded alternative, but rather in different forms of embeddedness. Whereas traditional markets come equipped with social structures (kinship, religion, culture), modern markets are equipped with a state-administrative apparatus whose intervention to obtain obedience to the law and disseminate diversified knowledge is indispensable if the market is to *appear* self-regulating. Polanyi's theory thus provided two major advances: *plural forms of exchange* and *plural forms of embeddedness*.

5.3. Products, actors, and forms of market embeddedness

The analytic principle linking forms of co-ordination to categories of commodities is operative in several analyses. Eymard-Duvernay (1989) relates three forms of economic coordination to three 'quality conventions'; Salais and Storper (1997) present four categories of economic coordination, associated with four categories of traded products, while I establish correspondences between two forms of market and respectively homogeneous/differentiated products and quality products (Karpik, 1989). This shared premise does not prevent different perspectives.

In the "economics of quality" products in the market competition are fashioned by both innovation and marketing, and more generally by the knowledge of market specialists (Cochoy, 2002; Barrey et al. 2000) in order to display desirable qualities to the customers. However, in the overwhelming majority of cases, the collective development of "singularities " does not prevent the autonomous intervention by collective devices and the independent transformations of consumers, both of which are changed in turn through processes that both integrate the market and extend beyond it (Paradeise, 1988b).

From this perspective, the *contents of the market embeddedness form depend on the specific constraints that quality products impose on exchange actors*. Once the primacy assigned to qualities has pushed price into the background, two problems become central. The first is, in order to reduce and even to eliminate market opacity on multidimensional products, to construct and disseminate complex information based on the ever-problematic choice of relevant product dimensions. Moreover as consumer choice is based on judgment rather than calculation, this complex information should respect the rules governing judgment-shaping. This difficulty is particularly acute given how fast "singularities" are renewed. The second problem is that quality uncertainty requires setting up mechanisms to guarantee the promise associated with the purchase. These constraints have to be at least partially met for the market to be able to function. This job is handled by devices and market actors.

Quality market "equipment" is made up of external arrangements that encompass both *judgment devices* and *promise devices*. The first ones include networks, labels, rankings, guides, reputations, brands, professional groups etc., and their job is to produce knowledge adequate to the consumer judgment. The second ones make trade predictable by neutralizing fears of opportunism through the trust ensured by judgment devices (Karpik, 1996, 2000).The two come together in the same device.

Market actors are characterized by a form of commitment that combines *competence*, as specific knowledge of the products, and *judgment*, as a decision based on a particular configuration of evaluation criteria. Devices and actors, the first ones by their modes of action and the second by their modes of commitment, transform the product characteristics: *their interaction determines singularities' final qualification.*

The following are a few cursory illustrations of how devices/consumers transform quality products. By *network*: Business consultants, for example, are basing the excellence of their services and clients' trust by belonging to a network composed exclusively of *grandes écoles*[33] graduates (Sauviat, 1994). By *impersonal devices*: The 'same' job will be more or less 'skilled' depending on which hiring mechanisms are used (Eymard-Duvernay and Marchal, 2000). By *guides* : an authoritative guide can bring about the 'overqualification' of some wines, while on the contrary, the box-office omnipresence will usually downgrade the 'films d'auteurs'. By *interaction between impersonal devices, networks, and actors' dispositions*: choice of university professors is legally supposed to be based on a purely scientific qualifications of the vacant position, implying ranking based exclusively on candidates' scientific research achievements. But in most cases, networks are added to the impersonal device that diversifies the nature of information, and as a result the redistribution of jury members' judgments, in the form of votes, requalifies both positions and candidates, thus upsetting the initial distribution of hiring chances (Musselin, 1996). The examples that could be cited are various enough to preclude the setting in advance of the analytic approach' empirical relevance.

Far from economic naturalism, the functioning of "markets of singularities" is thus defined by the relationships between the producers and intermediaries who fashion the supply of quality products, market devices, and forms of consumers' commitment. All things being equal, the variations of these components explain the variants of markets of singularities.

5.4. Price formation

When competition by qualities dominates competition by prices, price formation is only partially the result of the supply-demand relations. What mechanisms then explain why prices are low (but at least equal to production costs) or high ? And if price competition is subordinated to competition by qualities, how is it nevertheless that prices seem to build a general order ?

The lawyers' market shows clearly the influence of lawyers' networks which, by their daily functioning, makes possible a system of individualized comparisons and spontaneous fee-setting that corresponds to the self-evaluation of a personal professional status (Karpik, 1999: 163-168). The observation of a few other "markets of singularities" suggests (among others) two main possibilities : 1) prices are set according to the position occupied by "producers/sellers" within a more or less shared conception of the professional hierarchy; 2) prices are more or less set according to intermediaries' dominant judgments, when their authority, based on expertise, is recognized as such by consumers. In sum, the price order in these two cases, and under highly variable financial constraints, expresses two versions of the social order: professional hierarchy, and the ranking by consumers of the market authorities.

[33] Prestigious higher education and professional training institution based contrary to most French universities, on selective admission. They are mainly oriented toward scientific and business positions.

It should not be impossible to identify a few patterns of price formation in singularities' markets. The real difficulty, given the lack of relevant data, lies in identifying the specific or combined effects of these social structures and supply-demand relations on prices.

5.5. Conclusion

The "economics of singularities" points out a theory that aims to make intelligible the organization and functioning of economic coordination around singularities. The analysis here was limited to commodities, but it could be extended to other bearers of singularity like corporations (Favereau, 1989a). But before one should check the markets' limits whether the imaginary, idiosyncratic figure of Nike, for example, has really become the foundation and the guarantee of a collective singularity that could now apply to all Nike products, even the most ordinary ones (Klein, 2001).

This theoretical construction is not limited to the final step of the relation between supply and demand. It is also relates to the prior stages where products qualification and re-qualification create singularities or make them disappear. More generally, it is concerned with the mid- and long-term effects of singularization and de-singularization of commodities, the historical forms of economic co-ordination and the kind of testing such study implies (Gadrey, 1994).

6. Products, norms, and historical dynamics (Alessandro Stanziani)

The above contributions suffer several shortcomings: they are vague about the notion of norm and they do not pay enough attention to historical economic dynamics. While product qualification is essential in order to speak of norms, norms can refer to both legal rules (which should in turn be distinguished according to the institution that produced them -parliament, government, a ministry, a law-court- by group that produces them and their place in the legal hierarchy -law, decree, circular, etc. of legal arrangements and mechanisms) and economic policy measures, as well as to conventions between private actors and even investment strategies (production normalization). This has to be clarified to account for current product safety problems and their historical origin. But norms are also inscribed in the historical dynamic of the economy and help shape that dynamic. From this perspective, norm production and application are not external to economic action but are an essential component of it. All static opposition between norm and market is overcome in what I call the economic-legal history.

6.1. Information and conventions

It is first necessary to specify the relations between product characteristics, institutions, and the historical economic dynamics in the information economy. The solution proposed by Akerlof (1970) and Stiglitz (1987) applies in fact to a special case: information asymmetry presupposes that contracting parties share the same notion of quality with regard to the traded good or service. Only in this case can I affirm, for example, that the used car I bought doesn't correspond to the quality I was seeking and the seller claimed to be offering. The seller, meanwhile, can only hide the real characteristics of his ‘lemon’ if he knows and shares the same notion of quality as the buyer. In other cases, there is no such shared knowledge. The quality of meat, for example, is not always defined in the same way by butchers, stockbreeders, and consumers, nor by various administration departments in charge (agriculture, health, justice, and so forth). This diversity is accentuated when temporal and spatial contexts are enlarged: the notion of ‘quality’ meat was hardly the same in the eighteenth and twentieth centuries!

The economics of conventions has proposed innovative responses, but has difficulty in positioning itself in relation to the information asymmetry theory. Some reject these answers (as M. Callon), while others consider them it as the firm centre bulk of the economics of quality (as L. Karpik). The problem is that conventions are treated as tools of coordination, either alternative or complementary to others, such as prices and norms. In either case, it is necessary to clarify not only the notion of price, as François Eymard-Duvernay in this debate rightly observes, but also and above all the question of norm. This notion encompasses heterogeneous elements: legal rules, productive solutions, agents’ agreements on product characteristics.

6.2. Coordination vs hierarchy

Why does economics of conventions have trouble grasping this aspect? The answer probably lies in its virtually exclusive emphasis on coordination, to the detriment of hierarchization (of actors, products, adjustment mechanisms or arrangements, etc.). Though legal rules on products may be adopted through agreement within or among one or several constituted economic interest groups, they also work against other interest groups. European Union norms officially define wine in a way that excludes certain practices and producers and creates hierarchies among actors and regions. It is only at this point that conventions rooted in trust can be put in place. In other words, conventions are situated in a clearly defined institutional context that they have, of course, contributed to shape. This conclusion is also valid for other aspects evoked by the economics of convention, beginning with expertise. Without neglecting the importance of the issues and questions examined in a far-ranging literature (Bessy and Chateaureynaud, 1995; Callon, 1998; etc.), it is regrettable that on this point too, juridical rules have been neglected. Disagreements and conflicts around types of expertise, the role of experts and their training, the impact of expertise on public policies and action and on the media does not occur in an institutional or legal vacuum.

Certification, labels, and AOCs *(appellations d’origine contrôlée*; labelling guaranteeing location of origin) are among the signs of quality currently in use in the European Union. Jurists distinguish them in terms of procedure and validating institution. The label is a sign of quality subject to the control of professional associations; it refers directly not to goods quality, but to goods characteristics. AOCs, on the contrary, are determined on the basis of government regulations. These, in turn, are determined on the basis of agreements between the major relevant producer associations (Olszak, 2001). Lastly, certification has a different definition whether considered by jurists or by economists or sociologists. Certification is not a matter of legally imposed quality control but rather a private sector-determined normalization (Serverin, 1985). This is based on company blueprint aiming not at superior quality (in contrast to AOCs) but a consistent quality (Olszak, 2001, p. 166). These three types of norms do not have the same legal status, and for this reason they do not have the same impact on economic practices. Therefore, though one of the economic consequences of these arrangements is a process of normalization and even standardization (though this effect depends on the sector and the studied period under study), that phenomenon should be distinguished from industrial production normalization, which has no direct source in law or legal regulation.

6.3. Legal rules and informal agreements

At this point it is necessary to link legal rules with other norms on products. It is important to loosen the traditional nineteenth-century opposition[34] between behaviour governed by law and behaviour involving informal agreements between or among parties. This opposition causes to loose sight of the link between the two: actors can of course make arrangements among themselves, but informal agreements are not independent of legal rules, and this is so from both cognitive and instrumental viewpoints. The way labelling and certification are conceived and implemented depends on disciplined use of the signs of quality above them in the legal-economic hierarchy: AOCs.

This does not mean that the solution is to be found in the new standard approaches to law and economics. In its laissez-faire variant (Coase, 1984; Posner, 1977; the Chicago school), as in the neo-institutionalist approach (Williamson, 1985), this school mistakenly identifies law as an external constraint involving prohibitions and costs that actors seek to minimize. Not only does this approach not take into account the presence of non-instrumentalist types of rationality, but the notion of incomplete contract makes this approach vulnerable. First, with regard to economic theory, if contracts were 'complete' the situation of static equilibrium would make markets impossible. Second, from the perspective of jurists and Weberian sociology, the notion of incomplete contract overlooks the fact that, like all legal rules, contracts define not so much prohibitions as frameworks for economic action within which actors form their expectations and define their strategies. From this perspective, civil or commercial law textbooks present a much different notion of 'quality' than economists do. The substantial qualities of a thing are among the elements for perfecting contracts. They refer on the one hand to the use of the thing serves, and, on the other, to the will of the contracting party. The problem is that textbooks and legal studies tend to overlook the fact that the notion of 'substantial quality', as well as its applications to the various products concerned by contracts, change over time, creating considerable tension.

This is where the study of legal history helps, shedding light on the evolution of legal notions since the early modern times that originated in the Renaissance (Halpérin, 1996; Hilaire, 1986, 1995; Poughon, 1987; Torre-Schaub, 2002; Tuffery, 1998). In the mid-nineteenth century, the legal meaning of exchange was not the same as under the Ancien Régime, not only because exchange had lost its privileged place in economic thought, but also because the corresponding legal notion had changed. In fact, the break occurred not so much in the late seventeenth and early eighteenth centuries as a century earlier. Up until the

[34] The 'free law' school, from Eugène Ehrlich to François Gény, elaborated on this opposition, that is still present in Georges Gurvitch's work.

early seventeenth century, the relevant legal notion was the one inherited from Roman and medieval law, *sunallagma*, where exchange is not entirely distinct from gift. It was only after that sales contracts were distinguished from exchanges strictly speaking (Poughon, 1987). According to Poughon, exchange was the essential qualifying notion of the contract. But 'even at the very moment when commutative justice triumphed, municipal authorities were still rendering distributive justice in commercial relations between salers and consumers; this justice was based not on parties equality but on contract equity.' This was necessary to ensure a just price and stop all speculation; the requirement of good faith was conducive to parties' mutual trust and implied transaction transparency. Hence the presence of the state: buyer was no longer alone in facing seller (Tuffery, 1998).

It is significant that, chronologically, at just the moment when exchange was taking on importance in economic analysis, it lost all its interest for jurists, who preferred the notion of contract. The opposition between sale and exchange in the eighteenth century reflected the existence of two conceptions of contract. In one, the contract existed as soon as there was consent of the two parties; in the other, material performance was required. This ambivalence is reproduced in the French *Code Civil*. The first outline for the Code exhibits confusion between sale and exchange, with exchange considered as a double sale. The definitive version dispels the ambiguity: exchange is subordinate to sale.

6.4. Historians' idea of quality

Still, historians took a long time to recognize the interest of historical study of the law. Their tendency, especially in economic history, was to reproduce economists' approaches. They neglected product quality, or took one or another definition of it as simply given. Above all, many historians accepted the idea that prices correctly reflected quality and that corporative quality control as practiced under the Ancien Régime had only thrown off the play of the market and thereby limited growth. Several historians, namely those interested in how cities were supplied (Braudel, 1973; Kaplan, 1996; Labrousse, 1933; Meuvret, 1988) were concerned with product 'qualities.' In general, however, this meant either identifying reliable statistical sources or studying the problems that product quality raised for municipal authorities when working to implemented their policies. The socio-economic and institutional construction of quality was not a focus of research. Neither construction of legal rules or their application in legal disputes were part of it.

Recent studies show however that quality definition was part of how the economy under the Ancien Régime functioned, and that these arrangements can be distinguished from a market economy, though it is important to specify that quality innovation and development were present (Grenier, 1996; Hilaire-Perez, 2000; Hirsch, 1992; Kaplan, 2001; Minard, 1997; Reynard, 2000). These analyses, which use innovative approaches to the history of economic thought, have identified what was specific in Ancien Régime economic categories and practices (Perrot, 1994). Unfortunately, these approaches are almost completely neglected by food historians who did not provide convincing explanations for the introduction of new products and the development of the existing ones. Fernand Braudel and his followers, pay no attention to the way a product is defined and to the institutional construction of its quality. It is assumed that everyone knew and shared the same notion of 'coffee,' 'wheat,' 'sugar,' whereas this was not always the case. And the phenomenon is not only relevant for new products: the wheat police under the Ancien Régime put into evidence that institutional classification was part of quality definition. John Brewer and Roy Porter's work (Brewer, Porter, 1993) on the history of consumption has the same limitation. When the authors write of the 'consumption revolution,' they assume that the products in question—tea, sugar, wine—were homogeneous and that everybody defined them in the same way and attributed the same characteristics to them. This is why these studies have trouble getting free of diffusionist or epidemiological models for the spread of new products.

Martin Bruegel (1999, 2000) indicated a possible way out of this impasse when he brought to light the role in diffusing new products of such institutions as schools, hospitals, and especially the army. The diffusion of canned foods occurred in France after long consumer reluctance, in part through schools but above all through the army, particularly after World War I. The works in progress of a number of young French researchers likewise look into the historical construction of quality, for example in the nineteenth-century markets for meat and food staples in France and Europe from 1960 (Lhuissier, 2002; Piet, 2002).

6.5. Toward an economic and legal history

Is is possible to get beyond such limits? Yes, by simultaneously paying attention to norm production and their application (legal, judicial, as related to productive technology, etc.) and to their links with economic behaviour. All these concerns are to be put into a historical economic dynamic. Since economic actors do not act in a perfect information system, uncertainty is structural; but their subjective perceptions also count in their decision-making. They may but they also may not share quality conventions, and this means that how such conventions are established, transmitted and modified must also be explained. Law, conceived less as a body of doctrine than a set of practices that affect actors' anticipations and behaviour, must be given a central place. Types of coordination among economic actors (price, quality, information, norms) thus become inseparable from the hierarchies that underpin them. Analysis of legal disputes enables to understand how economic and institutional actors perceive rules and put them into practice, and thereby to get beyond the traditional opposition between market and norm (and institutions in general) and show that a market economy in reality encompasses both these components. Product quality is a construction situated at the intersection of economic action, technical innovation, judicial practices, scientific knowledge, and political debate. From this perspective, falsification and fraud are not pathological states, but partake of the very functioning of a market economy, based on both economic action and legal rule. It then becomes possible to define the market economy as an economics of quality *and* an economics of uncertainty in which norms and their activation cannot be fully distinguished from the economic action itself.

6.6. Litigation and economics of quality in context: the wine market in the nineteenth century

The nineteenth-century wine market provides a good example of this approach (Stanziani, 2003a, 2003b). From 1850 to1870 the wine market expanded; emphasis was above all on quantity. In this context, actor uncertainty primarily concerned resources and competition strategies and did not extend to economic environment (rules of the game, types of rationality, quality definition, techniques). During the last quarter of the nineteenth century the opposite situation occurred: actors shared neither product definitions or strategies, due to several interrelated phenomena: the rise of an international market and the development of transportation; new balances among French regions and within regions; urbanization and increased social mobility; new techniques, namely organic chemistry being brought to bear on agro-food business; other actors' unknown strategies. All these phenomena gave rise to radical uncertainty and brought about the breakdown of quality conventions. At this point, several economic actors began crying 'fraud' and 'falsification'—by which they meant that other actors were no longer playing by the rules. The fact is that existing norms and the way they were being applied were no help at all. Notions of fraud, falsification, and product 'quality' as conceived in the penal code and law of 1851 were at a loss now that chemistry was operative in the agro-food industry. Throughout the 1880s, the courts handed down different rulings in food falsification cases. Magistrates' uncertainty was twofold: scientific uncertainty about whether the substances at issue were harmful (substances had to be proved either harmful or unharmful for judges to know what legal rule applied) and the absence of legal traceability, since there were no accounting rules, which made it extremely difficult to attribute responsibility to litigious parties.

Economic actors hostile to this situation set out to refine the information at their disposal and modify the existing norms. These objectives could not be easily reached, since the different winemakers and their associations did not share the same representation of the market and they did not necessarily aimed to minimize transaction costs. A very similar phenomenon conditioned public policy: All public administrations and civil servants did not share a common representation of the market either, nor, by the same token, of the state's role. Some favoured fiscal measures for disciplining the market; some others supported forceful intervention in the economy to correct 'market imperfections,' though they did not question the market itself. Among the latter camp, some gave priority to the 'loyalty of affairs' and others to 'consumers' health.' In other words, the state was doubly fragmented, horizontally between bureaus and departments and vertically within hierarchical levels.

The solution reached can be understood by stressing that, in contrast to what neo-institutionalist game theory and the standard law and economics suggest, economic actors do not conceive of legal rules as a constraint but rather as a field of action in which to develop their expectations. Over the 1890s, several of the actors who had protested the loudest against fraud preferred to give up imposing the norm which best deserves their own interests, demanding instead only stable, clear norms that would enable them to develop expectations and determine their strategies. Ultimately this solution was equally accepted by those who had been profiting from 'heterodox' strategies—from then on qualified as fraud. In fact, generalized cheating had led to a decrease in business, both in the national market and at the international scale. French production and producers as a whole came to suffer a negative reputation. Thus, an increasing majority of economic actors came to the conclusion that stable rules were what would make it possible to reach an institutional definition of products and procedures. It was on this basis that expectations could be developed and new quality conventions put in place, and this attitude explains the adoption of the first special laws on butter (1887) and wine (1889, 1891), which marginalized certain production techniques and producers, in some cases even excluding them from the market.

The law of 1905 synthesized and generalized this process, opening the way for an institutional definition of main products that was precise enough to fix the rules of the game and yet flexible enough to allow for competition. It should be remembered, however, that this law was aimed not at protecting the consumer but disciplining competition. It makes sense, then, that recourse to norms inspired primarily by the law of 1905 has not been especially helpful in resolving recent food safety problems.

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