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# Markets, market-making and marketing

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**Abstract.** *Recent debates in economic sociology have moved away from a critique to homo economicus to a focus on how market exchange is formalized and abstracted from social relations. Rather than dwell on the disparities between the formalism and the practice of market exchange, the work of Michel Callon and associates focuses on the calculating agencies that enable the creation and operation of markets. This article provides a critical examination of these ideas and argues that they have important implications for marketing theory, namely in terms of a shift from exchange as events to markets as institutions. Rather than regarding marketing practices as operating within pre-defined markets, we argue that marketing practices have a performative role in helping to create the phenomena they purportedly describe.* **Key Words** ● economic sociology ● exchange ● marketing practice ● markets ● performativity

## Introduction

The purpose of this article is to examine recent contributions in economic sociology that have begun to address the role of marketing in the construction and operation of markets and that have largely bypassed the marketing discipline.<sup>1</sup> Given the centrality of the exchange concept in marketing (see Håkansson and Prenekert, 2004), it is somewhat surprising that the discipline has failed to engage with these developments.

Granovetter's (1985) revival of Polanyi's (1957) notion that market exchange is embedded in social structures paved the way for a re-examination of the notion of markets from a sociological perspective. The work of Callon and associates (Callon, 1998a, 1998b; Callon et al., 2002; Callon and Muniesa, 2005) has been pivotal in reorienting economic sociology towards market exchanges and market-making practices.

If Granovetter's effort had the merit of reminding us how social structures play a supporting role in sustaining market exchanges, Callon's approach is directed at the heart of what constructs these exchanges. Rather than pondering on the



inadequacies of *homo economicus* to explain market behaviour, Callon asks what practices and bodies of expertise are mobilized to make *homo economicus* a reality.<sup>2</sup> This article aims to provide a sympathetic critique and extension of these arguments and assess their relevance to marketing theory and practice. The key argument developed in this article is that the construction of markets is an accomplishment that depends on the mobilization of varying bodies of expertise and calculative agencies, including marketing practices. Marketing can be understood as a distributed and heterogeneous set of agencies involved in the process of facilitating market exchange and constructing markets institutions.<sup>3</sup>

The structure of the article is as follows: in the first section, we will examine Callon's proposals and discuss its critique of economic sociology. In the second section, the discussion shifts to markets as institutions. The third section looks at the role of marketing in the construction of markets and the fourth section examines calculative agencies as central features in markets. Finally, we conclude with a reflection on the implications of Callon's approach for the study of marketing practices and their role in performing different market forms.

## What is market exchange?

The starting point for Callon's (1998a) approach to market exchange is a definition borrowed from Guesnerie (1996): market exchange is a process of defining the price at which exchange can take place given two parties with divergent interests. The emergence of calculativeness is the linchpin of Callon's approach. Rather than falling for the economists' notion of calculativeness as a hard-wired feature of agents, Callon regards Granovetter's embeddedness notion as an elegant solution to eliminate the antinomy of the undersocialized *homo economicus* and the oversocialized *homo sociologicus*.

The emergence of calculative agencies is, according to Callon (1998a, 1998b), the product of framing. Framing is an operation of disentanglement that allows the myriad of associations between agents to be sorted and classified. The networks of relationships in which agents are embedded are still influential, but framing allows these relationships to be abstracted and dissociated from one another. The frame establishes a boundary around which interactions take place independently of their context (Callon, 1998b: 249).<sup>4</sup>

Market exchange is enabled by a process of framing that allows distinct agents to come together and agree a price for the exchange of goods and money. Callon and Muniesa (2005: 1230) define '... markets as collective devices that calculate compromises on the value of goods'. But framing is always a fragile, partial and artificial achievement that requires substantive investments. The counterpart to framing is overflowing. Overflowing is both the supplement as well as the foundation on which framings can be sustained.

Callon's contribution has stirred up a lively debate, not least in the pages of *Economy and Society*. On one side of the debate, there are those like Miller (2002), who criticizes Callon for being enamoured with the formalities of market



exchanges. Miller accuses Callon of mistaking the economist's abstraction of the market for the obdurate world of practice. Miller further notes that the way business makes sales and profits is not by focusing on the disentanglements of transactions, but by addressing the complex entanglements that connect practices on the supply and demand sides.

Slater (2002) introduces an important contribution to this debate. For Slater, the essence of market transactions is the alienation of property rather than the establishment of calculating agencies. As Slater (2002: 237) notes, Miller and Callon agree that markets can be conceptually separated from other systems of exchange by a specific form of framing and calculation. However, Miller argues that any ethnographic examination of market exchange surfaces other forms of calculation at work other than the operation of the price mechanism. For Miller, the diversity of calculations present in 'real' market exchange subsumes Callon's framing and disentanglement operations.

Slater's focus on property rights and alienation provides a more robust definition of market exchange. As Slater (2002: 238) puts it, '... the stability of legal entities and frameworks allows for reliable and predictable encounters and in this much broader sense allows "calculation"'. Slater's argument harks back to a different if hardly novel definition of market exchange, and one that is more precise than the one Callon adopts from Guesnerie (1996). Ménard (1995) defines markets as institutional arrangements that enable the routine and voluntary transfer of property rights on a regular basis. If Callon is right to ask where the calculating agencies that make up *homo economicus* come from, Slater is equally justified in pointing out that without a stable legal framework enabling transactions amongst strangers to take place. As Callon (2005) and Callon and Muniesa (2005) conclude, there is no fundamental opposition between the practices that produce the entanglements illustrated by Miller (2002) and the disentanglement produced by market exchanges.

In the case of the transfer of goods for money, as Miller (2002) points out, the objects and actors involved in market exchange come to a transaction already infused with meaning and multiple forms of calculation. The transaction can only take place if it fits within a complex set of entanglements on both sides. In the example used by Miller (2002), the sale of a car can only be understood by reference to the entangled web of its purchaser lifestyle, finances and projected use of the car, as well as the salesperson's quota, commissions, the franchised dealership relationship to the manufacturer, and so on.

Callon et al. (2002) move this debate forward by focusing on the notion of goods. A good implies a stabilization of characteristics at the moment an entity, product or service, is made tradeable. A product is an economic good that can be seen from a variety of perspectives: production, circulation and use. Thus a product corresponds to a process, a trajectory in time, whereas a good corresponds to a state at a point in time. Services can be turned into goods too by defining and objectifying their properties making them tradeable – e.g. a rented car available for a limited period and for pre-specified uses.

Products may have long and complex biographies that are temporarily inter-



rupted by the attachment and detachment of property rights. A car, for example, is a product that moves from the designer's office to an item in a manufacturer's brochure, to dealership showrooms. It is a good at the moment it is traded as a new car, but once in the hands of its first registered owner, it follows another trajectory of clocking miles on public roads, of service in maintenance workshops, to used car magazines or dealerships. The same product can thus have a multifaceted biography and constitute a different good at different stages of its life-cycle (e.g. new and second-hand). At each point in this trajectory, when it is traded, it is necessary to stabilize and singularize its properties as a good (e.g. placing a newspaper advertisement specifying the age, mileage condition and so forth, of the car).

The work of qualifying goods, or imbuing them with specific qualities, is a distributed effort involving both market professionals and the final user – more about this later. Through this process, a product is progressively transformed into a good that slots into the world of the buyer, becoming entangled into the networks of socio-technical relations that constitute this world (Callon and Muniesa, 2005: 1234). The two processes of objectifying and singularizing a good's properties are deemed to occur simultaneously, thus allowing Callon and Muniesa (2005: 1234) to claim that there is no 'irreducible opposition between the practices that produce entanglement and the market transaction that implies a break'.

Callon and Muniesa (2005: 1245) are primarily concerned with explaining how goods can be calculated as the outcome of distributed agencies '... whose encounters are organized and stabilized to a greater or lesser degree'. The organization of these encounters is provided by what they call algorithmic configurations. Algorithmic configurations perform a variety of functions: a) they determine the particular configuration of calculative agencies that participate in a particular encounter; b) they organize the way these agencies are linked in a concrete instance; and c) they establish ground rules for the ordering of these connections (Callon and Muniesa, 2005: 1242). Thus a space like a supermarket, a shopping mall, or even virtual spaces such as electronic markets, are all examples of algorithmic configurations, where calculative agencies can be assembled and markets emerge as collective calculative devices.

The framework proposed by Callon et al. (2002) and Callon and Muniesa (2005) leaves a number of questions open. Transactions are seen as pinchpoints along sequential processes of production and consumption with little room for interaction between market participants. For example, when products are modified in anticipation of a buyer's idiosyncratic preferences or customized following interaction between a buyer and a supplier, when does a product become a good – and when does a good revert to becoming a product? In business markets, is the investment made by a supplier in understanding its customers' needs part of the process of objectifying and singularizing goods, or is it an antecedent to singularization?

Callon's market actors appear to be compelled to shed their production and/or consumption identities in order to participate in market exchange. Although clear-cut transitions between production, exchange and consumption may well be characteristics of particular market forms, they can hardly be taken as universal. The argument pursued in the following section attempts to establish a clearer con-



nection between the market practices that produce the entanglements highlighted by Miller (2002) and the institutional frameworks that support the framing and transaction pinchpoints that Callon and associates have underscored.

In doing so, we also aim to expose a tension in Callon's arguments between markets as institutions and markets as dynamic, learning spaces where supply and demand are continuously being reshaped. This (irresolvable?) tension is also evident in the debates that oppose the proponents of flat social ontologies (see e.g. Latour, 2005) and their critics (see e.g. Reed, 1997). For Latour (2005: 171), the introduction of layered social ontologies precludes the investigation of key social phenomena such as the production of place, size and scale. For Reed (1997: 26), 'The world of the actor network theorist . . . seems to consist almost totally of verbs and hardly any nouns; there is only process, and structure is regarded as its passing effect'.

## **Market as institutions**

Loasby (1999) remarks that most economists write about exchange when they purportedly discuss markets. The same judgement applies to marketing theory, in its concern to affirm exchange as the foundation of the discipline and its relative neglect of markets as institutions (Araujo, 1999; Houston, 1994). As Loasby (1999: 107) argues:

To confuse markets with exchange is a category mistake; it is a confusion of institutions and activities. An exchange is an event . . . it is something that happens. A market is a setting within which exchange may take place – a setting which refers to 'a group or groups of people, some of whom desire to obtain certain things and some of whom are in a position to supply what the others want'. (Marshall, 1919: 182)

In much of economics and marketing, markets appear as a natural given as exemplified by Williamson's (1975: 20) dictum: 'In the beginning there were markets'. Indeed, the tendency of economics is to explain the absence of markets as in the case of public goods or externalities, or their failure, as in Williamson's (1975) explanation for the existence of firms as cases of market failure. The relationship between markets as institutions and exchange as events deserves further scrutiny.

In economics, the term 'institution' implies a structure that has become stable enough to influence and constrain behaviour. As North (1990: 3) put it: 'Institutions reduce uncertainty by providing a structure for everyday life'. Indeed, structures can be seen as enabling because they constrain: they allow actors to behave intelligently despite pervasive uncertainty (Loasby, 1999; North, 1990). Loasby (2000: 299) writes: 'Institutions are frictions which, like frictions in mechanical systems, by restricting movement may make controlled movement possible'. Institutions comprise a variety of elements in informal conventions and norms of behaviour to common and contract law (North, 1990). Some of these elements may be changed overnight (e.g. as a result of political or judicial decisions), whilst others may be rather more impervious to designed changes (e.g. behavioural norms).

The relationship between markets as loci of practices and institutional evolution



is crucial. As Loasby (1999: 120) remarks, a firm's market whilst drawing upon societal institutions, can be regarded as an institutional framework in its own right, which is primarily intended to support a continuous transactional capability, whilst the routines that constitute this framework, evolve through the sequence of transactions themselves. Economic evolution thus proceeds along the twin tracks of evolution within institutional frameworks and the evolution of institutional frameworks themselves (Loasby, 2000).

A degree of stability of institutional frameworks is crucial for the development of capabilities on the demand and supply side. The institutions of each market provide a stable framework within which variations on the supply side can be introduced and tested on the demand side, which include the indirect examination of buying decisions as well as direct interactions between buyers and suppliers, as is often the case in business markets. On the other side, the stability of market institutions allows customers to learn and develop their user capabilities, and generally find new ways of meeting their needs. A stable institutional framework acts as a (temporary) platform for establishing a connection between actions and outcomes, for reshaping supply and demand. In summary, a market is not just a locus where pre-defined supply and demand functions intersect within static institutional frameworks, but a setting where entanglements between demand and supply are continuously reshaped and, as a consequence, institutional frameworks redefined (Loasby, 2000). There is thus a recursive and co-evolutionary relationship between evolution within institutional frameworks and the evolution of institutional frameworks themselves.

The approach of Callon and associates reveals a tension between the formal aspects of market institutions and the notion of markets as a setting where suppliers and customers develop mutual understandings and develop their capabilities as a result of these interactions. On one hand, the emphasis on framing and markets as organized encounters of distributed calculative agencies highlight the stabilizing role of investments in rules and conventions such as property rights, as well as more durable assets such as the spaces and technologies involved in algorithmic configurations (Callon and Muniesa, 2005). On the other hand, notions such as the qualification of goods and making them calculable through objectification and singularization, hint at action and sets of practices with the potential to destabilize the encounters of distributed calculative agencies on which market exchange rests (Callon et al., 2002). As mentioned above, Callon and Muniesa (2005) regard these two aspects as compatible and co-occurring but without specifying how they interact.

The tension between markets as institutional frameworks and markets as loci of practices leads to another important question, namely the role of different bodies of expertise in the operation and evolution of markets. In Callon's terms, the processes of framing and setting up calculative agencies require particular types of expertise, namely law and accounting. The law plays a key role in establishing and policing trading relationships through regulation, such as the laws of theft and fraud as well as laws that protect private rights (Collins, 1999). Similarly, the emergence of processes of counting, control and calculation and the way they



evolved into highly institutionalized forms have been explored by Miller (2001) and Power (2004), amongst others. As Miller (2001: 394) remarks: 'It is through the calculative practices of accountancy that the disparate ways of producing and providing goods are made visible in economic terms'. Law and accounting can be regarded as playing an infrastructural and totalizing role in the construction of markets by providing solid institutional frameworks for exchange. The role of marketing has, however, been less explored (cf. Kjellberg and Helgesson, 2006, 2007) and it is to this task that we now turn.

## Marketing and the construction of markets

For Callon (1998a, 1998b) and Cochoy (1998) the role of marketing in the construction of markets is essentially performative. Callon's emphasis on the role of expert discourses in performing and formatting the phenomena they purport to describe, leads him to turn Granovetter's embeddedness argument on its head. Rather than seeing the economy as embedded in society, we have the economy embedded in economics, broadly understood as all the activities involved in analysing and intervening in markets (Callon, 2005).

Callon (1998a: 22) used a strawberry auction as an example of the power of neo-classical economics to perform a market in its own image.

The conclusion that can be drawn is very simple and yet fundamental; yes, *homo economicus* does exist, but it is not an a-historical reality; he does not describe the nature the hidden nature of the human being. He is the result of a process of configuration, and the history of the strawberry market shows how this framing takes place. Of course, it mobilizes material and metrological investments, property rights and money, but *we should not forget the essential contribution of economics in performing the economy.* [emphasis added]

The notion of performativity goes beyond issues such as how theoretical frameworks slip into lay actors' language and behavioural assumptions (e.g. Ferraro et al., 2005) to the heart of the relationship between theories and practice. Cochoy (2005) and Osborne and Rose (1999) describe how the figures of 'customer' and 'public opinion' have been constructed. Cochoy (2005) shows how the notion of a 'customer' has mutated over time. For example, industrial customers have under the aegis of national and international standards such as ISO 9000, become 'quality customers', auditors of quality in their suppliers' operations and customers of pre-qualified suppliers.

Osborne and Rose (1999) examine how the notion of 'public opinion' was progressively constructed through a series of tools and methods aimed at extracting opinions from representative samples of populations through questionnaire surveys. The techniques employed by pollsters and market researchers were based on the same principles and benefited from each others' experience. Phenomena such as 'public opinion' and the 'customer' are products of the techniques, tools and bodies of knowledge that are mobilized to capture and influence them. Over time, people learn how to cooperate in the creation of these phenomena; they become willing subjects of market researchers and pollsters, keen to portray them-





selves as the 'informed consumers' and 'opinioned citizens' they understand is expected of them.

MacKenzie (2004) distinguishes between two types of performativity. A generic notion of performativity emphasizes that social categories are not natural or self-sustaining but enacted by a variety of performances and artefacts, such as the calculating agencies highlighted by Callon and Muniesa (2005). A second and narrower form of performativity which MacKenzie (2004: 305) calls Austinian performativity (after Austin, 1962), designates 'utterances that makes themselves true' by bringing into being the subject of the utterance.

The notion of performativity has been adopted by sociologists, in particular those who have studied the operation of financial markets (Knorr-Cetina and Bruegger, 2002; MacKenzie, 2001, 2003, 2004; MacKenzie and Millo, 2003) following earlier studies of the social structures of market traders (Abolafia, 1996). The performativity of economics is clear in markets that have either been designed according to neoclassical precepts such as auction markets, or markets where theoretically-derived formulae, such as the Black-Scholes-Merton option pricing model, are incorporated into the behaviour of actors (MacKenzie and Millo, 2003). These cases are close to the Austinian performativity ideal although it is tempting to recall Joan Robinson's (1966: 308) quip: 'After putting the rabbit in the hat in full view of the audience it does not seem necessary to make so much fuss about drawing it out again.'

However, the construction of other market forms requires more distributed and heterogeneous sets of practices and bodies of expertise. As MacKenzie (2004: 305) argues, examples of generic performativity are common and intuitive but nevertheless poorly understood.

The role of marketing practices in performing markets is one such neglected example of generic performativity. Cochoy (1998: 195) portrays marketing's role as central to market economies: 'Halfway between producers and consumers, halfway between economics and managerial practices, marketing specialists have gradually reinvented the fundamental actors and processes; they have succeeded in disciplining (mastering/codifying) the market economy.'

Cochoy (1998) describes this evolution in terms of marketing having to leave economics behind in order to perform the economy. In doing so, marketing ended up borrowing conceptual and methodological tools from a number of bodies of expertise in its quest to perform marketing management. The performances of marketing are, as Cochoy (1998) admits, hard to fathom and measure empirically. This elusiveness is attributed by Cochoy to the distinctive character of performative sciences, or sciences that arise in and through practice.

The argument developed in this section is that marketing as a practice is deeply rooted in specific market contexts, spatially distributed, and dependent on complex forms of coordination amongst different actors and heterogeneous bodies of expertise. For example, Miller and Rose's (1997) study of how the post-war consumer was constructed in Britain highlights this facet of marketing practice. Making up the consumer turned out to be the mobilization of psychological bodies of expertise (e.g. psychoanalysis) to map the needs of consumers, linking



those needs with specific products and linking products with their context of usage. In particular, through the application of psychological expertise, the notion of consumer choice was placed in a broader context of subjective meanings and lifestyles rather than linked to the physical attributes and functions of products. As Miller and Rose (1997: 30) note, the application of these bodies of expertise fell short of providing a full theory of consumer choice. However, their power and usefulness to manufacturers and their allies, namely advertisers, stemmed from their ability to render the process of choice intelligible in terms of the make-up of psychological factors affecting choice and the potential to influence the process at different stages.

Callon et al. (2002) see the work of qualifying of goods at the heart of market processes. Markets are continuously being made and remade as a result of the processes of singularization of goods as well as the construction of spaces of similarity where goods can be compared. Marketing agents are deeply involved in these processes of qualification and requalification. Existing market structures and qualification processes serve both as a constraint and as resource for new attempts at requalification and restructuring of markets (Callon et al., 2002: 201).

Consumers are caught in this dynamic and continuous process of qualification and requalification, either sticking to existing routines and attachments or engaging with the efforts at requalification (Callon et al., 2002). Attached consumers accept the *status quo* and are driven by their routine choices supported by the existing apparatus of qualification (e.g. category definitions as embodied in shelf positioning), whereas consumers captured by the process of requalification are willing to re-evaluate their routines, the qualities of products, as well as the systems of classifications of goods.

According to Callon and Muniesa (2005: 1245), because of its obsession with singularization, mass retail provides a primary site to study the collective work undertaken by marketing professionals. Latour (2005: 209–10) describes the mass retail scene in typically vivid tones:

A supermarket . . . has preformatted you to be a consumer, but only a generic one. To transform yourself into an active and understanding consumer, you also need to be equipped with an ability to *calculate* and *choose*. . . Even when one has to make the mundane decision about which kind of slice of ham to choose, you benefit from dozens of measurement instruments that equip you to become a consumer – from labels, trademarks, barcodes, weights and measurement chains, indexes, prices, consumer journals, conversations with fellow shoppers, advertisements and so on. The crucial point is that you are sustaining this mental and cognitive competence as long as you *subscribe* to this equipment. You don't carry it with you: it is not your own property. [emphasis in original]

Barrey et al. (2000) shed further light on how this scene is configured and formatted. Product designers, packaging designers and merchandisers all contribute to configure the choice of consumers, drawing on different representations of that consumer and the different phases of the buying process. The product designer looks at the aesthetic and functional elements and works at the interface between production, the purchasing environment and usage of the product. The packaging designer is concerned with the projection of the intrinsic characteristics



of the product and facilitating choice when consumers face the product in the shopping environment. On the other hand, the merchandiser is not directly concerned with the product but with the configuration of the space in which consumer choices are made, both in terms of the overall layout of the space as well as the allocation of shelf space and product 'facings'.

All these different professionals' interfaces with the consumer are mediated by their common client, the retailer acting as a spokesperson for the final consumer. The client, in turn, interfaces with these different professionals at different levels and with its own set of specialists – e.g. specialist buyers, product or category managers, store managers. In summary, the consumer no longer appears as a singular entity modelled by a single unified logic, but as a multi-faceted entity modelled according to a variety of criteria not easily amenable to a single set of calculations. As Barrey et al. (2000) remark, the coordination amongst these professionals poses a number of problems. For example, product and package designers have a common focus on the product, follow the same educational and professional routes, and often work in the same agencies. A merchandiser by contrast has a different focus (e.g. shopping floor space), works according to different performance criteria (e.g. revenue per square meter, stock turnover) and looks at the allocation of space for different categories of products rather than single products.

The coordination amongst these professionals is thus sequential (e.g. packaging is defined before merchandising), spatially dispersed (e.g. the same product and package is spread over multiple points of sale) and asymmetric in terms of the distance each specialism faces from consumers and their purchasing environments. Thus product designers and packagers have to anticipate from a distance not just how consumers look at and eventually use products, but also at the actions of retailers and rivals. The conclusion of Barrey et al.'s (2000) study is that marketing in the context of mass retail is a highly distributed, heterogeneous and loosely coordinated set of tasks.

In the marketing process there is no powerful 'centre of calculation' (Latour, 1987) mobilizing all these different activities in a strong and well-aligned network. All these activities configure consumer choices and help format the market (Cochoy, 1998), but they neither ensnare the consumer in a particularly tight web nor can they be easily understood as examples of aligned calculative agencies.

In addition, these attempts at governing demand and manipulating consumers have a double-edge, as Barrey et al. (2000) recognize. First, professionals deploy a variety of methods and tools hoping to manipulate choices and configure the consumer. Some of these methods have roots in the social sciences (e.g. psychology of choice), whilst others are closer to practice and idiosyncratic experience. Second, consumers are adept at manipulating objects and symbols, and can frame choices in a variety of ways. In some cases, consumers are happy to choose within the parameters that marketing professionals have configured for them, whilst in other cases they can break out of these entanglements and mobilize resources that help them subvert these frames (e.g. consumer reports, product guides).

A major implication of Barrey et al.'s (2000) study is that the activities and specialisms involved in formatting markets are likely to vary across different types



of markets (e.g. packaged goods, services). We should therefore speak of 'markets' and 'marketing practices' in the plural. As Barrey et al. (2000) demonstrated, the very notion of 'consumer' varies according to different specialisms operating in the same market and will vary across different market contexts. Marketing activities are thus likely to cohere into different configurations for different markets, as Easton (2000) highlighted, even if they draw on similar bodies of expertise. In the next section we will discuss in more detail the role of marketing practice in the formation and operation of the calculative agencies at the heart of market processes, according to Callon and associates.

## **Marketing, calculation and 'qualculation'**

For Callon and Muniesa (2005) markets involve a large number of calculative agencies involved in activities such as design, production, marketing, purchasing and consumption. These agencies are equipped with different sets of tools and capabilities and they can compete, cooperate or simply be unconnected from each other. In addition, the calculative power of each agency is likely to be heterogeneous. In the example of mass retail pursued by Barrey et al. (2000), the individual consumer enters a scene that has been choreographed by an alliance of professionals that have examined every detail of the buying process.

In this example, it is also clear that the power of calculative agencies on the supply side is unequally distributed. For example, retailers and manufacturers mobilize different calculative agencies drawing on different sets of data (e.g. panel, store check-out and geomarketing data) to represent demand (e.g. market segments). The structure of markets can be regarded as a sort of a collective investment embodying both competitive efforts at the re-qualification of goods, but also stabilization at the level of market measurements (e.g. market shares), conventions about cognitive representations and buying routines, layout of categories in supermarket shelves, and so on. Periodic reviews provide opportunities to reassess market definitions, patterns of substitution and complementarity amongst different categories of goods, introduce new performance metrics, propose new physical layout of stores, the repositioning of brands, etc.

In other markets, the calculative agencies on the demand side are better equipped and, at times, more powerful than the supply side. For example, in business markets, purchasing professionals are equipped with their own calculation agencies focusing on pre-qualification of suppliers (e.g. quality certificates), selection processes using a variety of criteria (e.g. life-cycle cost of ownership) as well as a formal supplier performance evaluation metrics (e.g. product and delivery assessment) (Gadde and Håkansson, 2001). In more complex buyer-supplier relationships, multiple calculative agencies associated with different forms of expertise (e.g. product design, logistics) can feature on both sides of the dyad.

In summary, different types of markets will differ in the specific configurations of calculative agencies mobilized and the distribution of power amongst these agencies. But, from a marketing perspective, a focus on calculation alone presents



a partial and incomplete picture. Power (2004) notes that calculation relies on the measurement systems enabled by calibration, or the creation and determination of quanta. In turn, the creation of quanta is a special case of metrology, which requires technical instruments to make phenomena standardized and measurable. This requires the establishment of frames, decontextualizing objects, grouping and comparing them in the same frame.

But as Cochoy (2002: 207) highlights, calculation is not always possible, leaving room for other types of rationality, namely the exercise of qualitative judgement. Cochoy (2002) coined the term 'qualculation' to denote this exercise of qualitative judgement and elaborates on the link between calculation and qualculation. Calculation and qualculation are seen as two sides of the economic rationality coin. There is no discontinuity or break between the two – there is no possible calculation without designating and classifying objects within frames. There is thus a recursive relationship between the two: there is no calculation without qualculation and new forms of qualculation, if successful, can destabilize existing forms of calculation and usher in new ones.

Marketing operates within institutionally and spatially distributed sites which generate a number of coordination problems. Marketing expertise is often distributed across different actors (e.g. manufacturers, specialized agencies, retailers) and it relies on partial and often conflicting representations of the same entities (e.g. products, consumers). In addition, marketing often requires the set-up of coordinated assemblages of activities that are hard to align and stabilize. Rather than one powerful 'centre of calculation' around which an aligned network can emerge, we have cooperation as well as competition as rivalrous networks attempt to destabilize and redefine each other's qualculations and calculations.

The role of marketing in creating and sustaining markets becomes clearer if we take into account qualculation as well as calculation. Marketing is implicated in institutionalizing forms of qualculation and calculation (e.g. tools for defining and collecting information on markets) as well as continuously attempting to reshape existing arrangements (e.g. goods are redefined and repositioned). This generative shuffling between calculation and qualculation turns the market into a perennially unstable and dynamic space and hints at the dual role of marketing in the making and using of markets.

In short, marketing practices have a dual character. On one hand, they can only take shape and produce results if they can rely on a degree of stability of institutional frameworks and calculating agencies. On the other hand, marketing actions generate new forms of qualculation and requalification of goods which destabilize existing institutional frameworks and established modes of calculation. In this sense, marketing is both parasitic on existing institutional forms and routines as well as a source of variation and novelty, relying on imagination and entrepreneurship rather than simply searching for more efficient ways to connect supply and demand.



## Conclusions

The starting point of this article was that the construction of markets requires the mobilization of a variety of bodies of expertise, from law to economics, accounting and marketing. From a definition of market exchange as comprising the exchange of products and/or services for money as well as the exchange of property rights, we reached the conclusion that the construction of markets requires activities that disentangle exchanges from their context (i.e. that make goods calculable and alienable) as well as activities that embed exchange in a specific context (e.g. relate product design to usage context). It is this paradoxical nature of market exchange that allows it to be framed as an instantaneous act, as Callon (1998a) argues, as well as a recurrent activity that is deeply entangled in processes of production and consumption, as Miller (2002) counterposes. As Callon and Muniesa (2005) remarked, there is no fundamental opposition between the practices that produce entanglements and the disentanglement required by market exchange.

As we have argued, the construction and operation of markets relies on a series of heterogeneous and distributed set of expert contributions. Law makes an important contribution in terms of providing the regulatory framework under which property rights, contracts and so on, can be exchanged and third party enforcement of rules sustained. Accounting provides the calculating agencies that allow market actors to use money as a medium of exchange, determine costs and prices, undertake investments and so on.

Marketing's contribution to market-making, as we have argued, is more elusive, multifaceted and indeterminate in its consequences than other specialisms. It has a less obvious structuring character, is more distributed over time and space, and dependent on a hybrid mix of knowledge derived from social science disciplines as well as tacit, practical knowledge on the workings of particular market forms. Rather than assume that some specialisms play a role in stabilizing market institutions, whilst marketing is merely concerned with the operation of existing markets, we argued for a recursive and co-evolutionary relationship between institutional frameworks and the entanglements produced when demand and supply meet. Marketing contributes to the reproduction and transformation of market structures. It relies on existing calculative agencies to produce destabilizing calculations, which in turn, require new forms of calculation and so on. In so doing, it draws but also produces new demands on the more infrastructural and totalizing contributions of other specialisms (e.g. new forms of regulation and calculation, new performance metrics).

Last but not least, we argued that different market forms rely on different calculative agencies, modes of calculation and assemblages of expertise. Whereas market forms such as mass retail rely on powerful assemblages of expertise on the supply side mobilizing a wide array of calculative agencies, other market forms such as business markets will normally feature a more balanced set of calculative agencies on each side of the dyad and a more seamless link between production, exchange and consumption. The implication of this perspective is that we need a



better understanding of how marketing contributes to the creation and operation of markets, as well as how different assemblages of marketing expertise cohere to help perform particular market forms. Rather than assume that marketing operates in pre-defined markets, we need to see market processes as the (partial) outcome of particular constellations of marketing practices and mobilization of heterogeneous expertise.

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## Notes

1. A quick trawl through the Social Sciences Citation Index (performed in August 2006) identified over 180 citations to Callon's (1998a) edited volume, *The Laws of the Markets*, but not a single one could be identified in a recognized marketing journal. See also Kjellberg and Helgesson's (2007) contribution in this journal.
2. Callon (1998a: 51) writes:

Whether we choose to enhance the economic theory of the agent or to denounce it, in both cases, we formulate the same critique: *homo economicus* is pure fiction. . . . Yes, *homo economicus* really does exist. Of course, he exists in the form of many species and his lineage is multiple and ramified. But if he exists he is not obviously found in a natural state – that expression has little meaning.
3. The primary focus of the article is on marketing practices performed in markets. Needless to say, marketing practices do not have to be located in markets – see e.g. Kotler and Levy's (1969) broadened concept of marketing.
4. Although Callon's inspiration is Goffman (1974), Abbott (1995: 872) looks at boundaries and entities in a way that is reminiscent of Callon's frames and overflows:

the emergence of an entity is the assemblage of various sites of differences . . . into a set of boundaries in the topologically strict sense, boundaries that define an inside and an outside. But the work of creating an entity has the ability to endure, as a persistent thing, in the various ecologies in which it is located.

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