# The making of a petrol station and the "on-the-move consumer": classification devices and the shaping of markets

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**Abstract**

This paper addresses the issue of classification devices and their role in the shaping of markets. We depart from the notion that markets are shaped by multiple calculative agencies and examine how particular forms of calculation are made viable and sustainable. Classification devices, we argue, are the infrastructure that makes calculation possible and sustain particular forms of economic ordering. We illustrate these notions with an empirical, longitudinal study of a fuel retail company and its initiative to re-classify its network of petrol stations across Europe. Our study focuses on the extensive and protracted negotiations over what constitutes appropriate or relevant categories and the multiple perspectives that can be employed to define petrol station types. We illustrate how a store typology plays an important role in making assemblages of ideas (e.g. consumer-on-the-go), objects (e.g. store planograms), and managerial roles (e.g. category managers) coalesce around particular constellations of practices and impact upon the outline of markets.

## *1. Introduction*

The topic of this paper follows in the wake of recent work within the fledgling IMP Market Studies tradition that has attempted to connect the "markets-as-networks" approach to the new economic sociology inspired by science and technology studies (Mattsson, 2003). An important development in this emerging tradition has focused on how markets are performed and shaped by multiple calculative agencies (Callon and Muniesa, 2005; Kjellberg and Helgesson, 2006). More recent contributions, have studied how economic entities become calculable through particular market devices and economic agencies are constituted - "An economic *agencement* is, in the broadest sense, one that renders things, behaviours and processes economic" (Muniesa et al, 2007: 3). From this perspective, the role of marketing is performative – i.e. engaged in the production of the very phenomena it purportedly describes. Market practices bring together a variety of market actors acting in accordance with different market representations and engaging in divergent market practices, each trying to shape the market in a different fashion (Araujo, 2007; Azimont and Araujo, 2007).

Coming from a different tradition, though equally concerned with practice, Bowker and Star (2000) suggest that rather than looking at the ways theories help shape their objects of study (e.g. how economics shapes the economy), we should study the ways through which classification devices help construct social orders. Bowker and Star study how classification systems shape and commodify categories. They observe that classification systems work as a political force; they provide an organising method for complex bureaucracies. Their aim is to systematically address the pragmatics of the invisible forces of categories and standards in the modern world. The key argument is that classification devices constitute a boundary infrastructure, a system of mediation that enables cooperation amongst different social forces.

Philosophers and statisticians have produced highly formal discussions of classification theory but few empirical studies, Bowker and Star (2000) suggest, have examined their use or impact. One recent exception is Sjögren and Helgesson (2007), who argue that classification devices play a central role in performing markets. Their study of the medical and pharmaceutical classification is seen as a device that allows the linking of health care provision to economic value.

Our paper proposes an in-depth analysis of the discussions that occurred within a fuel retail company to define an economic object that we call the "petrol station". Using a methodology loosely based on Latour (1987) that consists in following controversies in networks, we study the various classification devices that compete to define, and provisionally stabilize the functions and the product categories that the focal company proposes to its customers. This type of device is seen as central to calculativeness and the qualification of objects.

Becker (1996: 55) articulates a useful view regarding the difference between epistemology, an enterprise devoted to deciding what should count as science, and the sociology of science: "The sociology of science, the empirical descendant of epistemology, gives up trying to decide what should and shouldn't count as science, and tells what people who claim to do science do, how the term is fought over, and what the people who win the right to use can get away with (Latour, 1987)". In a similar vein, we should give up trying to find an answer as to what markets should look like based on abstract templates (e.g. a perfectly competitive market). Instead, we should try to understand what practices make up markets and how the term market is fought over by those who claim expertise in managing markets. To paraphrase Boyer (1997), we are interested in "really existing markets" rather than the market as a theoretical abstraction. Our approach tries to follow how different versions of the petrol station can compete, and, through this ongoing controversy, create multiple versions of what we call the "on-the-move consumer".

The paper is structured as follows: in the two first sections we review the latest contributions to the literature on calculative practices and classification devices, in the field of marketing and the sociology of commensuration. In the next section, we briefly describe our project and the methodology of our study before proceeding to present our empirical data. Finally, we conclude with reflections on the key theoretical issues that emerge from our empirical study.

## 2. *Making market shaping intelligible*

The study markets is a major challenge for actor-network theory (ANT), as Callon (1999) suggests, particularly if one considers neoclassical economics as the standard. Economics assumes that goods are inert, passive and classified as non-human, whereas economic agents are regarded as competent decision-makers, equipped to choose between

alternatives in a way that maximizes their utility. The two, goods and agents, are strictly separate.

For neoclassical economics, the economy is everywhere and individual action through instrumental rationality is economizing behaviour *per se*. Calculativeness is regarded as a hard-wired attribute of individual agents rather than a practice to which agents need socializing into (Finch, 2007). Williamson (1993: 456) frames the importance of this view in a typically assertive tone: "Calculativeness is the general condition that I associate with the economic approach and with the progressive extension of economics into the related social sciences".

For Callon (1999), the market seems to undermine ANT's core tenets since everything is determined a priori and the roles of agents and goods are perfectly defined and strictly separate. ANT, by contrast, was conceived to deal with situations where it is difficult to separate human and non-human actors and agencies assume a variety of forms and are constantly being questioned and reconfigured. The key challenge for ANT, still according to Callon, is to study under what conditions calculativeness is possible and how do calculative agencies emerge.

Following Miller and Rose's (1990) work on governmentality, influenced by the seminal ideas of Foucault, the relationship between economic sciences and markets have led Callon and Caliskan (2008) to coin the expression "economization", or the "…process of constitution of the behaviours, organizations, institutions, and more generally, objects, which, in a particular society, are tentatively and often controversially qualified by scholars and / or lay people as economic" (*op. cit*.: 2). The idea of economization reflects a perspective where the economy is seen as an achievement and outcome of various performative actions. Within this large process of economization, one particular area of research studies the establishment of economic markets, through socio technical *agencements* (Muniesa et al, 2007).

An important development in this emerging tradition has focused on how markets are performed and shaped by multiple calculative agencies through various market devices (Callon and Muniesa, 2005; Kjellberg and Helgesson, 2006). The term device was proposed by Michel Foucault (1994: 299) to define "…the network one can trace between heterogeneous elements including discourse, institutions, architectural arrangements, laws, administrative measures, scientific statements, philosophical and moral statements, in short: explicit as well as tacit elements". With the notion of device, Foucault has highlighted the necessary role of heterogeneous networks in the production of knowledge, power relations, subjectivities and objectivities.

Following a similar perspective, a market can be described as a socio-technical *agencement* that combines discursive and material activities, heterogeneous elements such as technical devices, metrological systems, scientific and technical knowledge, etc (Muniesa et al, 2007). Studying marketisation as one particular instance of economization means describing, analyzing and making intelligible the shaping and dynamics of the sociotechnical *agencements* that make up markets. In turn, shaping markets means acting upon assemblages which are interpreted as economic and produce a particular version of a market, including the material devices that impart a degree of stability to the overall construction. Among the devices that contribute to the shaping of markets, processes of calculations are worth of study as they are necessarily involved in setting up valuation networks.

## 2. *Calculative agency and classification processes*

Calculability, in Callon's (1999) terms, designates the processes which make possible the assignment of numbers (such as prices or rankings) to entities, an assignment which, in turn, endows these entities with relative stability and makes possible their circulation throughout society. It is a process of making things equivalent or commensuration (Espeland and Stevens, 1998). Central to this endeavour, the notion of qualification suggests that agents have to agree on the quality of things and to transform different qualities into a single metric. The notion of qualification, from the sociology of labour, was tied to collective agreements that defined attributes to be ranked and weighted in order to build an appropriate fit between a job, a worker, and a salary. Theorizing qualification involved a dialectical movement between constructing a person's qualifications and qualifying a job, as the sociologists of professions suggest (Abbott, 1988).

A French labour economist, Eymard-Duvernay (1986), transposed the idea of quality into the study of product markets. For Eymard-Duvernay, to qualify is to establish equivalencies. In economic theory, price is often seen as the universal measure of equivalence but the approach does not need to be restricted to prices alone. Markets for goods may be segmented by differentiating between several qualities of products that break the homogeneity, limit interchangeability and create economic niches. Karpik's (1989) "economics of quality" is a concept that contributed to blur the boundaries between sociology and economics by linking together collective arrangements and social mechanism of production, intermediation and exchange which standard economics had worked hard to dissociate. Karpik's purpose was to provide an explanation as to why a monopolistic profession (lawyers) failed to take advantage of their strong position vis-à-vis

their less informed clients, by charging exorbitantly high fees for their services. The answer lies in the collective agreements that provide clients with a degree of protection against possible abuses of their disadvantage position in this exchange. The notion of "economics of quality" provided a theoretical link between qualification and socio-technical networks (Cochoy and Dubuisson, 2000; Callon et al, 2002).

Calculative practices make the economy visible and measurable *qua* economy. It is important to examine their emergence, and the ways in which new calculative practices alter the capacities of agents, organizations and the connections among them (Miller, 2001). Cochoy (2002), stresses that calculations draw on both qualitative and quantitative components, hence the reference to hybrid spaces of *qualculation*. Defining the quality of things is integral to the idea that things can be calculated. All measurement systems are made possible by calibration, understood as the creation and determination of quanta (Power,2004). 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, the decontextualisation of objects, and the grouping and comparing of objects in the same frame. Once quanta are established, they can be subject to further calculative operations. In other words, measurement is based on classification systems that ignore purportedly irrelevant differences and reduce complexity. Once accepted, such systems appear natural and incontestable (Bowker and Star, 2000).

The idea that categories have powerful framing consequences has been recognized in the field of statistics. Desrosières (2003) argues that classification devices structure their environment by imposing categories and therefore framing the issues under discussion. The definition of an index, for example, is not neutral. The economists and statisticians who designed GDP as measures of the economy were well aware that some questionable choices were built into them. He demonstrates how the idea of domestic work was kept to the margin and a decision was made to keep it out of the measurement of the GDP, despite intense controversies. The measurement of the national income and the development of an international system of public accounts emerged at the same time, contributing for a better visibility of this area of public policy. In short, for an agent to be able to calculate, (s)he must be equipped with classification instruments that will produce representations which are specific to a certain issue.

The definition of the quality of things, also called "first order measurement" by accountants relates to the institutions of classification that make counting possible (Vollmer, 2007). This phase witnesses extensive negotiation over categories of similarity and relevance, which translate qualities into quanta. Once the quality of things are agreed upon, a second order measurement or meta measurement can be undertaken as the further aggregation of

numbers and a further creation, via statistical and mathematical operations, of ratios and indices. As second order measures are normalized, they become cut-off from their original imperfect databases, they travel and are mobilized in unqualified form, constituting techniques of long distance control between remote centres of calculation (Latour, 1987 ) and the basis for interventions (Hacking, 1983).

Economists have generally be willing to assume that firms, under the discipline of economic competition, behave rationally, and they have not cared to examine the forms of corporate organization, tools and instruments involved in various forms of calculation (Porter, 2008). A practice-based approach to market seeks to understand how calculation is made possible, and in particular, how the categories that make calculation viable and durable are possible.

*3. Empirical Study*

As part of a larger research project, we are trying to capture the various practices involved in the shaping of markets. In previous publications, we have stressed how encounters between suppliers and retailers shape the representation of a particular product market be within the global petrol retail market (Azimont and Araujo, 2007). We have also studied how the changes in performance metrics and systems of measurement, led category managers to push certain products at the expense of others, with attendant consequences on the shape of particular product-markets. (Azimont and Araujo, 2008).

To complement these two studies, this paper tries to capture the dynamic of classifications as a market device by trying to understand the work of making, maintaining and evaluating classification systems. The role of a classification system is here understood as a matter of defining categories, defining the rules to allocate one individual items to categories and then doing something with the classification. The questions that we are trying to address in this paper are as follows: how is classification work done to define what counts as a petrol station? Who does that work? What work do classifications and standards do in the shaping of markets? This categorical work, we contend, is an essential element of the processes of making markets. It is based on a rhetoric were the customer is on centre stage but it is equally a matter of organization and job qualification. The category "petrol station" is, in the case that we are now going to introduce, the emerging result of series of political negotiations rather than a taken-for-granted entity.

*4. Method*

The empirical study focuses on a fuel retailer's organization, labelled BEST to preserve anonymity, which in the course of the calendar year 2003 moved from a product to a category management structure. This move was accompanied by a total change in responsibilities, work processes, as well as performance indicators used by this set of professionals. The empirical material presented in this paper is based on what happened in the marketing department to organize the work of category managers and to structure the representations of what the network of fuel station looked like. We used Latour's (2005) injunction to follow the actors and artefacts to structure our data collection and analysis. The first author sat through and analysed the meetings where the marketers of the focal petrol retailer, involved in the various countries where the company has a presence (called here Rapland, Discoland, Rockland and Groveland) discuss the issues related to the categorization of their retail stores. We were primarily concerned with understanding the

logic used by managers to come up with clustering stores into particular types that they had thus far been classified simply as "petrol stations".

The first author acted as an observer, following a period of involvement with the organisation as a researcher, trainer and consultant. The role adopted was that of observer-as participant (Ackroyd and Hughes 1992: 135). In management research this strategy has been mainly employed in longitudinal studies of organizations (Kunda, 1992; Watson, 1994) or projects (Gersick, 1989).The major argument for the use of participant observation methods is that it facilitates an insider's perspective in naturally occurring phenomena in a particular organizational or social setting. One obvious difficulty in this research strategy is balancing the role of researcher and participant.
The researcher had previously developed contacts and relationships with key individuals in the focal retailer as part of a broader longitudinal study centred on category management over a 4 year period, from 2002 to 2006. This research project relied on a continuous involvement with the fuel retailer and relied on a variety of data collection mechanisms, including interviews, field observations and action research initiatives such as training seminars. The involvement with the company facilitated access to the empirical material used in this study: company documents, Excel spreadsheets and database requests used by the managers when analysing the performance of products and suppliers.

*5. Creating a store typology as a classification device*

The role and features of petrol stations have changed enormously over the last three decades. In the early days, forecourts were primarily seen as the site where vehicles were refuelled and maintained. The development of forecourts as separate entities from automobile garages made fuel delivery central to the concept of petrol stations. Progressively, products such as confectionary and drinks were offered to drivers at the moment of paying for fuel. The petrol station was primarily a fuel delivery area with a kiosk attached. The offer of non-fuel items expanded from the payment zone to the full area of the outlet. In the late 1990s, when it was discovered that store sales generated a higher margin than fuel sales, the so-called "petrol stations" became points of sales designed to address the needs of motorists on the move. Offers targeting drivers' comfort became a major profit lever for fuel retailing companies. Car maintenance products, such as light bulbs or windscreen wipers became by the early 2000s, a very minor business. In fact, a limited range of essential spare parts remained in the assortment for regulatory reasons: forecourts were compelled to stock products required for cars to circulate safely.

Our case documents the way BEST, one of the leading player in the European fuel retail business, contributed to shape what is today a differentiated landscape of petrol stations. We focus on the way one specific shop concept (labelled CONCEPT) with an emphasis on the offering of fresh food was deployed throughout the European network, once a prototype of CONCEPT was tested in March 2003 in Discoland. The attempt to roll out this particular version of a petrol station was made difficult because of concurrent internal and external initiatives.

After the successful launch of CONCEPT in Discoland and the opening of two more stores in other European sites, a launch assessment meeting was organized in June 2003 by the retail directors. At this meeting, Mike, who led the deployment of category management at the European level, was entrusted with a new mission which he perceived as challenging. He was tasked with the roll out of CONCEPT throughout Europe. Though the first three sites to be refurbished in every country had already been determined during the generation of CONCEPT, further sites had yet to be identified. For this purpose, the head of retail in Europe requested that Mike should generate a detailed description of the European network - in other words, a database of all European sites with a comprehensive report on their level of equipment.

The networks in different countries were very disparate. There were virtually no two stores with the same area, or the same equipment in terms of say, shelves or chillers. That's why, Mike believed, drawing such a big picture would be useful for his own projects starting with the roll out of CONCEPT, and including the deployment of category management in each country. Mike framed the rationale for welcoming this assignment in the following terms:

"We should find a way to classify these stores with a system that moves away from an ownership principle. COCO (Company owned, company operated) and CODO (company owned, distributor operated) are certainly appropriate categories when the objective is to minimize fuel distribution costs. But if we want to enhance our leadership in Europe, we have to be consumer-oriented and understand what consumers expect from a station when they stop. From an efficiency perspective, once clusters will have been identified, we will simplify the work of our category managers who will no longer have to define an assortment or a planogram for each station but rather for each type". (Mike, Marketing director, CONCEPT launch assessment meeting, June 2003)

The category managers had discussed the relevance of CONCEPT positioning in 2002 and the debate had been closed, at Mike's request, by focusing on the pragmatic issues needed for its launch, in one test store: "here is the store that we want to refit", "please define the range of products that you want for this sales surface", "the collection should fit on 3 elements", "execute your planogram", "this need to be OK by March", etc. These were the indications given by Mike to the category managers included in the task force.

All these recommendations were relatively easy to implement because they applied to one location only. But as soon as the roll out to a much larger store base was considered, Mike anticipated all sorts of difficulties. The variety of sites could cause problems to the category managers because, he thought, they would have to duplicate their work to as many stores as you can get in one country, unless we would agree very quickly on a typology of stores. Based on this preliminary work, many processes would be eased for the category managers, but also for everyone who would need to roll out a project, or rationalize a network:

"If we want to be able to set priorities easily, we need a precise picture of the network. We then will be able to decide which station should be positioned with CONCEPT, first. And by the way, the same applies to the selection of a site for a restaurant concept, to car wash investments, or to any prioritization which may be needed. In relation to the job of the category managers, we need to understand what surface to dedicate to one product family. If we develop a typology based on consumer insights, this will give us a rationale to decide and explain why any product family is given this much amount of space." (Mike, Marketing Director, CONCEPT launch assessment meeting, June 2003)

To start with his new mission, Mike had in mind the key targets set by the company: reach a market share of 22% in Europe and generate an operating margin of 13 % with two essential assets, the number of stores and a reputable brand in some countries. Mike could have limited his task to the creation of a database listing physical attributes of the stations, such as the sales area, the fuel volume, the number of parking places, the turnover made by key product families, which were the criteria normally used to depict a network at BEST. But Mike wanted to push the description further by integrating a consumer perspective, as he explained to the first author in a private conversation:

"If we want to do a serious job, we have to put consumers at the core of our processes; we certainly need to understand how our clients perceive our stores. Our recommendations, consequently, will be stronger because of a real marketing perspective." (Mike, Marketing Director, CONCEPT launch assessment meeting, June 2003)

After having selected a market research agency to help him create a typology of retail stores, Mike instigated the creation of several focus groups sessions with consumers throughout Europe. To determine the sample, a simple description of the client structure was given to the agency. Roughly, clients were described around two main categories: those whom for transportation is a daily routine but not a job (e.g. daily trips to school or to the office, weekend trips) and professionals (e.g. truck drivers, sales representative, etc.). The time spent by passengers in their car everyday was also a factor taken into account. This reflected the idea that many people spend several hours a day in their car, even if

they are not professionals. For most of us, the vehicle was becoming a space of everyday life so that, Mike wrote in his brief to the agency, it might well have an impact on the way customers experience the stations.

The agency recommended organizing focus groups with private drivers and passengers as well as running interviews with truck drivers or sales reps in the premises of a station. At the focus groups, organized in September 2003, participants were invited to express why they usually stop at a petrol station. Based on those comments, a list of motivations was written on the flipchart by the agency's moderator. In the meantime, the agency's assistant searched for visuals to depict these motivations, on the Internet. The visualization of the products or the function that had to be delivered by a petrol station was then injected into the discussion. Cards, on which the functions were pictured, had to be grouped on larger boards and a name had to be given to the type which had been created. Using this method, six types were created.

In October 2003, a separate meeting was organized in Rockland to debrief the focus groups' results with the category managers who had contributed to the development of CONCEPT. The objective was to confront the types created through the focus groups sessions with the physical attributes in use to describe the stations. The complementarities of the two approaches would make the typology more robust, it was hoped. In the following subsections we describe the various types and the comments of the category managers.

*Motorway stations*

Motorways stations, consumers suggested, have to deliver the best environment for customers who want to take a break and have some rest. The facilities (toilets and rest areas), the services (ATMs, telephones, TVs, Wi-Fi environment) and food on the go (sandwiches, hot and cold beverages) are essential features. Consumers also proposed that an offer with regional products could be an interesting idea. What about non-food products, the moderator asked? They are interesting because the shopping trip through the store is a kind of distraction:

"While drinking a coffee or a hot soup, I like to circulate through the shop and look at what is displayed". (A consumer, focus group in Rapland, September 2003)

When this first type was presented to the category managers, a month later, they could easily translate it into technical features. They pictured a store with a size from 120 up to 250 m², an annual turnover of €2 million, and a minimum fuel sale of 1,200 cubic meters. The traditional motorway station had a minimum of 30 customer parking spaces, was opened 7

days per week, 24 hours per day and the range of product was between 2,000-2,500 products.

In Rapland, this type of store could well include 160 sites, but: "In the other countries, one would need to measure the numbers that fit into this type but it should be an easy task" (Uwe, category manager in Rapland, Rockland meeting, Oct 2003).

A very similar variant was described by the consumers that they called "main road stations". Located on major axis joining large cities, these stations play the same role than their cousins on the motorways: taking a break.

"When I stop for a break, on average I stop for 15 minutes, refill, go to the loo and get a coffee as well as a breath of fresh air." (A consumer, focus group, Rapland, Sept. 2003 )

In Rapland, they were probably another 160 stores that would fit with this description, which meant that this cluster would represent a category as large as the motorway stations. The logistic delivery patterns however, would have to be different from motorway stations. The suggestion was that: "Since the cluster is large enough, let's make it a different group" (Uwe, Category manager, Rockland typology meeting, Oct 2003).

*Truck Meeting points*

When discussing about the barriers for their stay in a station, some focus group participants mentioned that they don't like these stations where there are too many truckers. The vehicles occupy many parking places and, they thought, are too dangerous for the kids. In the store, truck drivers gather together to eat and drink and they can easily be noisy, which seemed to bother some people. Using these insights as a starting point, the moderator pushed the idea of creating a separate truck stop station. The proposed idea would need to be confronted and reworked with truck drivers themselves. The interviews carried out at the point of purchase showed that professional truck drivers primarily stop at a station because the shower facilities are convenient and clean, but also because they know that they can park easily, they can meet other truckers around an informal sit down economic meal, and they can watch TV for a while, particularly on days of important football matches.

Category managers added to this description, items which are useful for a comfortable journey: ATMs, money changing facilities, telephone, but also maps, truck and car accessories, and (why not) apparel. The technical and financial profile of this category of station would very similar to the motorway type. The key differentiating factor appeared to

be the showers which can hardly be profitable, and a restaurant. In some countries, because of specific agreements to get a license to open a store on the motorways, petrol stations are not allowed to serve sit down meals, but a bar option could be considered.

"The custom base of the truck stops is simply different from the rest of the motorway stations and seems to fit poorly with the profile of other travellers. Why not create a specific type which could well be appropriate for 30 to 50 units in each country?" (Geoff, category manager, Rockland typology meeting, Oct. 2003)

In the real world, this type already existed in three countries, although not in Rapland. The locations which could serve as truck meeting points would need to be identified. The factors to consider would include for example the selection of industrial regions, the identification of the main truck transportation lines, as well as the ideal distance between two stations. But all in all, this type made sense to the category managers.

*The commuters' stop*

Main circulation axes in and out of major cities, focus group participants wondered, should have their own place. In the morning, fresh coffee and pastries together with newspapers should be on display. The primary reason why people stop there at this specific moment of the day is, for the early birds, to have a breakfast before rushing to the office. In practical terms, this meant that a cosy coffee corner and fast lanes could be put in place. For the evening commuters, a similar idea would apply with an offer of wine, flowers, gifts and even ready-to-eat meals.

The category managers did easily see how this would work. However:

"The question is to know if we should have two types, a morning station and an evening station. Can we get the two ideas in the same store? Inward stations will have a nice breakfast business but exit stations will need to focus on other strong points." (Susie, category manager, Rockland typology meeting, Oct. 2003)

In terms of size, these stores would have a 40-75 m² sales area, deliver a minimum fuel sale of 600 cubic meters, be opened 7 days per week, 16 hours per day and have a minimum of three customer parking spaces.

"Yes indeed, we could imagine positioning these stores to help time-pressured people to start or end the day better with a specific focus on breakfast or take-away food and drink solutions. In Rapland, we could probably set up 35 stores of each subtype. Now, are we not creating too many clusters, which mean a multiplication of the ranges, of the planograms,

and certainly difficulties in implementing our marketing programmes through the district managers?" (Anna, category manager, Rockland typology meeting, Oct. 2003)

*Workplaces*

The first three proposals were obvious because they corresponded to concepts which were already in existence to a greater or lesser degree. The distinction between entry and exit axes though, was not articulated spontaneously by focus group participants. The workplace idea came from a lady who commented on the absence of corporate restaurant in her company. She explained why she escaped from the office during the lunch break. She would, for example, go to the bank or do some shopping during the lunchtime break. She liked to stop at the local station where the owner's wife prepared something fresh every day. Fresh coffee was also available, not machine coffee, she insisted.

This idea was, at first, puzzling to the category managers. The number one role of a workplace station, as described by this lady, would be a restaurant. She did not mention the need to refill at any time. What was of interest to her was the convenient location of the shop, which laid on the way from, or to the office, with a few parking spaces to stop for no more than 15 minutes. With a limited monthly fuel volume, the kind of store she was describing was rated by BEST as a problematic format. In fact, the company had to sell off some of this type of stores following a recent merger. Managers, at Rapland for example, were thinking of getting rid of this type of store altogether.

Category managers had no clear idea about the relevance of this type because they were hardly involved in the restaurant business and felt the company was not particularly good at creating restaurants. By comparison, a company like Auto Grill, the European leader, was seen as a real expert in this area. Still a quick calculation was made, based on the number of stations with a small restaurant that delivered daily meals. The calculation showed that workplaces stations could represent a very significant share of a network's profit.

"We can currently identify 40 stores with such a potential which, with the profile we know from the restaurant stations located on the main roads, could easily deliver 30% of our domestic profits." (André, category manager, Rockland typology meeting, Oct. 2003)

"This is right but we are no restaurant specialists. Can you seriously imagine developing this know-how without a partnership?" (Joe, category manager, Rockland typology meeting, Oct. 2003)

This option of a partnership was suddenly taken seriously.

"We are specialists of consumption on the go. To get to our places, drivers take their car, and we know their needs better than anyone else in the country. Why not think of our stores as a combination of modules? I wouldn't see a major issue in having a McDonald's restaurant in our stores. After all, young people meet up at our stations; buy Red Bull and cigarettes, before they move to a night club. In many cities, they show up to buy beer and sit in a park next to the station, the whole night through." (Jennifer, category manager, Rockland typology meeting, Oct. 2003)

A simple consumer story had sparked the imagination and the category managers' group was thinking that a particular type of petrol station could be profiled in a much sharper way than it was currently. The next type described by consumers generated a similar level of excitement.

*Convenience stores*

City petrol stations, in recent years, have been sold by the major fuel operators because they were too difficult to operate until someone noticed that they were systematically acquired by entrepreneurs in the bakery or food businesses. Thereafter, some of the players decided to make a convenient store out of these stations. After many tests at BEST, it was shown that with a minimum of 5 customer parking spaces, these stations could accept stores of more than 100 m² with a range of up to 2,500 product lines in a 150 m² space and an average turnover of € 61 K per year (83% being food sales). Consumers were using these outlets as proximity stores for top-up purchases on their way home.
For the category managers and for Mike, this cluster was precisely the one where CONCEPT would need to be rolled out. But in Rapland, a recent research carried out within a sample of stations proved that 40% of the customer base came to the store on foot and bought an average of 7 items per basket, out of which 2 were fresh food items. In other words:

"We play the role of a local grocery store. The size we are talking about is smaller than that of Aldi but our range is the double of Aldi's. Our prices are far more expensive but we deliver fruit and vegetables and have an offer of dairy products. I doubt we can be a serious player on the discount side but if we choose our location carefully, we could make a good business out of these stores, for example within large cities. Our opening hours would give us a real advantage." (Barbara, category manager, Rockland typology meeting, Oct. 2003)

Discussing how far BEST could go with the convenience store idea, category managers mentioned the organization of Rockland who had set up a partnership with a multi-format retailing company, TESCOUR. This partner had expertise in delivering fresh food to local proximity stores at a low cost because of the dense network of its TESCOUR Express shops. The deal was working well, as agreed by all, because the local category managers were

following the procedures given to them by the partner, a retail expert. But the comments mixed admiration for the partner's expertise with worries:

"It is as if our category managers would be the employees of this partner. They have the same computer interface, the same procedures, the same referential of products and suppliers, etc. We even wonder if the deal is not set to anticipate a future transaction with TESCOUR Express, a kind of merger before the acquisition!" (Geoff, category manager, Rockland typology meeting, Oct. 2003)

On one hand, it was clear that the "convenient store" cluster was the ideal one to roll out CONCEPT, but the discussion stressed that a partner may be needed to compete with hard discounters. A price premium of 15% was the maximum consumers would be ready to pay, commented some category managers.

"And to reach this price, not only do we need to have efficient logistics, which most of our wholesalers are unable to have in the fresh food category, but we need to have a volume which will enable us to get good prices. In that sense, we cannot afford to have too many clusters because this process creates too much diversity within a distribution channel which in itself is very small compared to the supermarket channel." (Ben, category manager, Rockland, typology meeting, Oct. 2003).

*Pop and Mum's petrol station*

Finally, focus group participants reminded the company that they should not forget the Pop and Mum's petrol stations, the tradition fuel stations attached to a garage or to a local car dealership. These stations, consumers commented:

"…are essential parts of the local life, particularly in rural area. This is the place where you can order fuel for the home central heater, this is where you like to go to service your car, but also get your lawn mower repaired, and this is where you fill up as well. Of course, prices are not the lowest but you want to contribute to the community and maintain a local activity in the village." (A consumer, focus group, Discoland, Sept. 2003)

A category manager had a quick reaction to this comment:

"And these are the stations where we lose all the money we want! We don't want to spend time on this cluster because we will never roll out CONCEPT there. We'd better put these stations on the write-off list. (Susie, category manager, Rockland typology meeting, Oct. 2003).

These stations, the category managers observed, should not be operated by BEST anymore, even if they fulfilled a need for consumers. So far, arrived with the help of focus

groups and category managers, Mike had settled on a qualitative description of seven distinct groups.

After the qualitative research, the agency ran a cluster analysis in November 2003. The method consisted of grouping, step by step, the types which had been defined qualitatively. Consumers were asked to get together the two groups they thought were the closest. From 7 groups, we now had 6. In the following run, they were asked to do the same until they put the last two groups together. This methodology resulted in a cluster structure that formed the basis for a typology. Finally, consumers were asked to name each of the categories generated by the cluster analysis.

At this stage, in December 2003, Mike and his task force team thought they had achieved something and done it in a rigorous fashion. The outcome, they thought, would be gain legitimacy because it had been constructed with consumers at the core of the process. An important issue was now to determine at what level to cut the typology tree. Different kinds of logic could be considered. From an operational perspective, the more junior the category managers are, the less complexity they could manage, which argued for a high level of standardisation. Officially, these category managers would be graded 7 according to BEST's occupational grading system. Furthermore, the low level of seniority would have a strong impact on the level of legitimacy and leadership potential of the category managers vis-à-vis field managers. Everything was pointing towards a simpler system with just a few types and a cut say, at the "three types" level including "rest areas", "essentials" and "Pop and Mum fuel stations".

From a strategic perspective, and given the ambition of BEST in terms of European market share, a finer classificatory system was required. A cut at just three types would suggest implementing CONCEPT among the "daily trips" kind of stores, and this would not be really appropriate. The operational consequences of these debates were obviously major.

"If we just consider the assortment issues, a "7 types cut" means 7 assortment structures with a very fine way to address the consumer needs but a tremendous amount of work. A "2 types cut" similarly means 2 assortment structures with much more standardization for the consumers but a very simplified process and a lighter work load. These considerations cannot be answered without considering the number of category managers, the type of information systems, etc. and of course, it has an impact on the organization of the networks, the organization of the field managers etc. All this is so complex. If you touch one subject, it impacts on so many others." (Mike, Marketing Director, Rapland typology meeting, Dec. 2003)

In this process of defining a typology, it slowly became clear that the discussions would oscillate between pure descriptions of the existing networks, with a mind to assign existing stores to types, and a creative process whereby potential new concepts could be created.

"In fact, we could operate our sites as BEST, the fuel distribution specialist, with a partner in the restaurant area, as well as a partner in the grocery business. Why not add a car wash specialist as well? In this configuration, I don't see what the job of a category manager will be! We'd better go and get a job at Tescour!" (Geoff, category manager, Rockland typology meeting, Oct. 2003)

From a mission designed to classify the stores with the wish to decide where CONCEPT would be rolled out, Mike was again and again exposed to the need to clarify what CONCEPT was about, but also what a petrol station would stand for. The further BEST was developing a retailer culture, as expected with the implementation of category management, the more it was getting closer to a pure retailer in terms of methods and processes, and the more the managers would see the gap in expertise between real retail operators and BEST. Two typical reactions from category managers ensued: a) why shouldn't BEST get into a partnership with a "real retailer" since they have the know-how, a "delegation" reaction; b) why should we be category managers at BEST rather than at say, TESCOUR? - the "employability" reaction.

Mike recalled meetings where the category managers complained because they could not employ their methods to the fullest since the positioning of the banner was unclear but in effect, the issues run deeper. Should we or should we not operate the activities ourselves, what are we after with CONCEPT, what is a petrol station for after all?

## 6. *Discussion*

Our case shows that an apparently mundane representation of a petrol station is the outcome of a long and often contested process of naturalisation. A petrol station is seen as site for delivering fuel but it could be otherwise. It could also deliver many other things, which possibly are much more important than fuel, as far as the profit margins of the company and the expectations of customers are concerned. The concept developed by BEST had to be rolled out throughout the network but this was no easy task. As far as superficial appearances are concerned, petrol retail stores are all the same. But we discover that in fact, no two stores are alike. As stressed by Bowker and Star (2000), classification systems are central to the management of a wide range of enterprises. In our case, this applied to one object that was totally naturalised, the petrol station, and which

fuel companies had kept stable for decades. The idea that one concept would need to be rolled out in the network run into instant difficulties due to the material weight of existing store formats. It is not so easy to change and refurbish a building equipped according to a particular vision of what a petrol station is for. The roll-out forced managers to engage in classificatory work which drove them to question and open the black boxes of existing categories.

The request of the senior management that the network should be described in detail showed that representations can serve many causes: the deployment of CONCEPT, but also issues related to the standardisation and productivity of category management and finally, more strategic decisions to maintain, change or dispose of particular types of stores. The categorisation process became a site of great debate and potential significance for the future of the company's retail network.

The way the typology was developed is an interesting dimension of this political contest. Because Mike was a marketing director, he strived to put the consumer at the core of the research process leading to the generation of a number of abstract petrol station types. This initiative demonstrated the role of a particular vision of what marketing is and how it should work, as well as what counts as legitimate managerial methods for marketers. Marketers represent the consumer voice inside the company and this voice should be firmly placed at the hub of decision-making processes. Orthodox marketing management and its prescriptions to segment, target and position, framed the way Mike decided to approach the whole issue of CONCEPT's roll-out. A model of the marketing process was put to practical use with the help of a market research agency, equipped with the appropriate methodologies to capture consumer voices and represent market demand.

However, Mike felt that unless he could link this first order measurement with representations category managers could recognise, consumer-based representations would have little value. Consumers were not the only voice involved in making shop clusters commensurable and standardised. Mike needed to enrol other allies as Latour (1987) would put it. But while doing this, Mike implicitly reckoned that consumer voices needed a link to the routine practices in use at the various marketing departments of the company's country-based subsidiaries. A logic meant to generate productivity through routinised activities in the creation of assortment or planograms was central in deciding on the number of clusters that could be addressed. The logic of productivity through standardization and routinisation of category management tasks became an essential parameter to decide at what level to cut the burgeoning segmentation tree produced by consumer voices.

While enrolling diverse allies, Mike was confronted with further alternative logics. Some managers wanted to maximize standardisation, leading to a high level of homogeneity in the network, and making the task of junior category managers easier. The core argument of this logic was based on the job grading of category managers, and the need to facilitate their work processes. This was one possible way of making the retail network economic. Classification devices are important in organizing this work. In our case, revisiting the shop categorisation was a vehicle for both professional and organizational transformation. It was a central instrument in the standardisation of the shops' management, which also meant that it creates a relationship between diverse elements such as information systems, work patterns and the rest of the organization.

But economization also meant finding the basis for a different valuation network based on leadership and differentiation. A particular set of managers wanted to create niches so that the company would be able to touch a larger variety of consumer expectations. This initiative enhanced the role and importance of the non-fuel managers, making them managers of more precise product categories. The clear differentiation of product families gave an opportunity for category managers to become experts and interlocutors of specialist suppliers, instead of managing a group of products and shop configurations. The building of differentiation gave these managers a stronger sense of identity which they felt was more highly valued. This shift opened up opportunities for the study of consumer "needs" and listening to consumer voices. And the enhanced role of the business within the company gave more prominence to managers with a general retail profile. The shift in denomination, the new outline of the job qualification combined with a higher level of complexity in the network, were the ingredients that helped create a new identity for category managers.

And, while moving towards this new organisation, new equivalencies were created as illustrated in the debate about employability or partnership, when comparing the capabilities of BEST vis-à-vis pure retailers. The more BEST moved in the direction of becoming a general retailer (characterised by the importance of commodity and fresh products in the shops), the more an equivalence system developed with other companies involved in the retail industry. Category managers at BEST become substitutable with other category managers, at TESCOUR for example. The space of qualculation (Cochoy, 2002) within BEST linked up with another space of qualculation in a community of retail practitioners, at once representing this community within BEST and contributing to its reproduction.

Finally, the number of clusters defined by BEST will have an impact on consumers. The concepts of proximity shop, of truck stops, of work place or motorway rest stations can potentially create different versions of the consumer. The availability of stations on motorways involves the creation of offers designed for motorists who travel long distances. The snacking or coffee markets, for example, are immediately affected by the effects this categorical work will have on the attention of the managers in charge of developing marketing plans for these consumers. Similarly, the sandwich and restaurant markets are impacted by the decision of making workplace stations active according to the cluster analysis' results. By re-defining the needs of consumers, the work of classification undertaken by BEST both represents and contributes to the making of a particular type of subject, the "on-the-go consumer".

*7. Conclusions*

Our case illustrates how collective arrangements and social mechanism are involved in the production, intermediation and exchange which standard economics has worked so hard to dissociate. This contribution adds to a larger project that consists of identifying set of practices involved in the shaping of markets. Commensuration is a general social process that deserves closer and more systematic scrutiny (Espeland and Stevens, 1998). As suggested by Callon and Caliskan (2008), calculation devices are central in the mechanisms of economisation, in general and of marketisation, in particular. Calculative practices are not just device to set prices. They include also the trials involved in defining the quality of things. Qualification and quantification initiatives operate in a mirror like process, as so nicely captured by the term coined by Cochoy (2002): qualculation.

This paper explored in detail how one mundane entity, the petrol station, was defined and re-defined by an apparently simple decision to roll-out one new store concept across a European network of petrol stations. We argue that a store typology, as a classification device, plays an important role in making assemblages of ideas (e.g. marketing management), objects (e.g. routinised planograms), and roles (e.g. category managers) come together and potentially alter the shape of markets. A store typology has consequences for the practices of category management and the role of category managers contributing to redefine their identity and legitimacy both within the company and across the broader retail industry. It also has consequences for the multiple versions of the petrol station that emerge from this exercise as well as the creation of multiple versions of the "consumer on-the-go". In that respect, the classification device that we have studied is a mechanism of qualculation involved in the framing of different markets actants:

market places, encounters between different types of supply and demand, types of goods and practitioners and so on.

Our contribution, we hope, has moved forward discussions that examine the emergence of calculative practices and the ways in which new calculative practices alter the capacities of agents and the connections amongst them (Miller, 2001). Classification devices make calculation possible. Practices based on these devices can be made to appear natural when the work of classification becomes invisible and taken for granted. But, as we have shown, classification work requires extensive and protracted negotiations over what constitutes an appropriate or relevant category. As Bowker and Star (2000: 9) aptly put it: "There is a lot of hard labour in effortless ease".

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