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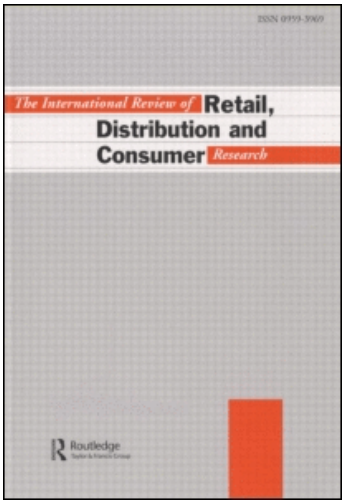

The International Review of Retail, Distribution and Consumer Research
Publication details, including instructions for authors and subscription information:
http://www.informaworld.com/smpp/title~content=t713735234

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Online publication date: 11 November 2009

To cite this Article Picot-Coupey, Karine, Huré, Elodie, Cliquet, Gérard and Petr, Christine(2009) 'Grocery shopping and the Internet: exploring French consumers' perceptions of the 'hypermarket' and 'cybermarket' formats', The International Review of Retail, Distribution and Consumer Research, 19: 4, 437 — 455
To link to this Article: DOI: 10.1080/09593960903331477
URL: http://dx.doi.org/10.1080/09593960903331477

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The International Review of Retail, Distribution and Consumer Research
Vol. 19, No. 4, September 2009, 437–455

Routledge
Taylor & Francis Group

Grocery shopping and the Internet: exploring French consumers' perceptions of the 'hypermarket' and 'cybermarket' formats

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(*Received January 2009; final version received August 2009*)

The growth of e-commerce calls into question the viability of traditional retail formats. Information and Communication Technologies (ICT), especially the Internet, now play a major role in retailing. With the stagnation of the hypermarket format in France, developing ICT could be a way for grocery retail companies to reinitiate growth. Some questions arise concerning the consumers' acceptance of these new technologies for food retailing. How does the consumer perceive the opportunities for the Internet and what associations do they hold for their favourite store? To what extent could consumers integrate ICT, especially the Internet, in their current or in future grocery shopping behaviours? Within this context, this paper focuses on the 'consumer–store' relationships. The research aims to explore consumers' perceptions of hypermarket and cybermarket formats for grocery shopping. The methodology is qualitative and based on 18 semi-structured interviews and on three focus groups of French consumers. Results show that the hypermarket format continues to appeal to French consumers while the cybermarket format remains unclear. The two targets – 'the organised' and 'the grumblers' – are an exception to this trend.

Keywords: hypermarket; cybermarket; drive-in delivery system; e-grocery retailing; French retailers

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Introduction

Today's widespread access to the Internet creates a favourable environment for the development of online shopping. In 2008 online sales in France increased by 35% (Fevad 2008). In this context, the Internet is affecting the traditional retail structure. Consumers are no longer limited to traditional trade areas and these changes question traditional approaches of spatial consumer behaviour (Cliquet 2006; Golledge and Stimson 1997). The development of multichannel retailing is also affecting the traditional retail structure. Through improvements in the Internet shopping environment, an increasing number of consumers now consider online shopping comparably experiential to the traditional store (Mathwick, Malhotra, and Rigdon 2001).

Although French consumers are becoming more accustomed to shopping online, the uptake of this technology varies significantly across retail sectors. The food retail

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ISSN 0959-3969 print/ISSN 1466-4402 online
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DOI: 10.1080/09593960903331477
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sector does not meet the same success as services like tourism or banking. Real successes are still rare (Grunert and Ramus 2005) except in the UK (Ellis-Chadwick, Doherty, and Hart 2002). In France, online food retailing currently accounts for only 3% of the Business to Consumer e-commerce activity and few food retailing ventures have been financially successful: only two out of the 13 cybermarket players in France are profitable (Bray 2008).

In a potentially conducive marketplace, it raises the question as to why only a few consumers have shifted to online grocery shopping. It seems that grocery retailers must face this new challenge and seek to understand the consumers' perception of their shopping options. What are the consumers' perceptions of the hypermarket? How do they perceive the cybermarkets? Will the consumer keep visiting forms of in-store sales, adopting a hybrid approach of complementarity between the different online and offline forms? If the customer keeps going to the hypermarket, what type of visits will it be? And if the customer completely abandons in-store formats, what forms of online stores will they choose?

Internet shopping has been extensively studied in the literature (Biswas and Krishnan 2004). But few of these research works concern food retailing (Hackney, Grant, and Birtwistle 2006) while the food sector exhibits specificities: food purchases are necessary, repetitive, perishable and with a low value-to-weight ratio (Raijas and Tuunainen 2001). Although the number of potential customers is high, many authors suggest that food products may be less suitable for e-commerce than other product categories (Morganosky 1997; Hart, Doherty, and Ellis-Chadwick 2000; Raijas and Tuunainen 2001). These specificities limit the generalisation of previous results to the food sector and highlight the interest to develop research on online grocery shopping behaviour. Within this context, this research aims at exploring consumers' perceptions of hypermarket and cybermarket formats for grocery shopping.

The remainder of the article is structured as follows. The literature on e-grocery shopping and consumer behaviour is reviewed. The qualitative research employed to better understand consumer's perceptions of a traditional and an online retail format is described. Results, including the presentation of a typology, are presented and followed by a discussion of the implications of the findings. Limitations and directions for further research conclude the paper.

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Retailers, consumer behaviour and e-grocery shopping: a literature review

The specificity of grocery shopping is first examined before analysing the status of grocery retailers in the development of cybermarket formats. The factors found to be explanatory variables of consumers' perceptions of hypermarket and cybermarket formats are then reviewed, followed by an analysis of how increased mobility and Internet usage affect spatial consumer behaviour. Finally, previous research works on online grocery shopping behaviour are evaluated.

The specificities of grocery shopping

Generalizing previous work on online consumer behaviour to the food industry is not easy, because of grocery purchases' specificities. Figuring out what these differences are is important to better understand the nature of the electronic grocery shopping.

First of all, buying groceries is a necessary task (Raijas and Tuunainen 2001). It is often perceived as a constraint and the 'pleasure' dimension is limited. As well as being necessary, grocery products are low-involvement purchases made with minimum effort (Park, Iyer, and Smith 1989; Verhoef and Langerak 2001). People tend to spend as little time as possible buying these convenience products. The routine dimension of this shopping also means that consumers will allocate few cognitive resources to the decision process. They will mainly make inferences from previous experiences to help their decision making. As a result, the grocery-buying patterns of most customers are fairly stable (Raijas and Tuunainen 2001) and these habits are very hard to change.

As well as convenience products, grocery products can also be considered as experience products (Dandouau 2001). Indeed, their quality characteristics can only be perceived by seeing, touching or eating them. Therefore, the product's evaluation is mainly undertaken in front of the shelves in the store. These factors are a potential deterrent to online food sales especially in a country like France where food is important in the way of living.

Finally, an average purchase basket of groceries contains many items with a low value-to-weight ratio (Raijas 2002; Raijas and Tuunainen 2001). A single grocery product may not be suitable for an Internet purchase as the distribution and transaction cost of one grocery item is considerable as a proportion of the price paid (Peterson, Balasubramanian, and Bronnenberg 1997). Only large bundles of groceries may be amenable to Internet-based transactions. It means that the consumer has to make many clicks for cheap items, making the purchase process more difficult compared to other types of products where only a few clicks are needed.

According to Raijas (2002), these specificities make groceries one of the most difficult objects of trade for electronic commerce. Consequently, specifically studying online grocery shopping is important as research on other types of Internet shopping cannot be applied to the food sector.

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Grocery retailers and the Internet: status and questions

What are the drivers to the development of click and mortar strategies? Could it be a response to the stagnation of traditional retail formats, especially the hypermarket format? The current context sees strong competition between hard-discounters and hypermarkets in France. Moreover, the 'all under one roof' concept is being questioned: no longer does it seem to match customers' expectations as they address many criticisms to this format. Consumers are increasingly looking for ways to save time and to free up constraints. There is a general desire for more convenience (Seth and Randall 2005). From this perspective, it might be an interesting option to increase pleasure to consumers by limiting compulsory, repetitive and physically painful tasks of food shopping. One solution could be to free them from these specific tasks with cybermarket's services.

In this context, there is an opportunity for food retail companies to create a competitive advantage by adding a new channel (Bevan and Murphy 2001). As presented in Table 1, 13 cybermarket retailers currently operate in France; only one – Natoora – is a pure player.

Can online grocery shopping develop into a valuable service for consumers? This question may be investigated by examining the factors explaining consumer perceptions of both offline and online retail formats.

Table 1. Cybermarket players in France (2008).

	Setting up date	Founding group	Turnover 2008
Auchandirect.fr	2001	Auchan group	100 M€
Auchandrive.fr	2000	Initiated by the hypermarket Auchan Faches	Unreported
Chronodrive.fr	2004	Auchan group	Unreported
CourseU.com	2008	Système U	N.S
Coursengo.com	2007	Masterfranchisee of Franprix and Leaderprice	≈20 M€
Expressdrive.fr	2007	Initiated by Leclerc Rocque sur Garonne	3,2 M€
Expressmarche.com	2004	Intermarché group	Unreported
Fastochecourses.fr	2007	Initiated by Super U Vern Val d'Orson	Unreported
Houra.fr	2000	Cora group	80 M€
Monoprix.com	mi-2008	Monoprix	N.S
Natoora.fr	1999	Jean-Patrice Quenedey and investors	Unreported
Ooshop.fr	1999	Carrefour group	85 M€
Télémarket.fr	1985	Created by the Galeries Lafayette group; investors since 2005	60 M€ (2006)

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Factors explaining consumers' perceptions of hypermarket and cybermarket formats

Previous works have determined variables explaining how hypermarket and cybermarket formats are used and perceived.

Among the geographic and socio-demographic factors, household size and the presence of children are found to be common explanatory variables for patterns of use of hypermarkets and cybermarkets (Bawa and Ghosh 1999). The area of residence is another key variable. Those who live in the city or the suburbs have more choice in stores and can adopt a multi-loyalty store formats attitude. The distance to travel to the shop is also decisive: the proximity of stores determines the frequency of visits (Fox, Montgomery, and Lodish 2004; Bawa and Ghosh 1999) and the level of loyalty to a grocery store (McGoldrick and Andre 1997). Berkowitz, Walton, and Walker (1979) found that in-home shoppers tended to live more than a ten minute drive away from the nearest grocery store. The housing type is very important as well. People living in a house with a car have more storage space (Bawa and Ghosh 1999) and are thus more likely to frequent a hypermarket. In contrast, consumers living in an apartment will be more favourable to in-home delivery, especially if they live in a city without a car and have less storage space. Finally the socio-professional category gives us information on the budget the consumer can allocate for food and indicates whether they would be willing to pay a fee for in-home delivery or drive-in services.

Psychographic factors such as the food-related lifestyle of a customer are also believed to influence adoption of Internet shopping (Grunert and Ramus 2005).

Behavioural factors such as familiarity, competence in use (Hoffman and Novak 1996; Helme-Guizon 2001; Clark and Wright 2007) and trust of the Internet (Bevan and Murphy 2001) are primary factors to take into account in order to understand the appropriation of new forms of online retailing. Donthu and Garcia (1999) found that Internet shoppers are more convenience seekers, innovative, variety seekers and

less risk-averse than Internet non-shoppers. As a consequence, the attitude toward innovations, as well as stimulation- and challenge-seeking should be considered (Helme-Guizon 2001).

Online shopping and spatial consumer behaviour

The domain of spatial consumer behaviour is affected by the changes in online shopping and therefore requires revisiting. Traditional consumer behaviour theories are based on the least effort principle (Zipf 1949). Most of the foundations of the spatial attraction model deal with gravitation. Gravitation asserts that distance should be minimized and the size of the 'body' should be maximized to enhance the attraction (Newton 1686). This theory is expressed in the Law of Retail Gravitation (Reilly 1931) and the Huff model (1964). The Multiplicative Competitive Interaction (MCI) model (Nakanishi and Cooper 1974) which is considered both a generalization of the Huff model and an attraction model (Cooper and Nakanishi 1988) can be 'a-spatialised' if distance is not perceived as a determinant attraction variable depending on the product sold (Cliquet 1995). The increasing distance consumers drive to go to work entails new spatial consumer behaviours as well.

Gravity models continue to be used by today's practitioners (Rogers 2003) especially through geomarketing software (Latour and Le Floc'h 2001). Research papers continue to be published using gravity or spatial attraction models (Baray and Cliquet 2007; DeSarbo et al. 2002), more specifically the Huff model (Fernandez et al. 2007; Okunuki and Okabe 2002), and the MCI model (Gonzalez-Benito 2000; Gonzalez-Benito, Greatorex, and Munoz-Gallego 2000; Gonzalez-Benito, Munoz-Gallego, and Kopalle 2005). However these models have been questioned given the increase in consumer mobility (Golledge and Stimson 1997). A gravity model manages a 'stock' of clientele but when mobility increases, the idea of 'flow' of clientele also increases (Cliquet 1997). It is problematic that there are currently no satisfying modelling processes to understand this idea of flow. This inadequacy of traditional spatial attraction models renders them incapable of capturing the new relationships between the consumer and the distance they have to drive to patronize their favourite store.

And what about Internet? On the one hand, a retailer is interested in increasing this flow of clientele even though some dwell further away than its regular customers. On the other hand, this retailer is wondering whether ICT is responsible for changes on the distance consumers are ready to drive to a store. Lenz and Nobis (2007) show recently how ICT can modify the way people manage their time and space.

Concurrently to the research, retailers are trying to implement new services to respond to these new shopping modes by mixing the Internet and stores. Consequently, this paper not only examines the traditional delivery system but also the service called 'drive' that mixes 'brick and mortar' and 'click' in a combined 'click and mortar' system specifically concerned with food consumer behaviour. 'Drive' actually stems from the drive-in system of McDonald's which enables customers to take away their orders without getting out of their cars. Because food e-commerce has never reached expected results, French retailers such as Auchan and E. Leclerc have been developing the 'drive' system since 2007; it seems to work better than home delivery services (Guérin 2009). The various order and delivery options, among which are the home delivery and the drive-in systems, are presented in Figure 1.

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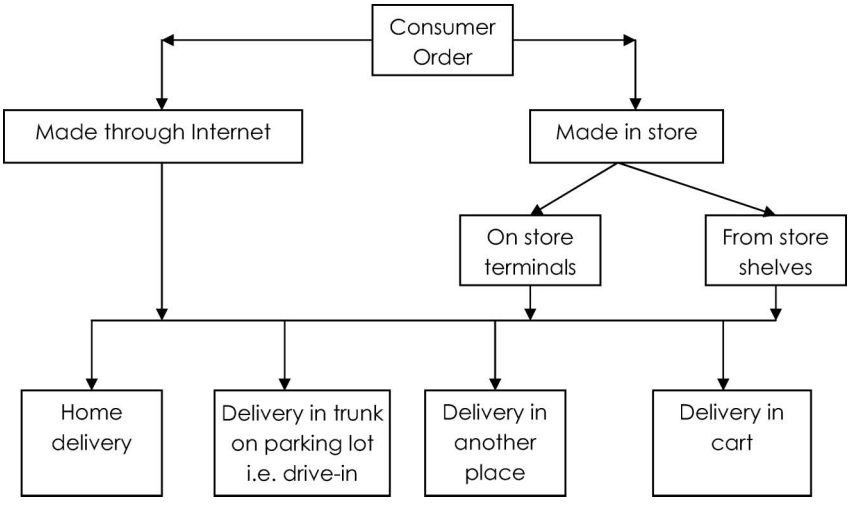

Figure 1. E-grocery retailing: the order and delivery options.

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Previous research on online grocery shopping behaviour

There are few research works focused on online grocery shopping behaviour, as illustrated by Table 2. The empirical studies have been mainly conducted on American consumers and more research is needed in a French context.

The results synthesised in Table 2 shed light on six main points:

(1) Grocery cybershoppers are generally woman, less than 45 years old, with child(ren) and university graduates with time-consuming jobs (Corbett 2001; White 2001; Morganosky and Cude 2002; Raijas 2002; Verhoef and Langerak 2001).
(2) The shopping baskets of cybershoppers contain all product categories, including fresh and frozen products (Raijas and Tuunainen 2001). Tesco claimed that online shoppers do buy fresh products, contrary to the 'feel and touch' myth (Fernie and McKinnon 2003). All product categories gain consumers' acceptance as time goes by (Morganosky and Cude 2002; Raijas 2002).
(3) Cybershoppers prefer the home delivery service to the drive-in service (Morganosky and Cude 2002).
(4) Motivating factors to online grocery shopping are convenience and time saving (Morganosky and Cude 2002; Hansen 2005; Teller, Kotzab, and Grant 2006; Verhoef and Langerak 2001). The types of convenience consumers perceive with cybermarkets is the flexibility in the timing for shopping, the saving of the physical effort involved in visiting stores and the avoidance of standing in line and crowding (Darian 1987; Morganosky and Cude 2000; Childers et al. 2001). Moreover, the drive-in service could be an opportunity for these families to combine their shopping trip with other daily activities such as the trip to work (Schenk, Löffler, and Rauh 2007). Finally, the hedonic dimension of shopping for food online (Childers et al. 2001) could also motivate consumers to adopt this format.

Table 2. Online grocery shopping behaviour: a synthesis of the literature.

Authors (date)	Research Purpose
Childers et al. (2001)	Comparative analysis of the drivers of online shopping behaviour for grocery and non food products
Corbett (2001)	Descriptive study of the profile of grocery online shoppers
Raijas and Tuunainen (2001)	Analysis of the critical issues of choosing an electronic grocery shopping
Verhoef and Langerak (2001)	Analysis of the relationship between the advantages and disadvantages of electronic grocery shopping with the perception of the innovation characteristics, and the relationship between this perception and the adoption intention.
White (2001)	Longitudinal analysis (1996–2000) of the profile of online shoppers of specialised food products
Morganosky and Cude (2002)	Longitudinal analysis (1998, 1999 & 2001) of – the profile of online grocery shoppers; – the motivational drivers of grocery online shopping
Raijas (2002)	Comparative analysis of the motivating and inhibiting factors to offline and online grocery shopping behaviour
Hansen (2005)	Comparative analysis of the perception of online grocery shopping by US online grocery shoppers, other online consumers and inexperienced online consumers.
Teller, Kotzab, and Grant (2006)	Comparative analysis of the attractiveness of online grocery shopping for time-starved consumers and consumers with Internet affinity
Wilson-Jeanselme and Reynolds (2006)	Analysis of the on-line preference structures of UK consumers
Clark and Wright (2007)	Model of online grocery shopping behaviour

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(5) Inhibiting factors to online grocery shopping are the cost of the service, the slow delivery system and difficulties with delivery personnel (Morganosky and Cude 2002). Consumers are not conscious of the logistic costs required in grocery shopping and do not relate it to a willingness to pay for home delivery (Teller, Kotzab, and Grant 2006). Moreover, Raijas and Tuunainen (2001) found that 61% of non-users of electronic grocery stores thought that prices were higher than in a conventional store. According to the same study, the most irritating issue for the users of cybermarkets was the lack of information about the product.
(6) Consumers seem to develop a multichannel consumer behaviour for their grocery and food items (Morganosky and Cude 2002).

Overall, the adoption, or not, of the cybermarket format depends on the benefits and costs perceived by the customer.

Research methodology: a multi-method qualitative study

The purpose of this research is to explore the perceptions of grocery shopping in relation to the 'hypermarket' and 'cybermarket' formats in a French context. A qualitative research methodology has been adopted to tap directly into consumers' interpretations. The empirical study was conducted in one French Region during

winter 2007–2008 and spring 2008 with two rounds of semi-structured interviews and three focus group interviews. The multi-method qualitative research design combining two data collection techniques with associated analysis techniques was chosen because it enabled triangulation to take place (Tashakkori and Teddlie 2003). It consisted of:

- semi-structured interviews aimed at making the respondents talk about their perceived experience of grocery shopping, their motivating and inhibiting factors in patronizing hypermarkets and cybermarkets.
- focus groups with five to ten consumers; this was to investigate the types of perceptions about grocery shopping that would be expressed in a social context and to stimulate reactions and ideas on potential usages of cybermarkets.

Given the exploratory nature of the research, respondents were not chosen using probability sampling but with the specific purpose of observing a variety of food shopping behaviours, according to the criteria brought to light by the literature review: gender, age, socioeconomic group, household size, housing location, housing type, Internet practice, whether or not the person is alone when shopping for food.

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Eighteen semi-structured interviews

A total of 18 consumers making all, or part, of their grocery purchases in hypermarkets were interviewed in two waves of nine semi-structured interviews. This two-step research design corresponds to an iterative analysis model; the rules of qualitative data gathering, especially the alternation and interactivity between data collection and data analysis were observed (Miles and Huberman 1994). The interview guide, formally pre-tested during 3 interviews, was divided into 4 sections: (1) 'shopping for food in an hypermarket: when, where, why?'; (2) 'grocery products always/never bought at the hypermarket'; (3) 'NTIC and grocery shopping at the hypermarket'; and (4) 'Imagine you shop online for food'.

The interviews lasted 45 minutes on average and were conducted by senior and junior researchers. They were recorded and fully transcribed verbatim (i.e. a 175 page corpus). A manual content analysis of these transcripts was performed with each interview being coded by 3 researchers. The *Alceste* CAQDAS program was used for statistical analysis of the transcripts. This package was preferred as it conducts the analysis without requiring the researcher to define categories but looks for co-occurring content in the transcripts. This method thereby generates a classification of the different themes in these transcripts (Reinert 2006) and hence its analysis is complementary to a manual content analysis. The categories obtained gave support to the interpretation of hypermarket and cybermarket consumers' perceptions. The classification generated from the statistical analysis of the semi-structured interviews sees 4 emerging themes representative of 69.55% of the initial corpus.

Twenty-four consumers in three focus group interviews

Three focus group interviews were held, gathering a total of 24 consumers doing all or part of their grocery purchases in hypermarkets. They were chaired by two

moderators while three observers took notes. The focus group interview guide was organised as follows. During the warming up stage, participants were invited to prepare a shopping list of groceries to purchase on their next visit to 'their' hypermarket, and then to draw their route inside the store. After using these documents to discuss their perceptions and experiences of shopping, they were asked to consider ways to improve their experiences and practices of food shopping. Each focus group then had a different objective during the refocusing phase, as presented in Table 3.

The focus group interviews were recorded. A summary of each focus group was written. Matrices and charts were used to reduce and rearrange the data (Miles and Huberman 1994); these analytical tools helped shed light on emergent patterns.

Research findings

The findings are presented as follows: (1) consumers' perceptions of grocery shopping in hypermarkets; (2) consumers' perceptions about current use of ICT in hypermarkets; (3) consumers' perceptions of online grocery shopping; and (4) new consumers' usages of the hypermarket format if shopping online for food.

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Findings on consumers' perceptions of grocery shopping in hypermarkets

A compulsory task

The participants distinguish 'shopping' from 'food shopping': if shopping is associated with pleasure, shopping for food is related to constraint. Their food shopping always takes much longer than expected. There is agreement on the feeling of wasted time. Thus, Cécilia (focus group discussion no. 1) explains: 'it is as if we were obliged to go all around, they move everything all the time' and 'when we see what is in the basket, we could have done it in ten minutes!'

Table 3. Focus groups and purpose of the refocusing stage of the interview.

Profile of the participants	Purpose of the refocusing stage 'Harry Potter with his magic wand is coming with you for grocery shopping . . .'
Focus group 1 **Five participants:** 3 women and 2 men – 23 to 36 years old, various profiles	Ask him to eliminate negative and restricting aspects of food shopping (e.g. repetitive handling of heavy products, monotony, waiting at the checkout).
Focus group 2 **Ten participants:** 5 women and 5 men – 22 to 49 years old, various profiles	Ask him to change and improve your hypermarket (potential improvements of the shop, ceteris paribus).
Focus group 3 **Nine participants:** 5 women and 4 men – 23 to 34 years old, various profile	Ask him to create a new hypermarket format (in a 'pleasure' purchasing perspective).

A controlled, rationalized and optimised activity

In accordance with the original mission of the hypermarket as a place of self-service, the consumers want to be independent and responsible for their actions and budget. But they also try to control and optimise their visits to the hypermarket. Thereby, consumers have developed an expertise: they know exactly the types of products they want, the place to go and the time of their purchase. The notion of control is a recurrent theme and appears as a key dimension in the experience of shopping at the hypermarket. One of the class (class 3) identified by the statistical analysis corresponds to the theme of the temporal organisation of food shopping. This idea of control of the food shopping behaviour appears in different ways, as presented in Table 4.

General expectations towards the hypermarket format: the search for traditional convenience stores

People regret the lack of services in the hypermarket: they would like to be assisted in their purchase decisions in the store (via testimony from consumers on product evaluations, testers of products such as cosmetics, information such as price comparison or top sellers).

Consumers also mentioned the need to improve the store atmosphere to avoid the feeling of a factory or a warehouse. The aim would be to reduce the feeling of suffocation (the shelf space is considered too narrow and regularly thought of having been moved closer), to reduce noise (resonance), and change the light considered as too artificial. From an architectural point of view, the shape of a cube is seen as an element that contributes to the image of a depot. Suggestions were made to propose different architectures (like 'a marguerite architecture') to reduce this feeling.

Moreover, the checkout area attracts many criticisms of the hypermarket formula. Whilst the association with payment involves unpleasant feeling, it is especially waiting at the checkout which is seen as a major problem. In focus group no. 2, Caroline explains that 'what is annoying at the end, it is when we arrive at the checkout and we need to unpack everything and after repack everything; then when

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Table 4. Consumers' strategies to control their grocery shopping behaviours.

Dimension of control	Optimisation and rationalisation strategies to control
Time spent	– Patronizing an hypermarket format: strength of the 'all under one roof' concept ('*A hypermarket to find everything without losing any time*'). – Patronizing always the same store: a familiar store known by heart. – Following an optimized route inside the store: writing the shopping list according to the organisation of the store. – Choosing the time of the visit to avoid crowd.
Budget	Developing avoidance strategies to limit unplanned purchases (e.g. writing shopping list, avoiding shelves).
Trolley	'Navigation' inside the store to optimise the way the trolley is ordered.
Distance	Optimising the route inside the store: avoiding comings and goings.

we see there is a queue behind and if the cashier is slow ... unpack everything before finally reloading everything ... (sigh)'. Anne-Sophie (focus group discussion no. 1) sums it up as follows 'we put pressure on ourselves'.

This negative perception would be deleted with waiting areas, tickets, labels to be removed (to reduce manipulation), and payment deferment. It could reduce the stress associated with the presence and the waiting of the cashier and other consumers.

Findings on consumers' perceptions about the current ICT used in hypermarkets: an association with automated checkout

ICT in hypermarkets is only associated with automated checkout or self-scanning; no other ICT is mentioned by consumers. Consumers are rather embarrassed with this innovation for three main reasons. Firstly, it may completely dehumanize the hypermarket. This technical solution is disturbing because it requires 'paying the same price while we do the job for them'. Secondly, they view new technologies as unreliable, fallible and not appropriate. Thirdly, automatic checkouts are problematic for consumers because they feel they are depriving the checkout operators of their work (Claire 2, focus group 2: 'the waiting time at the checkout exasperates me [...] but I don't want to deprive them of their work').

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Findings on consumers' perceptions of online grocery shopping: numerous inhibiting factors and unclear projects of usage

Motivating and inhibiting factors

Table 5 presents the motivating and inhibiting factors cited by consumers towards online shopping behaviour for food and grocery items. In general, respondents perceive numerous inhibiting factors to online grocery shopping and few motivating factors. Interestingly, contrary to other e-commerce sectors, the grocery sector suffers from a very bad price image while consumers have a high price sensibility for food purchases.

Table 5. Motivating and inhibiting factors to grocery online shopping behaviour.

Motivating factors	Inhibiting factors
– Time saving	– Home-delivery constraints: costs, waiting time problem
– Shopping at any time	– Uncertainty on the quality of the products, the 'best-before date' problem
– A physical impossibility to shop in a store (pregnancy, disability)	– Not being able to choose the products and having to trust the cybermarket operators
– An 'allergy' to the hypermarket format	– Not using their senses to choose and bargain hunt, while it is a pleasure
	– High prices
	– Limited choice: less diversity in the assortment
	– The loss of time in the service use
	– The loss of social ties and opportunities to see people
	– Costs or fears of learning something new 'At first, I dare not' (Cécilia)

The categorisation realised suggests further insights. Class 2 corresponds to a theme 'mechanist grocery shopping behaviour' with terms such as 'to put', 'to carry', 'to leave' in a 'trolley', 'car' or 'basket'. On the contrary, class 4 is related to the Internet with very unclear perceptions for the grocery shopping behaviour except that it is 'new'. The 'mechanist' dimension of the grocery shopping behaviour might prevent imagining new ways of shopping for food. But the terms 'question', 'to see', 'to try' associated with this class suggest that consumers are not opposed to grocery online shopping.

When respondents try to imagine shopping online for food, the following perceptions emerge:

Ordering on the Internet: the distance-selling logic and the 'drive-in' service as a partial solution

The Internet is primarily associated with the idea of distance-ordering and home delivery. If participants order on the Internet their first expectation would be home-delivery.

When addressing the proposal of the drive-in, consumers do not imagine this solution as it exists for other services such as fast food. Following the associations with the logic of distance-selling on the Internet, they expect a deal that will completely relieve them from the constraints of the grocery shopping. Consumers do not plan on having to come to the store site. The first impression of a 'simplification promise' seems to be unfulfilled. The drive-in proposal is seen by respondents as a partial solution as it does not fulfil the promise of eradicating all constraints of grocery shopping that the consumer expects from their perceptions of the Internet. The drive-in solution could be successful if were able to ease the task of shopping for food by eliminating the need to handle heavy products. With this drive-in formula, people could still go and visit the hypermarket for the 'pleasure' purchases.

Even worse, the drive-in proposal could force consumers to more organization while they aspire to more fluidity in the food shopping task. Some of the respondents even fear that the drive-in could increase waiting times, constraints and lead to less control over their shopping activity. This loss of control could presumably cancel out one of the motivating factors of buying online which is a greater control of the shopping task. Indeed, on the Internet people do not feel pressured either by time or by sales people, which usually leads to a greater feeling of control. This corresponds with previous research. Clark and Wright (2007) found that less than a quarter of their respondents felt that e-grocery shopping was giving them increased control. This feeling was mainly due to other people picking their produce. Moreover, the authors pointed out that 73.9% of their respondents found that shopping at a time most convenient to them was important for the feeling of control. This temporal notion of fluidity is also being underlined by our respondents.

These perceptions are related to a negative image of the retailer's intentions, not malicious, but self-interested. According to the respondents, the retailer would propose Internet services to increase its profitability at the expense of customers.

Grocery online shopping: only for some product categories

This 'distance-selling' vision has an impact on the products people think to buy. Thus, if the hypermarkets would propose an online service, consumers would use it

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for packaged products, bulky products, products which can be bought in high quantity and which can be stored at home, as well as for routine products they know very well, so they do not take any risk when they buy it online. On the contrary, fresh food is rarely thought as possible to buy on the Internet. There is a fear regarding quality. For these kind of products, consumers insist on the fact that they like 'touching, feeling, and seeing' the products they buy so they can appreciate the quality and the freshness of the merchandise.

New consumers' usages of the hypermarket format when shopping online for food: the search for hedonic shopping

Most of consumers say they will continue to go into 'brick and mortar' stores. Among these physical stores, the hypermarket format still makes sense for consumers. The variety of proposals and the 'all under one roof' concept seem very much appreciated while the interest of a shopping mall is also highlighted.

In the event of a widespread use of the Internet for automating part of the grocery shopping, participants explained that they would decrease the frequency of visits to the hypermarket and would patronize it in order to purchase fresh products, products they need to try on (e.g. clothing) and products for which they wish to have advice. They would prefer closer and smaller formats for last minute purchases. In this renewed retail context, consumers say they would patronise specialty stores such as the butcher's shop, bakery, and organic food shops more often. The underlying idea is that the time spent on repetitive and restrictive activities will be released. They can then spend this free time dedicated to food shopping in other forms of commerce. They may migrate to other formats and thus modify their spatial behaviour. This research suggests a 'time-money-energy' budget for grocery shopping activities that would remain fairly stable. Consumers would then conduct shifts between Internet food purchases through hypermarket websites and other formats.

The correspondence analysis performed on the transcripts leads to very interesting results and helps refine the interpretation. The perceptual map is presented in Figure 2. The first two eigenvalues contribute to almost 70% of the information.

Indeed, the horizontal axis shows motivations for shopping in a hypermarket in terms of assortment (e.g. 'quality', 'supply', 'brands') at one end, opposed to the 'list' approach on the other end. Motivations for purchasing food products seem clear, even 'indisputable'. New technologies appear concentrated at the centre of the graph which reflect the fact that they are perceived as unclear by consumers. The consumers seem to find it difficult to imagine how new technologies could change their approach to food shopping in a hypermarket. The projection of individuals on the axes shows no association: in other words, this attitude is not specific to a socio-professional profile.

The vertical axis contrasts terms like 'quiet', 'simple', and different times of the week such as 'weekends', 'Friday', 'Wednesday', to terms like 'constraint', 'unloading', 'carrying', 'handling'. This structure suggests an opposition between a natural and highly integrated approach of food shopping into the lives of individuals (one moment in a week in a specific shop, with a specific person to go for food shopping) and a very resistant behaviour against food shopping in a hypermarket. This opposition can be interpreted as a symbol of a contrast between two types of food shopping approach in a hypermarket, an 'automatic' versus a 'duty' one.

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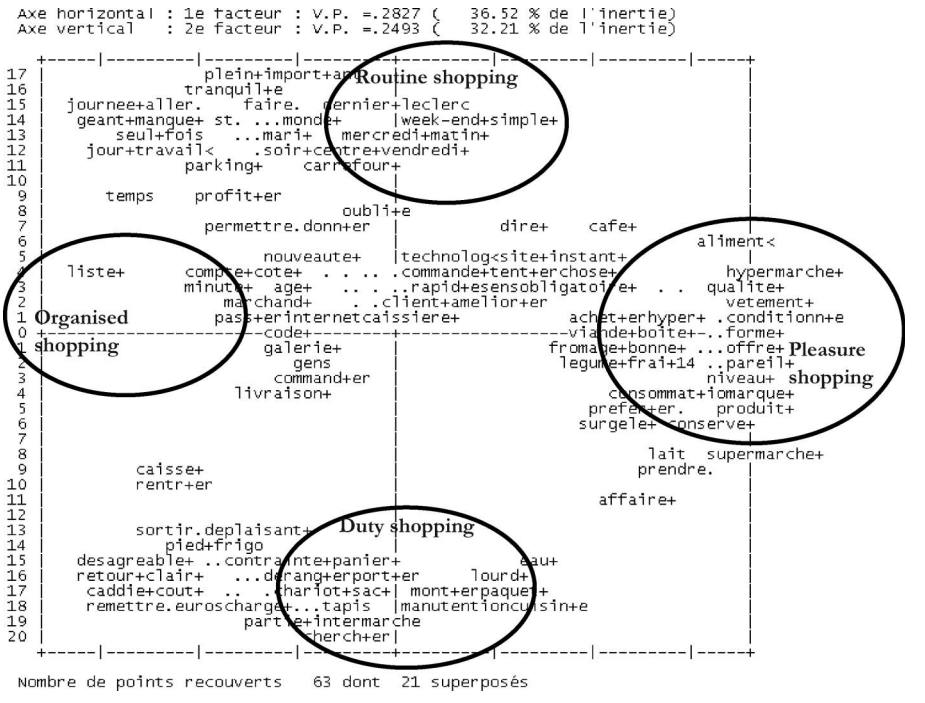

Figure 2. Perceptual map – results of the principal component analysis conducted on the transcripts of the 18 semi-structured interviews (Alceste program).

In this context, a typology can be suggested. From the analysis, four segments seem to appear: the unadventurous (segment 1) who feel comfortable with the hypermarket format and are not ready to change and adopt cybermarket; 'the epicurean' (segment 2) for whom Internet is not a priority; 'the grumblers' (segment 3) who are reluctant to patronize hypermarkets and who are, as a consequence, an interesting target for cybermarket; 'the organized' (segment 4) which corresponds to time-starved people who would be pleased to save time with new services.

Combined with the previous results, the chart observation may suggest the following interpretation: the horizontal axis may oppose 'organized shopping' to 'pleasure shopping'. The vertical axis seems to oppose the 'routine shopping' to 'duty shopping'. Hence 'pleasure shopping' is not opposed to 'duty shopping'. If this finding would be generalized by future research, the strategic and managerial implications of this result would be significant. This could involve retail companies developing at least two types of formats:

- an 'attractive format' to enable 'epicurean' and 'unadventurous' people to whom the current system seems to suit, to shop in their usual environment;
- a 'rational format' with the use of new technologies to facilitate the shopping of 'organized people' and to attract 'the grumblers'.

Discussion, academic and managerial implications

The research results suggest implications and questions even though its exploratory character leads us to eschew any generalization process.

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The necessity for retailers to improve the perception of cybermarkets

Introducing an Internet vehicle for grocery shopping with a drive-in system or a home delivery service is a challenge: indeed, modifying the grocery purchase behaviour of consumers is difficult because it is a very mechanistic, almost automated behaviour. Respondents have difficulty spontaneously imagining how their habits might change. It seems essential to sell the very concept of 'online grocery shopping' with advertisement focused on eliminating inhibiting factors to the adoption of the concept. As the online environment cannot provide customers a 'touch and feel' experience, they should work on other aspects, e.g. visual and technical information. Morganosky and Cude (2000) suggest than in-store stresses must not be replaced by online stresses, e.g. inconsistencies in the items available online, mistakes in filling the order and the hassle of returning the merchandise. This obliges retailers to make efforts in developing information technology systems to improve the service they usually provide.

Moreover, retailers should also advertise the benefits of the cybermarket format. As people do not seem satisfied with the existing hypermarkets, retailers should remind customers that online grocery shopping can permit them to avoid the check-out passage as well as crowding. Another advantage is the possibility to check the total amount of expenditure, which could help consumers to better manage their shopping task. Retailers should also take advantage of the interactive format by providing more information and product advice and include additional features such as recipe ideas. This could be a response to the criticisms addressed about the lack of service in the hypermarkets.

Consumers will need to develop some additional skills to adopt this format and retailers must meet them half way. Retailers must work on the functioning and image of their online stores if they want to maximize the consumption utility and foster loyalty to the electronic grocery store. These moves should reinforce people loyalty to a 'retailer name' whatever the channel consumers choose for their grocery shopping task (Nicholson, Clarke, and Blakemore 2002). Drive in systems have been developed by some French retailers for example Auchan (a family-owned retail group) and some independent retailers members of the E. Leclerc's group since 2007 (Guérin 2009). Pioneering such new multichannel combined formats seems to be of great strategic interest. However this format is not so easy to manage and more information about customers within the trade area is needed to make informed decisions about implementing such a system. It is remarkable to see that publicly-owned retail companies like Carrefour, Casino or Cora seem to resist this innovation in retail format.

Towards modifications of spatial consumer behaviours?

Would spatial behaviours be modified by patronizing a cybermarket? This question refers notably to the opportunity to switch from one store to another. Considering a drive-in system, consumers order from home and pick up their basket on their travels to their workplace or any other trip. The drive-in system is likely to impact shopping trips by changing store format attributes as defined by Reutterer and Teller (2009). By grouping various activities located in the same area, consumers could still confirm results found by Brooks, Kaufman, and Lichtenstein (2004) concerning trip-chained store choice and based on the reference-dependent theory. The question of the

transportation mode choice (Vande Walle and Steenberghen 2006) can also be set, especially in the perspective of reducing carbon emissions. Another key question for the future concerns the evolution of technologies used by consumers: mobile phones and palmtop devices could dramatically change consumer behaviours already associated with Internet through the drive-in system (Dholakia and Dholakia 2004).

Three scenarios of usage for the cybermarket format

The interviewees appear curious about the concept of online grocery shopping. There is no rejection by any consumer, no matter their profile. The services offered by cybermarkets (e.g. drive-in or home delivery service) could lead to new shopping behaviours, allowing coupling online stores and 'brick and mortar' stores.

Cybermarkets may presumably be patronized in different ways. In a first scenario, cybermarkets may be used for bulky and heavy shopping. In this case, consumers consider the cybermarket as a format to free them from physically strenuous shopping; their basket will only contain heavy and non perishable products. In a second scenario, the cybermarket may be used to do the whole food shop either at specific moments of a consumer's life – e.g. having a baby, suffering a temporary disability – and for other reasons of convenience. In this case the basket will contain all product categories, from perishable to frozen. In a third scenario, the cybermarket format could be patronized for the weekly shopping trip. For such a major trip, online ordering could be interesting as people tend to buy similar items from one week to another. Large-scale retail formats such as hypermarkets tend to be more appropriate for a major trip (Reutterer and Teller 2009). Further research should determine if these formats are the most threatened by the cybermarkets.

All consumers seem to be tempted by an online purchase. This leads to various questions: which learning mechanisms for consumers will be put in place? What loyalty programmes will be proposed by hypermarkets for online shopping with drive-in or home delivery services? Can there be loyalty to a specific cybermarket or short term learning of a new shopping behaviour with a potential change of online store? Are the first entrants in this market working for the competitors when initiating the adoption of a new grocery shopping behaviour?

Limitations and directions for further research

At this stage the results of the research are exploratory. The exploratory nature of this research is required due to the lack of experiential feedback from interviewees. Notably, the development of drive-in systems in the future will enable researchers to better understand the evolution of this phenomenon. Generalised findings will be withheld until larger sample sizes allow more accurate conclusions.

Further research needs to be developed on the subject of multichannel retailing, especially concerning consumer segmentation within this. The typology proposed in this paper expresses similarities with the typologies described by Konus, Verhoef, and Neslin (2008) which highlights three segments: multichannel enthusiasts (that we split into two segments), uninvolved shoppers, and store-focused consumers. The authors add covariates like shopping enjoyment, loyalty, and innovativeness in order to predict the segment consumers belong to. Additionally, it would be interesting to revisit some profiles such as that proposed by McGoldrick and Collins (2007) based

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on four segmentation criteria: risk reduction, product value, ease of shopping and experiential to see whether it fits with the above typology stemming from our own exploratory research. Finally, further research could focus on a segment-specific analysis with consumer segments based on usage situation. Such segmentation could help retailers determine for which situation the cybermarket format would be the most appropriate for purchasing groceries.

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