

Slowness logistics

Paché, Gilles

Postprint / Postprint

Zeitschriftenartikel / journal article

Zur Verfügung gestellt in Kooperation mit / provided in cooperation with:

www.peerproject.eu

Empfohlene Zitierung / Suggested Citation:

Paché, G. (2007). Slowness logistics. *Time & Society*, 16(2-3), 311-332. <https://doi.org/10.1177/0961463X07080271>

Nutzungsbedingungen:

Dieser Text wird unter dem "PEER Licence Agreement zur Verfügung" gestellt. Nähere Auskünfte zum PEER-Projekt finden Sie hier: <http://www.peerproject.eu> Gewährt wird ein nicht exklusives, nicht übertragbares, persönliches und beschränktes Recht auf Nutzung dieses Dokuments. Dieses Dokument ist ausschließlich für den persönlichen, nicht-kommerziellen Gebrauch bestimmt. Auf sämtlichen Kopien dieses Dokuments müssen alle Urheberrechtshinweise und sonstigen Hinweise auf gesetzlichen Schutz beibehalten werden. Sie dürfen dieses Dokument nicht in irgendeiner Weise abändern, noch dürfen Sie dieses Dokument für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, aufführen, vertreiben oder anderweitig nutzen.

Mit der Verwendung dieses Dokuments erkennen Sie die Nutzungsbedingungen an.

gesis
Leibniz-Institut
für Sozialwissenschaften

Terms of use:

This document is made available under the "PEER Licence Agreement". For more information regarding the PEER-project see: <http://www.peerproject.eu> This document is solely intended for your personal, non-commercial use. All of the copies of this documents must retain all copyright information and other information regarding legal protection. You are not allowed to alter this document in any way, to copy it for public or commercial purposes, to exhibit the document in public, to perform, distribute or otherwise use the document in public.

By using this particular document, you accept the above-stated conditions of use.

Mitglied der

Leibniz-Gemeinschaft

Slowness logistics Towards a new time orientation?

Gilles Paché

ABSTRACT. Works conducted in logistics management mostly emphasize the importance of a 'time compression' strategy to develop a sustainable competitive advantage. At the level of the design, manufacturing or distribution of products to consumers, high-speed orientation is now considered to be a universal source of performance. Drawing from current developments in the French food retailing industry, the paper points to a possible alternative path based on 'slowness' logistics. This new time orientation is set in a context of the '*theatricalization* of low prices' adopted by an increasing number of large retailers. **KEY WORDS** • logistics • management • price policy • slowness • time-based strategy

Introduction

Throughout the 1990s, the major home shopping companies fought a regular commercial war in France, not in the field of diversity and quality of products offered, not even in the field of attractive prices, but in the field of delivery on time. It was a period of ruthless battle over a guarantee of delivery of products in a few hours, rather than in a few days, once customers had phoned their order. At the same time, and using an identical mode, hypermarkets started presenting the immediate availability of products as an advertising asset, betting that a low level of stock out should mechanically increase customers' loyalty. These situations have something in common: they consider that logistical performance in terms of rapidity and delivery on time represents a major source of competitive

advantage, and only those companies able to implement a 'time compression' policy should be able to avoid losing market shares. The time-based strategy (TBS) found its roots in a context where execution speed became a formidable weapon, sometimes difficult for competitors to emulate in the short term.

This exploratory article takes a view opposed to the conventional one of service-oriented logistics. Its aim is to show that the economic conditions concerning the price of energy will oblige companies to change strategy radically. In the future, the degradation of logistical performance will be the only possible way, and it will be necessary to justify this new deal to the consumer. Several examples drawn from the French retailing industry show that some companies have decided to voluntarily reduce their level of service quality, by reducing the frequency and speed of deliveries, within the setting of a new marketing strategy: the '*theatricalization* of low prices'. These companies are succeeding in increasing their market share by explaining to customers that untidiness in stores and the multiplication of stock outs will be the counterpart of a low price positioning. A new form of inter-firm competition could thus emerge, in total contradiction with the last 30 years of logistical evolution: competition founded on low speed and low service strategy as best practice.

In the first part, I recall the origins of TBS, by placing it in an organizational and logistical perspective. It will be possible then to highlight the main criticism expressed over it, particularly the fact that consumers are not systematically high-speed oriented, thus opening the way for an alternative strategy based on the deliberate degradation of logistical customer service; in a way, the ideology of 'real time' seems to be thoroughly questioned these days (Hope, 2006). The second part focuses on the case of the French retailing industry, which has been subjected to profound transformations over the last few years, with the emergence of low service/low price-oriented retail formats. The third part reviews this emergence of new logistical rules turning away from the cult of speed and possibly likely to experience quick success with the end of cheap crude oil in the years to come.

The Rise and Fall of Time-based Strategy

To win the battle against lost time or time deemed unproductive in the management of operations, to proceed ever faster in the design, production and distribution of new products or new services, appears to be the current leitmotiv of companies trying to get an edge over their competitors. Time here appears as an 'explicit strategic variable', in the words of Lacroux and Nourry (1997). A real consensus seems to be emerging around this position, in marketing, in organizational analysis, in strategic management, in sociology and in supply chain management. The ability to reduce time-to-market is thus the symbol of winning

strategies, condemning companies with a legacy of slowness to failure, as they are unable to develop organizational procedures facilitating speed of execution and agility. Is this so inevitable? A trend in criticism is currently questioning the managerial dogma developed by TBS.

Time Orientation: An Organizational and Logistical Perspective

For more than a century, the whole history of industrial capitalism has been based on a permanent search for productivity gains by trying to reduce the execution times of operations. It is not surprising that Coriat (1982) put the image of a stop-watch at the heart of his analysis of scientific management, imagined by F. Taylor and implemented by H. Ford. The compulsory factor for increasing the productivity of workers toiling together in a factory lies in a rigorous control of time and motion. This philosophy of the 'fight against time' in order to avoid workers' idleness and the waste of resources later spread to all areas of activity, by adopting increasingly sophisticated organizational forms, one of the best known examples remaining the production line. Morgan (1986/1997), for his part, uses the machine metaphor to describe a firm as a set of well-oiled gears, whose perfect synchronization is a guarantee of efficiency.

The machine metaphor considers it is essential to plan strict operation management procedures, and also product manufacturing and distribution processes, to reduce as much as possible operating costs of firms as organizations, as much as possible through a widespread dissemination of clock-time (Hassan, 2003). This reduction of operating costs is the key factor of success for conquering new markets by developing a cost leadership strategy, as Porter (1980) explains. A firm must be broken down into different complementary activities that must be managed in the most efficient manner and coordinated according to a 'global' principle. For example, the performance of marketing activities relies on an efficient use of market segmentation and strategic positioning techniques, but also at the same time, on taking into account the productivity constraints characteristic of manufacturing activities.

The issue extends well beyond the limits of a single firm. In most cases, several firms work together in order to design, manufacture and sell products (or services). For example, L'Oréal designs a new shampoo in its R & D department, then manufactures it in its factories, but Wal-Mart or Carrefour will be the firms selling it in their stores. Therefore inter-organizational relationships define the time constraints that need to be respected *jointly* by several firms, the only possible way to deliver the right product, at the right place in the right time to consumers. Accordingly, these firms belong to the same supply chain,¹ whose efficient management requires not independent, but shared decisions. This is the basis of the supply chain management (SCM) approach. Its objective is to

increase the reactivity of manufacturing and retailing firms all faced with a highly volatile environment (Christopher, 2005).

From this point of view, the organizational perspective of time orientation has experienced a renewed interest in the last few years in view of the movement of modern economies toward a globalization of exchanges and the search for efficiency through a continuous improvement of consumer responsiveness. The new competition rules force manufacturing and retailing firms to completely reorganize their supply chains to increase value creation. This means new strategies of time rationalization to eliminate all the steps of industrial, logistical and commercial processes that do not generate any value; the ideal model is finally an ideal of time consumption close to zero (Brondoni, 2000). As Bluedorn and Denhardt (1988) aptly note in their study of time and organizations:

Time is closely related to organizational productivity and that time can be viewed as a resource to be managed in the pursuit of organizational objectives . . . In modern organizations, time is considered one of several scarce resources, one to be measured and manipulated in the interest of organizational efficiency and effectiveness (Bluedorn and Denhardt, 1988: 303).

At the end of their article, Bluedorn and Denhardt (1988) suggest three main subjects of research on the organizational approach to time. First, we should try to better understand relationships between time management, strategies and organizational structures. Then, we should identify which type of time management is most efficient in terms of strategies and organizational structures. Finally, we should thoroughly study the influence of contextual variables on time management. This last subject matter obviously leads to major questioning on the explanatory factors of companies' time orientation. The most urgent issue to study is undoubtedly this one: is there only one way to consider temporal performance? The answer seemed positive for some years, since the development of a time compression strategy and, more widely, of a TBS, is presented as the sole manner to achieve a sustainable competitive advantage. This consensus poses a problem as it minimizes the influence of contextual variables associated with environmental changes.

Fundamentals of Time Compression

TBS has taken up a significant place in the professional and academic literature since the end of the 1980s and the beginning of the 1990s. Stalk (1988), then Stalk and Hout (1990), consultants in the Boston Consulting Group, were early in pointing out a new form of competition between firms, no longer based on cost leadership, but on the ability to use speed as a source of competitive advantage. According to Stalk and Hout (1990), the issue is no longer to reduce

costs to sell cheaper, as the Japanese have managed to do. It is also and above all critical to increase the degree of customer responsiveness. For a firm, the time-based competitive advantage is identifiable at several levels: at the level of manufacturing activities, with the maximization of production runs without waste or unnecessary work-in-process (WIP) immobilizations; at distribution level, with delivery of the right product at the right time to satisfy customer demand; at the level of design and innovation, with the reduction of the period between the idea of creating a new product and its effective launch on the market. Winning strategies lie on a time compression scenario, combining the different levels described earlier.

In about 10 years, TBS has experienced a significant widening of its scope of analysis. Leaving behind studies centred on firms, most authors are now increasingly and systematically considering a network of firms associated in the operation of supply chains. The activities of design, production, distribution and sales of products involve several firms establishing exchange relationships between them. An overall time-based advantage may emerge only if the firms in the same supply chain coordinate efficiently, so that time compression in one specific point of the supply chain is not cancelled by delays in production or distribution runs in other points. This is why it is possible to present SCM as managerial skills with the ambition to obtain time and space compression to improve customer responsiveness (Ciscel and Smith, 2005).

In brief, we are now in a new reality – that of an industrial organization where factories are no longer at the heart of the value creation system, but have been replaced by firms able to control the diversity, volumes and qualities of consumer products. Flow monitoring inside supply chain processes takes on a critical dimension that third party logistics and large retailers control perfectly. Rather than speaking of ‘flexible production,’ as Ciscel and Smith (2005) did, I prefer referring to a ‘supply chain system’ to underline the central importance of product flow, which must be totally fluid in time and space (see Table 1). It should be noted that many researchers in applied economics are following the same type of reflection from a measurement of time value in transport (Conférence Européenne des Ministres des Transports [CEMT], 2005). Their objective is to justify in which specific situation an investment in facilities such as motorways, airports or railway bridges is legitimate, in view of the cost for taxpayers and in function of the reduction of access time between several locations within a land area.

As said before, displacing the ‘centre of gravity’ of value creation, and the coordination constraints to be respected to achieve an overall time-based advantage, requires an integration of logistical processes and, more widely, of decision-making processes. ‘The way stakeholders coordinate in time with other stakeholders in the environment is of critical significance for deciding to invest or to launch new products’ (Demil et al., 2001: 83). This explains the importance

TABLE 1
Paradigms of space–time: From the factory system to the supply chain system

Dimension	Factory system	Supply chain system
Dominant economic sector	Manufacturing	Logistics and retail trade
Spatial organization of production	Linear	Nodes or bush
Temporal organization of production	Sequential	Simultaneous
Corporate form	Vertical form	Supply chain network
Spatial location of production	Consolidated	Decentralized
Overall character of space–time	Fixed and predictable	Mobile and fluid

Source: Adapted from Ciscel and Smith (2005: 432)

given to inter-organizational repartitioning, to the coordination of operations between supply chain members, as we underlined before, and to their perfect communication. This is a requisite condition to achieve an optimal level of time compression. The cases studied most often refer to a dyadic approach, for example relations between a manufacturer and its suppliers (Carter and Hendrick, 1997), but they can (must) be generalized to all relations throughout a supply chain, from suppliers' suppliers to large retailers' customers. The objective is to reduce the response times of an entire supply chain, since competition is now between supply chains, not between the firms in each supply chain (Christopher, 2005).

If the idea of a competition between supply chains is accepted, it is obviously the supply chain having the most efficient TBS that is durably going to get ahead of the other supply chains in the competitive arena. For most observers, only advanced cooperation policies between firms will help achieving this result, particularly through a reduction of waste and waiting time at the various interfaces of supply chains (Balsmeir and Voisin, 1996; Sauvage, 2001). However, firms will certainly be part of several supply chains at the same time. Consequently, the issue is not to analyze each supply chain independently from the others, but to see whether a firm belonging to several supply chains brings the same time-based competitive advantage to each. The customer responsiveness of third party logistics companies may thus be standardized for several supply chains, but the TBS of each supply chain will depend on the quality of interactions between the third party logistics firm and the other supply chain members (manufacturing and retailing firms).

Criticism of Time Compression

TBS gives rise to many interrogations as to its relevance. A large part of these interrogations do not question time and speed as a source of competitive advantage, but question the final aim of strategic action. As Helms and Ettkin (2000) summed up neatly, the issue is not to go ever faster, but also to use the speed acquired to create a sustainable competitive advantage. For example, consumers do not buy quick delivery or execution, but an optimum availability depending on their expectations. This is particularly the case in online grocery where consumers do not necessarily look for ultra-quick delivery, but expect delivery within a precise (and previously negotiated) time window, when they are at home (Paché, 2004). Rather than advising them of a delivery within two days, at any time during each day, it is preferable for e-tailers to promise delivery within three days, but between 7 pm and 8 pm and keep this promise. Here the idea of *timing* as a situational time concept reoccurs, inspired by the theory of Kairos: the major aspect is not to go fast, but rather to know how to wait for the right moment for beginning or doing something (Adam, 2004).

Another more radical criticism questions the foundations of a TBS based on an explicit or implicit assumption: consumers are particularly sensitive to the fact of having the right product at the right time to satisfy their needs. This assumption is based on common sense. If consumers do not have the right product at the right time at their disposal, for lack of coordination in the supply chain, they will be frustrated and choose another product or another point of sale; consumer behaviour confronted with stock outs in stores has been analysed in depth by the marketing and retailing literature since the 1970s. But are consumers still sensitive to a complete availability of products? This is forgetting that the process of value creation must be centred on the customer-perceived value of products. Research on SCM teaches us that material and immaterial resources must be present at the right time (and place) throughout a supply chain, but this allocation will depend directly on the real value given to time by consumers; more exactly on the value attached to a maximum availability of products (Wilding and Newton, 1996).

It is impossible to have a universal approach to the value given to time by consumers. When customers in a hypermarket or supermarket buy convenience goods, they refer to a mix in which products deemed important and others deemed less important are associated, and the tolerated level of stock out is obviously going to vary from one customer to another. Let us imagine that a consumer is organizing a romantic dinner for two and wishes to prepare his/her companion's favourite dish for the occasion. In this context, the ingredients of this dish are very significant and any stock out in store may generate intolerable frustration. This might not be the case when the same consumer prepares the same dish for his/her own consumption. An efficient time-based distribution

means offering a maximum availability of consumers' favourite products, while making do with an average availability for other products; the overall level of availability will thus be the combination of various levels of services received by an individual customer (Zinn et al., 2002).

In managerial terms, the approach is quite difficult. Going back to the example of the intimate dinner, consumers' expectations obviously vary with the purchasing situation. For the same product, depending on backgrounds and individuals, a level of availability may be perceived as excellent, just satisfactory or poor. The result is that TBS must rely on a situational segmentation, by identifying situations of purchase for which the value of time is highest, and in which the price consumers are ready to pay for the maximum availability of products is deemed important. This idea of logistical segmentation, developed by Christopher (1986) and Hise (1995), means that some consumers will probably be ready to accept a downgraded service, with frequent stockouts, if a large retailer offers them as compensation highly attractive prices for products deemed not so important.

Conducting a low-price strategy, rather than a TBS, means that a manufacturer, a third party logistics firm and a large retailer (as partners in the same supply chain), will be able to coordinate their actions to reduce logistical costs: for example, by working on a less frequent delivery of products in store, and consequently on a lowering of transport costs, even if the result is an increase in stock outs. Hence, the provocative idea of downgrading the logistical customer service, which could appear to be a source of competitive advantage to supply chain members, is confronted with low-price-oriented consumers in specific purchasing situations. The French food retailing industry, experiencing extensive changes for the past 10 years, is an interesting playground for discussing the relevance of this idea, in reference to the inter-type competition now opposing two main retail formats: hypermarkets and hard discount stores.

Understanding the French Food Retailing Context

For many years, the dominant retail format in France was the hypermarket retail format, characterized by high customer responsiveness. Hypermarkets built their high price/high service positioning on the reliability of logistical and merchandising operations. They relied on the progressive development of cooperative strategies throughout the supply chain with their suppliers and third party logistics to reduce cycle times, but also on coordinated actions to accelerate the design and introduction of new products as in a trade marketing approach. With the arrival of hard discount stores, new, highly aggressive competitors favouring a low price/low service positioning, the TBS of hypermarkets

is being questioned and has produced contrasting responses, between re-enchantment and deliberate deterioration of the logistical customer service.

The Development of the Hard Discount Retail Format

The quick growth of hard discount in France (and more generally in Europe) represents a major break in the dynamics of the food retailing industry. The hard discount retail format was born in post-war, devastated Germany at the initiative of the Albrecht brothers, creators of Aldi. Their wish was to propose food products to consumers in small-size stores, with a plain and very simple presentation. Hard discount made its appearance in France only at the end of the 1970s, with the opening of the Ed stores belonging to the Carrefour Group. The Ed stores were then located around Paris, and on the model of the hard discount invented by the Albrecht brothers, they offered a product assortment reduced to 550 references. The real birth of hard discount in France was in fact the arrival of Aldi at Croix, near Lille, in 1988, followed by Lidl and Norma in 1989. A few large French food retailers managing hypermarkets and supermarkets reacted very quickly and opened their own hard discount stores (CDM then Netto for Intermarché, Le Mutant for the Coopératives de Normandie, Dia for Promodès), but the growth of the retail format depended essentially on the German hard discounters.

Throughout the 1990s, the hard discount retail format developed at an unrestrained pace, with an average of one store opening per day. At the same time, the opening of hypermarkets in France was slowed down by the Royer Act (1973), then the Raffarin Act (1996), as the political objective was to give the illusion of a protection for the single-unit independent stores threatened with disappearance.² The hypermarket, symbol of the commercial revolution in France, is a 'shopping factory' of imposing dimensions (a little over 5,000 m² in general, with stores sometimes larger than 15,000 m²). Hard discount stores, with their average of 600 to 700 m², often escape from the provision of these laws, all the more so as they are often located in underprivileged areas. While authorizations to open hypermarkets have become scarce, authorizations to open hard discount stores have multiplied. As shown in Table 2, the total sales area of hard discount stores increased by 100 per cent between 1995 and 2005, while the sales area of hypermarkets increased by only 27 per cent.

Since the beginning of the 2000s, the hard discount retail format has been the uncontested winner of household consumption changes. Buying convenience goods at a hard discounter's was perceived as shameful for a long time; this retail format was reserved for the poorer households, for whom hypermarkets and their high prices were becoming inaccessible. This is no longer the case. According to a study conducted by TNS Secodip, 67.7 per cent of French house-

TABLE 2
Comparative development of hard discount stores and hypermarkets in France

	1990	1995	2000	2003	2005
Hard discount retail format					
Number of stores	166	1794	2539	3207	3741
Total sales area (m ²)	–	1,215,000	1,676,000	2,066,000	2,442,000
Average area per store (m ²)	–	679	660	644	653
Hypermarket retail format					
Number of stores	851	1074	1155	1264	1344
Total sales area (m ²)	4,590,000	6,100,000	6,623,000	7,454,000	7,728,000
Average area per store (m ²)	5395	5680	5734	5897	5750

holds said they shopped regularly at a hard discounter's in 2005 (against 38 per cent in 1998), and 9 per cent of households said that a hard discounter was their main store. According to the same study, from December 1992 to June 2005, household expenditure in hard discount stores increased from 1.6 per cent to 13.4 per cent of the total of purchases of convenience goods and fresh products. The reasons for this success are known: the stagnation of wages, massive unemployment among the young, a growing social exclusion, but also, paradoxically, the desire of the wealthy classes to save on convenience goods and spend their money instead on travel, sophisticated multimedia services (Internet access, mobile phones, etc.), or on entertainment, etc. As the hard discount retail format flourishes, hypermarkets unavoidably suffer.

The 'Marketing Alignment' of the Hypermarket Retail Format

For more than 30 years, the hypermarket has been the retail format best symbolizing the international success of the 'French exception', that of a typical store stocking food and non-food products under the same roof. Although French consumers have become *blasé*, faced with the diversity of the product assortment offered by a conventional hypermarket, foreign visitors are surprised. At least 30 to 40 per cent of the sales area is dedicated to non-food products such as household appliances, jewellery, mobile phones, books and DVDs, PCs and printers, not to speak of gardening products. It is even possible sometimes to buy tickets for rock concerts or plays, to subscribe to an Internet operator, even to book a trip to the Caribbean for your next holidays. Each category of products is presented in a homogeneous little world of its own a '*univers de consommation*' (consumer

ecosystem) whose polished decor and adapted merchandising create a pleasant and friendly atmosphere. For some observers, this is even a unique model whose success is explained by the fierce wish to offer a multitude of products and services to consumers, in a pleasant commercial environment transforming the shopping activity into a gratifying experience (Filser et al., 2001).

Of course, the rise of the hard discount format has deeply modified the rules of the game. It means that French consumers finally accept being 'disenchanted' when they shop in plain, bare stores, offering a limited product assortment and few marketing customer services, if this enables them to get good bargains. Hypermarkets understood this quickly, and even if hard discounters continue to gain market shares, the signs that they are running out of steam are discernible since mid-2005. For example, the average sum spent during each visit has decreased for the first time in 10 years (21.3 euros). According to some observers, the current reversal is explained by the first effects of the counter-attack of hypermarkets developing their own low-price private labels and, for some of them, launching a hard discount space directly in their stores (Auchan, Casino).

An interview given by the Director of Marketing of Auchan confirms that this is perhaps the time for the return of a sort of disenchantment (Cuthbertson, 2005). Auchan now wishes to 'make it simple' to compress costs as much as possible and to efficiently compete with hard discounters, a retail format that large food retailers do not possess. The declared objective is to shorten customers' comings and goings in the hypermarket by reducing the assortment, after a golden age during which Auchan presented itself as the specialist of choice and variety. If reducing the complexity of the offer is felt by the Director of Marketing as an advantage for consumers (make their buying process easier), it is clear that the issues for Auchan lie elsewhere: a greater buying power with suppliers and a *massification* of flows through warehouses so as to obtain a better quantity discount, and consequently to reduce selling prices in stores. The strategy adopted by Auchan should not have any negative impact on the store image. As Broniarczyk et al. (1998) demonstrated, the moderate reduction of the number of references has no effect on consumers' perception of the product assortment. When their favourite references remain available, consumers do not notice the disappearance of other complementary references or the potential reorganization of store shelves. The issue, consequently, is to identify exactly the favourite references of the different customer segments.

Disenchantment has gone even further with Casino and Leclerc. Whole parts of some of their hypermarkets are occasionally or permanently transformed into warehouses or hangars, with an incredible accumulation of podiums, palettes, cut cases, racks, etc., that seem to be staged on purpose to create a discount image (Badot and Piché, 2006). The presence of piles of products or bulky packs creates a store atmosphere visually symbolizing the principle of

economies of scale for consumers: very low selling prices made possible by mass purchases by large retailers. Similarly, the placing of trolleys of products in aisles or of products out of their packaging creates the impression of a clearance sale, and therefore once again, lower prices and good bargains, as in the hard discount retail format. We can speak of the *theatricalization* of low prices, which undoubtedly influences the way of conceiving what the logistical (and timing) performance must be.

Logistics Management: Between High Speed and Slowness

The academic literature dedicated to retail logistics keeps stressing the importance of performance criteria associated with reactivity and flexibility, to develop a time-based advantage. One of the objectives is to reduce stock outs in stores to increase the level of consumer satisfaction (Fitzsimons, 2000). More generally, it is accepted that logistics has to take an active part in the construction of a 'service-oriented management'. The *theatricalization* of low prices questions this managerial dogma, by emphasizing other key elements of marketing positioning, little or not studied for the time being. The profound changes that western countries are going to experience with the end of cheap oil are probably going to accelerate the emergence of a new model mainly based on resource savings; large retailers will deliberately have to accept a downgrading of their logistical customer service, and favour slowness logistics, abandoning the cult of speed.

From Service-oriented Management to the *Theatricalization* of Low Prices

When we analyse the evolution of the large French food retailers' logistical strategy, it is obvious that their different actions were at first to attempt to optimize transport, storage and handling operations from factories to store shelves. The problem was then to reduce logistical costs and to avoid wasting resources to improve the price positioning of hypermarkets (Filser et al., 2001). In a second stage, with the increase of intra-type competition, the large French food retailers made the mistake of favouring logistics customer service only, particularly respecting delivery deadlines. The dominating theory was that, in addition to looking for the lowest prices, consumers no longer accepted stock outs that generate a feeling of dissatisfaction, which could lead them to change stores. If one refers to the different time dimensions described by Boudier-Pailler (2002) in Table 3, recalling some of the time dimensions studied by Batsch (2002), delivery on time and urgency (short term) undeniably occupy a central place, to the detriment of period, horizon and trajectory (medium and long

TABLE 3
Strategic implications of the different time dimensions

Time dimensions	Definition	Example of managerial objectives
Deadline	Time given to conduct an activity	Respect a product delivery time previously notified to customer
Urgency	An activity that must be conducted in an extremely limited time	Supply stocked-out store as soon as possible to avoid losing sales
Period	Division of time into important events	Plan the number of products that can be stored in a regional warehouse during one quarter
Horizon	Time perspective within which an action falls	Plan the firm's development in the medium and long term in relation to its estimated sales
Trajectory	Trajectory or schedule to fulfil an objective	Enable the firm to develop by relying on its competences, skills, culture, etc.

Source: Adapted from Boudier-Pailler (2002: 93)

term). Strategies of re-enchantment were to lead to overbids in logistics customer service. The shopping experience would obviously be a real source of value for consumers only if spectacularly staged products were always present and in sufficient quantities.

Many studies conducted in France, and also in Europe, confirm the slow drift of retail logistics toward the continuous search for an increasingly sophisticated logistics customer service, to the detriment of logistical costs (Duong et al., 1998; Colin, 2002). In the 1990s, an excellent company was able to conduct a time compression strategy, even if this meant more frequent and costly transport. The phenomenon also occurred in the United Kingdom. Similarly, to stage their products, the large French food retailers did not hesitate to use a lot of equipment and staff, even if this meant a significant increase in handling costs. The growth of the hard discount retail format and the choice of new strategies to 'make it simple' completely changed the rules of the game. The *theatricalization* of low prices, creating a store atmosphere close to that of hard discounters, leads to a rediscovery of the virtues of more thrifty logistics. This echoes, in terms of the demand chain, the analysis of Walters and Rainbird (2004), replacing consumers at the centre of the value creation process: to make use of market opportunities to maximize the firm's overall value chain requires implementing an effective combination of 'logistical capabilities' and 'demand chain effectiveness'.

A palette or a rack left in the middle of an aisle may appear to be the result of a malfunction in a hypermarket, just like regular stock outs. On the other hand, it is possible that this palette or rack may for consumers mean a rather untidy store, where they however have the pleasant feeling of making excellent bargains, thanks to savings made in personnel management. The proof is there: 'bargains' are so obvious that the large retailer can no longer control supplies, hence the multiplication of stock outs. Store disorganization and the deterioration of the customer logistics service could send a powerful signal to consumers, that of a low price strategy enabling them to avoid shopping at hard discount stores, as they can find just as good things by shopping directly in hypermarkets. In such a context, the old models of logistical management must be revised, like the performance criteria on which they are based, particularly in terms of maximization of the logistics customer service.

Large retailers desiring to develop a strategy of disenchantment for their hypermarkets will find an advantage in purposefully deteriorating the logistics customer service and countering lastingly the development of hard discounters. This is a provocative proposition, but it refers to an idea developed by Christopher (1986), in which consumers build their own store image in relation to a number of factors. For example, a well-kept store, offering a diversified product assortment, with many attendants available for help and advice, gives the image of a large retailer favouring a high-quality marketing customer service. So consumers expect to pay high prices, knowing that low prices will be the necessary counterpart of a poor-quality marketing customer service. Consequently, if a large retailer wants its hypermarkets to attract consumers who have defected to the hard discount retail format, it must absolutely return to poor performing logistics. This will be consistent with the *theatricalization* of low prices, and will allow the cost savings required to conduct a successful low-price strategy.

If the scenario of the purposeful deterioration of the logistics customer service is confirmed, it could give birth to a 'wheel of retail logistics', aligned on the model of McNair's (1957) wheel of retailing. When introducing a new retail format, logistics management is simplistic, without a real desire to be a tool of differentiation. As the number of competitors operating in a retail format increases, each firm will try to build consumer loyalty by improving its logistics customer service. However, it will then be threatened by a new retail format whose logistics management is again simplistic. If customers become increasingly reactive to low prices, the older retail format must react by returning to less costly logistical solutions. This has been obviously the case of Carrefour in France since January 2005. The group decided to stop the implementation of new logistical partnerships with its main suppliers, the objective of which was to increase logistics customer service with the adoption of collaborative management tools. The priority is to reduce logistical costs, for example by forcing

suppliers to put their products in secondary packaging eliminating any useless handling in stores. In so doing, Carrefour tries to reproduce in its hypermarkets the basic principles of hard discount, and takes part in the invention of a new generation of hypermarket.

In brief, it is necessary to encourage logisticians to go and meet the marketing community. Since Babin's et al. (1994) contribution, nobody ignores the fact that if consumers go to a point of sale, it is as much to buy a product (utilitarian considerations) as to live a 'shopping experience' and look for bargains or for pleasure and entertainment (hedonistic considerations). Research conducted by Filser et al. (2003) in the French context confirms the significant value some consumers give to the pleasure felt during the shopping activity: meeting other people, taking part in social life, but also and above all having the feeling of making bargains. In other words, it is not certain whether the perfect availability of products, in perfectly neat and well-supplied gondolas, may always be the source of intense satisfaction. In contrast, an 'organized disorder' could participate in the disenchantment desired by large retailers . . . and enjoyed by consumers. This implies that logisticians must not persist in trying to implement a well-oiled machinery, in Morgan's (1986/1997) terminology, but must reflect on the type of logistical organization required to successfully establish the marketing strategy of large retailers. This transformation appears all the more urgent as the business situation is likely to experience a significant upheaval within the next few years. A new logistical model, that we will call slowness logistics, should be at the heart of a growth that is more respectful of Planet Earth's resources.

Slowness Logistics in the New Economic Environment

Even if awareness is not yet general, the end of cheap energy is now an established fact. It heralds a mutation that will prove painful for our societies with the last throes of an economy entirely based on oil for more than a century. It is clear that this mutation will have a strong direct impact on transport systems, requiring a complete restructuring of logistics organization modes, something Georgescu-Roegen (1971/1999) had very early anticipated in reference to the entropy law without meeting any echo within the scientific community. The retailing industry relies massively on road transport to supply its stores, located in urban areas. It directly depends on the price of oil and its evolution, in the absence of alternative and credible energy sources.

Although experts disagree on the exact date, an oil peak will be reached in the next few years before daily production inexorably decreases in the world. This process will result in a continuous rise in the price of fuels whose effects will probably be catastrophic for large retailers (more than 50 per cent of their

logistics costs are made of transport costs, much higher than storage costs). To continue with the *theatricalization* of low prices, it seems probable that all possible solutions will be resorted to, particularly through a severe-energy saving policy, based on fewer trips to stores, for example, even if this means downgrading logistical customer service, and forcing consumers to accept this. From this point of view, transformations in the way individuals consider the management of their time could offer an unhopèd-for way out for large retailers.

Of course, it would be excessive to think that slowness logistics is becoming the rule governing the operation of all supply chains. A more likely scenario is to consider a coexistence of time compression and slowness logistics in the supply chain strategy of large retailers. For local products, fashionable products or fresh produce with a short expiry date, reactivity and reliability undoubtedly remain important elements in logistics management. On the other hand, for products whose manufacturing is relocated in low-cost countries, for example bottom-of-the-line textiles and household appliances, the criterion of lowest possible cost of transport is essential, requiring massive dispatching, and respecting that a high level of logistical customer service is no longer an absolute priority.

Industrial reality is like the superimposition of two logistical systems: a system based on geographical proximity (reactivity and reliability as sources of competitive advantage) and a system based on distance (low cost as source of competitive advantage) (Paché, 2006). Undoubtedly, French food retailers are successfully implementing global sourcing strategies from low-cost countries for a growing number of convenience goods (Filser et al., 2001). This means that the logistical system based on distance, although preventing any time compression considering the distances to cover by sea transport, has become an efficient business model in an economic and societal environment where values associated with 'ever increasing speed' are strongly questioned.

We have been witnessing for several years a more or less violent questioning of the superiority of speed in western societies (Hassan, 2003; Parkins, 2004). Following Honoré's (2005) iconoclastic reflections, some observers dispute the legitimacy of individuals to live in a permanent state of urgency at work, in private life or in consumption activities. They militate in favour of a systematic questioning of the dictatorship of Chronos, and promote 'dropping out' (Carayol, 2005). For them, slowness must thwart the cult of short-lived fads and the search for an immediate satisfaction of all needs, including the minor ones, represented by the race toward artificial happiness: consume more and faster. It is true that an increasing number of individuals looking for some inner peace aspire to new life tempos, enjoying occasional inaction, or even a degree of laziness. It seems probable that as they are trying to escape the perpetual motion, they will accept a temporary stock out in store with relative resignation.

This type of behaviour may be interpreted, as Becker (1965) did, from works

studying the modes of time allocation by consumers. It is necessary to distinguish two possible modes of allocation: (1) an allocation based on the obligation to dedicate time to a number of professional and/or personal activities; (2) a discretionary allocation based on a relative freedom to make use of time (Hendrix et al., 1979). For example, individuals may decide to spend a lot of time shopping if they obtain a significant gratification from the activity. This may lead them to browse in stores, looking for bargains, and to accept the occasional unavailability of such and such product, which finally corresponds to a kind of cat and mouse game between the store and the consumer. In her literature review, Bergadaà (1988–9) highlights the valorization of recreational activities better to understand time allocation strategies. As she points out in reference to research conducted in sociology, time is but one attribute of the shopping activity, and consumers valorize various time segments in a different way. To browse in a store and postpone a purchase because of a stock out does not necessarily give rise to dissatisfaction.

Implementing a new management model based on slowness logistics will probably require extensive communication work from large retailers to consumers. We will have to be able to replace the well-known '*I want it all and I want it now*' of service-oriented logistics, by a provocative '*just some of it, today, tomorrow or the day after*'. The objective will be to stress the emergence of a new harmony between individuals and their consumption rates, which also means that firms stop focusing on the acceleration of their activities to favour processes creating value for consumers (Ehret, 2002). For example, one can easily imagine advertising campaigns playing on the concept: 'Stock out in store: is it so tragic to wait a little to buy more?', highlighting the false urgency of the immediate purchase of such and such a convenience good.

Time management would then become an efficient discrimination tool of demand for vendors (Zollinger and Desmet, 1998). Traditionally, the academic literature views discrimination by giving value to the product itself through an artificially scarce offer (= occasional and scheduled availability of products to propose good bargains to consumers). We can suggest another way, that of creating dis-utilities for consumers by systematically introducing delays for their purchases (= random availability of products depending on grouped and more economical arrivals).³ This mutation will not occur without questioning the cult of performance, or without a profound change of minds. It involves connecting the deliberate postponement of purchases not to consumers' psychological checks (Batsch, 2002), but to a *rational* behaviour in a context of differentiated value given to availability and therefore to time: a probably unavoidable mutation in a controlled growth society that will not be able to withstand the wasting of resources by service-oriented logistics much longer.

It would be consequently erroneous to believe that the move of French large retailers towards the *theatricalization* of low prices and slowness logistics can

be summed up by the simple transformation of a threat into an opportunity. The evolution of logistics management is certainly a part of a larger 'slowness trend' appearing as the answer to the cult of urgency and its excesses – psychological 'burnout', psychosomatic disorders, etc. (Aubert, 2003; Carayol, 2005). For this 'slowness trend' to develop in a sustainable way, it will be necessary for consumers to accept the idea of a number of sacrifices in their everyday life, for example delay (or cancellation) of some of their purchases. For if the strategy of French food retailers is irretrievably to downgrade their logistical customer service to improve their profitability, there will be an increasing number of temporary stock outs. They may increase consumers' frustration or irritation, if they are forced to go back to a store several times or to go to several stores to find some products. In this case, it is unlikely that they may experience any hedonistic feeling of well-being in their shopping activity, quite the reverse.

The aspiration to new life tempos, as introduced by Parkins (2004) or Honoré (2005), therefore requires, in parallel, accepting a new way of consuming, particularly of consuming in a less compulsive way, including by willingly giving up some purchases considered as superfluous. If this is not the case, consumers will not be able to escape from the feeling of being 'time crushed' but rather add to it. For the *theatricalization* of low prices to succeed, mentalities will have to undergo a thorough revolution. It will certainly be the most significant check to overcome in the next few years to get consumers to accept the sometimes unpleasant consequences of slowness logistics in terms of poor availability of products in store.

Conclusion

Praising slowness as a source of competitive advantage may be seen as a provocation or the flights of fancy of an intellectual flight from the real world. Who would dare pretend that time-based competition is not the rule for firms, in a world where customers want their needs immediately satisfied? Numerous works on marketing have continuously stressed for more than 15 years the volatility of consumer behaviour, according to opportunities offered, without any attachment or loyalty to brands (Dubois, 1991). Not to look for the maximum availability of the right product and the right time and place would then be suicidal, as much for manufacturers as for large retailers. But in a society where speed is the rule, some firms seem to wish to develop a counter-model based on a deliberate downgrading of the logistical customer service, to the benefit of a *theatricalization* of low prices. Stock outs in store are here managed as a marketing variable sending consumers a *positive signal* of the existence of good bargains that they must seize at the right time.

Further analysis of slowness logistics is required in at least two directions. One

would be to determine the exact performance criteria on which slowness logistics relies, so as to build monitoring and assessment tools; to give up TBS does not mean letting events take over by thinking – wrongly – that the slowness competitive advantage cannot be measured. The other would be to better define the components of the large retailers' marketing mix to convince consumers of the benefits of the new management model, when it could appear as an unacceptable decline in the level of logistical performance. After prioritizing reliability, quality and after-sales service dimensions of the customer value, large retailers will have to learn how to communicate on the price dimension as a source of customer value, by using as leverage the marketing influence dimension.

More generally, the logic of slowness logistics seems to be found in some other industries, such as the e-retailing industry. It can be presumed that, for example, if the waiting time for buying an e-plane ticket were artificially increased by the e-retailer (with slower loading time of the fare page, or payment page), consumers would more likely buy the ticket whatever its cost, even if the price stopped being a bargain.⁴ Trying consumers' patience while pushing the low-cost discourse therefore seems to be a marketing strategy found to be efficient in many different contexts. This type of argument shows that the idea of slowness logistics is not just provocative, but has already proven to be a 'universal way of thinking'. This certainly opens important research avenues well beyond the field of logistics management and SCM.

Notes

For thoughtful comments on an earlier draft, I am grateful to Barbara Adam, Michelle Bergadaà, Bertrand Urien, and two anonymous referees of *Time & Society*.

1. According to Christopher (2005: 17), a supply chain is 'the network of organizations that are involved, through upstream and downstream linkages, in the different processes and activities that produce value in the form of products and services in the hands of the ultimate consumer'.
2. The Royer Act and the Raffarin Act are a perfect symbol of the French Administration's recurrent interventionist policy in controlling the retailing industry to prevent its unchecked development. The Royer Act of December 27, 1973 introduced a procedure before any authorization to open new stores; the act imposes an administrative authorization for any creation or extension of a store whose sales area is above 1,500 m² in towns with more than 40,000 inhabitants, or above 1,000 m² in towns with less than 40,000 inhabitants. The purpose of the Royer Act is to see that the establishment of factory outlets, hypermarkets, malls, etc., does not cause the disappearance of small shops in town centres. The Raffarin Act of July 5, 1996 restated the philosophy in the Royer Act, but defined more stringent sanctions in case of interference with fair competition, and reduced the authorization thresholds from 1500 m² to 300 m² for opening new stores.
3. In this respect, seasonal events such as '*la rentrée*', '*les foires aux vins*' and '*le mois*

du blanc' are uniquely French, with no equivalent in the UK. If logistical cost reduction were to become the priority, they could well become the norm.

4. I thank one of the two anonymous referees for pointing out to me this possible extension of the logic of slowness logistics to marketing strategies in the e-retailing industry.

References

- Adam, B. (2004) *Time*. Cambridge: Polity Press.
- Aubert, N. (2003) *Le culte de l'urgence: La société malade du temps* [The Cult of Emergency: Society Sick about Time]. Paris: Flammarion.
- Babin, B., Darden, W. and Griffin, M. (1994) 'Work and/or Fun: Measuring Hedonic and Utilitarian Shopping Value', *Journal of Consumer Research* 20(4): 644–56.
- Badot, O. and Paché, G. (2006) 'Une logistique expérimentielle pour la firme de distribution: du "zéro défaut" au "zéro ennui"' [Experiential Logistics for the Retailing Firm: From "Zero Defect" to "Zero Boredom"], *Management & Avenir* 11: 11–28.
- Balsmeier, P. and Voisin, W. (1996) 'Supply Chain Management: A Time-based Strategy', *Industrial Management* 38(5): 24–7.
- Batsch, L. (2002) *Temps et sciences de gestion* [Time and Management Science]. Paris: Economica.
- Becker, G. (1965) 'A Theory of the Allocation of Time', *Economic Journal* 75: 493–517.
- Bergadaà, M. (1988–9) 'Le temps et le comportement de l'individu' [Time and Consumer Behaviour], *Recherche et Applications en Marketing* 3(4): 57–72 (part I), 4(1): 37–55 (part II).
- Bludorn, A. and Denhardt, R. (1988) 'Time and Organizations', *Journal of Management* 14(2): 299–320.
- Bouder-Pailler, D. (2002) 'Maîtrise des avantages temporels organisationnels internes et externes: implications logistiques: Cas des chantiers navals' [Control of Internal and External Organizational Temporal Advantages: Logistical Implications: The Case of Shipyards], *Actes des 4^e Rencontres Internationales de la Recherche en Logistique*, pp. 91–101. Lisbon.
- Brondoni, S. (2000) 'Time Compression and Time Value as a Competitive Strategy', in D. Caseby (ed.) *Time and Management*, pp. 343–54. Palermo: Fabio Orlando Editore.
- Broniarczyk, S., Hoyer, W. and McAlister, L. (1998) 'Consumers' Perceptions of the Assortment Offered in a Grocery Category: The Impact of Item Reduction', *Journal of Marketing Research* 35(2): 166–76.
- Carayol, V. (ed.) (2005) *Vivre l'urgence dans les organisations* [Emergency within the Organizations]. Paris: L'Harmattan.
- Carter, C. and Hendrick, T. (1997) 'Organizational Determinants of Time-based Strategies and Tactics', *International Journal of Physical Distribution & Logistics Management* 27(8): 445–58.
- Christopher, M. (1986) *The Strategy of Distribution Management*. London: Heinemann.
- Christopher, M. (2005) *Logistics and Supply Chain Management: Creating Value-adding Networks*, 3rd edn. Harlow: FT-Prentice Hall.
- Ciscel, D. and Smith, B. (2005) 'The Impact of Supply Chain Management on Labor Standards: The Transition to Incessant Work', *Journal of Economic Issues* 39(2): 429–37.

- Colin, J. (2002) 'De la maîtrise des opérations logistiques au supply chain management' [From Logistical Operations Control to Supply Chain Management], *Gestion* 2000 19(1): 59–75.
- Conférence Européenne des Ministres des Transports (CEMT) (2005) *Le temps et les transports* [Time and Transport]. Paris: OCDE-CEMT.
- Coriat, B. (1982) *L'atelier et le chronomètre: Essai sur le taylorisme, le fordisme et la production de masse* [The Assembly Line and the Stop-watch: An Essay on Taylorism, Fordism and Mass Production], 2nd edn. Paris: Christian Bourgeois Editeur.
- Cuthbertson, R. (2005) 'Quick, Flexible and Smart: Interview with André Tordjman, Director of Marketing, Auchan', *European Retail Digest* 45: 31–5.
- Demil, B., Leca, B. and Naccache, P. (2001) 'Le temps de la stratégie: "l'institution temporelle", moyen de coordination' [Time and Strategy: "Temporal Institution" as a Means of Coordination], *Revue Française de Gestion* 132: 83–94.
- Dubois, B. (1991) 'Le consommateur caméléon' [The Chameleon Consumer], *Harvard L'Expansion* 61: 7–13.
- Duong, P., Mattiuzzo, N. and Paché, G. (1998) *La logistique de la grande distribution* [Retail Logistics], 2nd edn. Paris: Editions Eurostaf.
- Ehret, M. (2002) 'Enhancing the Productivity of Time in Global Supply Chains', in *Proceedings of the 6th Research Conference on Relationship Marketing and Customer Relationship Management*, pp. 1–20. Atlanta, GA. [CD-ROM]
- Filser, M., Des Garets, V. and Paché, G. (2001) *La distribution: organisation et stratégie* [Retail Management: Organization and Strategy]. Caen: Editions Management & Société.
- Filser, M., Plichon, V. and Anteblian-Lambrey, B. (2003) 'La valorisation de l'expérience en magasin: l'adaptabilité d'une échelle de mesure de la valeur perçue' [Perceived Store Value: An Analysis of Perceived Value Scale Adaptability], *Cahiers du Centre d'Etudes et de Recherches en Management de Touraine* 16(03–102): 5–24.
- Fitzsimons, G. (2000) 'Consumer Response to Stockouts', *Journal of Consumer Research* 27(2): 249–66.
- Georgescu-Roegen, N. (1971/1999) *The Entropy Law and the Economic Process*. Cambridge, MA: Harvard University Press.
- Hassan, R. (2003) 'Network Time and the New Knowledge Epoch', *Time & Society* 12(2–3): 225–41.
- Helms, M. and Ettkin, L. (2000) 'Time-based Competitiveness: A Strategic Perspective', *Competitiveness Review* 10(2): 1–14.
- Hendrix, P., Kinnear, T. and Taylor, J. (1979) 'The Allocation of Time by Consumers', in W. Wilkie (ed.) *Advances in Consumer Research*, pp. 38–44. Ann Arbor, MI: Association for Consumer Research.
- Hise, R. (1995) 'The Implications of Time-based Competition on International Logistics Strategies', *Business Horizons* 38(5): 39–45.
- Honoré, C. (2005) *In Praise of Slowness: Challenging the Cult of Speed*. New York: HarperCollins.
- Hope, W. (2006) 'Global Capitalism and the Critique of Real Time', *Time & Society* 15(2–3): 275–302.
- Lacroux, F. and Nourry, L. (1997) 'Temps et rythmes de la stratégie' [Time and Rhythms of Strategy], in *Actes de la 6^e Conférence Internationale de l'AIMS*, pp. 1–17. Montréal. [CD-ROM]

- McNair, M. (1957) 'Significant Trends and Developments in the Postwar Period', in A. Smith (ed.) *Competitive Distribution in a Free High Level Economy and its Implications for the University*, pp. 1–25. Pittsburgh, MI: University of Pittsburgh Press.
- Morgan, G. (1986/1997) *Images of Organization*. Thousand Oaks, CA: Sage.
- Paché, G. (2004) 'L'optimisation des ressources doit-elle être la finalité des stratégies logistiques dans la distribution alimentaire électronique?' [Must Resource Optimization be the Objective of Logistical Strategies in the e-Grocery Sector?], *Economies & Sociétés* 26: 451–69.
- Paché, G. (2006) 'Approche spatialisée des chaînes logistiques étendues – De quelle(s) proximité(s) parle-t-on?' [Spatial Approach to Supply Chains: Which Proximity(ies) are we Talking About?], *Les Cahiers Scientifiques du Transport* 49: 9–28.
- Parkins, W. (2004) 'Out of Time: Fast Subjects and Slow Living', *Time & Society* 13(2–3): 363–82.
- Porter, M. (1980) *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. New York: The Free Press.
- Sauvage, T. (2001) *Quelle organisation logistique face à la contrainte temporelle?* [Which Logistical Organization Faces Temporal Constraint?]. Nantes: Audencia Nantes Ecole de Management.
- Stalk, G. (1988) 'Time: The Next Source of Competitive Advantage', *Harvard Business Review* 66(4): 41–51.
- Stalk, G. and Hout, T. (1990) *Competing against Time: How Time-based Competition is Reshaping Global Markets*. New York: The Free Press.
- Walters, D. and Rainbird, M. (2004) 'The Demand Chain as an Integral Component of the Value Chain', *Journal of Consumer Marketing* 21(7): 465–75.
- Wilding, R. and Newton, J. (1996) 'Enabling Time-based Strategy through Logistics: Using Time to Competitive Advantage', *Logistics Information Management* 9(1): 32–8.
- Zinn, W., Mentzer, J. and Croxton, K. (2002) 'Customer-based Measures of Inventory Availability', *Journal of Business Logistics* 23(2): 19–43.
- Zollinger, M. and Desmet, P. (1998) 'Le temps, composante de la valeur et du prix' [Time, an Element of Value and Price], in J.-P. Bréchet (ed.) *Valeur, marché et organisation*, pp. 269–86. Nantes: Presses Académiques de l'Ouest.

GILLES PACHÉ is Professor of Logistics and Strategic Marketing at the Institut des Sciences de l'Entreprise et du Management (ISEM), Université Montpellier I, France. He is the co-author of *La logistique: enjeux stratégiques* (Vuibert, 2004) and *L'entreprise en réseau: approches inter et intra-organisationnelles* (Editions de l'ADREG, 2006). His major interests are supply chain management and network organization, areas in which he has published numerous journal articles and chapters in books. ADDRESS: Institut des Sciences de l'Entreprise et du Management (ISEM), Espace Richter, Bât. B, Rue Vendémiaire, CS 19519, 34960 Montpellier Cedex 2, France.
[email: gpache@univ-montp1.fr]