Peugeot Type 3 - 1891

Après un essai en 1889 avec un véhicule mû par un moteur à vapeur, Armand Peugeot produit en 1890 sa première automobile à moteur à pétrole, fabriquée en quatre exemplaires.

En 1891, afin de bénéficier de la publicité faite autour de la course cycliste Paris-Brest, il eut l'idée d'y participer avec un Vis-à-vis Type 3. Depuis Valentigney il parcourut ainsi 2 045 km à la vitesse moyenne de 14 km/h.

LA LETTRE DU GERPISA

RESEAU INTERNATIONAL
INTERNATIONAL NETWORK

N° 155

NOVEMBRE 2001

Peugeot Type 3 – 1891

After experimenting in1889 with a steam engine vehicle, in 1890 Armand Peugeot began to turn out his first petrole-driven automobiles. A total of four were made.
The following year he tried to take advantage of the publicity surrounding the Paris-Brest bicycle race, and thought it would be good to take part in a Vis-a-vis Type 3. Starting in Valentigney, he covered the course's 2,045 km at an average speed of 14 km/h.

Editorial

Yannick Lung

PEUT-ON IDENTIFIER UN MODÈLE EUROPÉEN ENTRE UNE VARIÉTE DES MODÈLES DE FIRMES ET UNE HÉTÉROGÉNÉITÉ DES CONFIGURATIONS INSTITUTIONNELLES NATIONALES ?

Penser la variété des modèles productifs des firmes a été au cœur du premier programme de recherche du GERPISA *Emergence de nouveaux modèles industriels.* Cela fait partie de notre « connaissance commune », au départ intuitive, qui s'est consolidée par les travaux du réseau et la théorisation proposée par Robert Boyer et Michel Freyssenet. La traduction de leur ouvrage *Les modèles productifs* en espagnol et en anglais devraient assurer une plus large diffusion de cette approche qui conteste toute approche en terme de *one best way*.

Au delà de la firme, cette démarche a aussi ses implications au niveau macroéconomique. Comme il y a dix ans, il fallait contester la représentation d'un modèle japonais de firme et sa variante, la « production au plus juste », il est tout aussi fondamental de déconstruire les discours sur la « nouvelle économie » en relativisant la performance des Etats-Unis au cours de la dernière décennie. Comme il y a plusieurs stratégies de profit efficaces, il y a plusieurs configurations institutionnelles qui ont assuré une forte croissance économique dans la période récente : certes, la performance de l'économie américaine est réelle, mais d'autres pays (le Portugal, l'Irlande, la Finlande, la Suède, etc.) ont réussi à s'inscrire dans le nouveau régime de croissance, alors qu'ils présentent des caractéristiques très différentes au niveau de l'emploi, du marché financier, etc.

CAN A EUROPEAN MODEL BE IDENTIFIED BETWEEN THE VARIETY OF PRODUCTIVE MODELS AND THE HETEROGENEITY OF NATIONAL INSTITUTIONAL CONFIGURATIONS ?

The first GERPISA international research programme *Emergence of new industrial models* focused on the varied nature of firms' productive models. This was part of our "common knowledge", an understanding that was intuitive at first, and which was later consolidated in the work that the network carried out and in the theoretical constructs that Robert Boyer and Michel Freyssenet developed. By translating their book *Productive Models* into Spanish and English, we will ensure a wider diffusion of this approach, which opposes any analytical avenue that is based on the concept of a *one best way*.

Above and beyond the firms themselves, this approach also has a number of implications at a macroeconomic level. 10 years ago, it was necessary to contest certain ways in which the Japanese model (and its variant, "lean production") was being represented. Similarly, today it is just as essential that discourses on the "new economy" be deconstructed. This requires that the United States' performance over the past decade be relativised. Just as more than one profit strategy is capable of being efficient, there are also a number of institutional configurations that have been able to ensure strong economic growth in recent years. Clearly the US economic performances have been real, but other countries (Portugal, Ireland, Finland, Sweden, etc.) have succeeded in finding a place for themselves in this new growth regime, even though they present characteristics that are very different in terms of labour relationships, financial markets, etc.

La dernière séance de travail du GERPISA a permis de débattre de ces questions à partir des travaux présentés par Robert Boyer dans la perspective de notre réflexion sur la possibilité d'un « modèle productif européen ». Dans le contexte institutionnel actuel de l'Union Européenne, il semble prématuré de parler d'un tel modèle européen, non pas du fait de la variété des modèles productifs des firmes – cette variété étant irréductible et constitutive de la dynamique d'une industrie – mais compte tenu de l'hétérogénéité des contextes institutionnels dans lesquels les firmes évoluent. Il y a certes une monnaie unique et les institutions associées, des éléments de politiques communes mises en œuvre par la Commission Européenne (politique de la concurrence, politique de la recherche notamment), mais subsistent des configurations très différentes entre les pays quant au système d'innovation, au rapport salarial ou encore au système financier (la *corporate governance* à l'anglo-saxonne n'est pas la règle, loin de là !).

Mettant en œuvre des stratégies de profit variées s'appuyant sur des modèles productifs tout aussi diversifiés, évoluant dans des contextes institutionnels parfois fortement divergents (par exemple entre l'Allemagne et la Grande-Bretagne), l'industrie automobile présente-t-elle une cohérence suffisante qui autoriserait à définir un système automobile européen et qui permettrait de le différencier des autres régions du monde (Amérique du Nord et Japon notamment). La réponse à cette question n'a pas qu'un intérêt intellectuel ou métaphysique (le système automobile européen existe-t-il ?) car d'elle dépend la définition d'un référentiel et d'un registre d'actions pour les dirigeants des firmes comme pour les salariés ou les pouvoirs public.

Le prochain séminaire CoCKEAS à Berlin s'efforcera de fournir des éléments de réponse dans une démarche comparative qui saisisse la singularité d'un tel système par rapport aux autres régions du monde tout en prenant en compte la diversité interne qui est constitutive de ce système. Un défi intellectuel stimulant car penser la complexité ne s'accorde pas de visions simplistes du monde.

The last GERPISA's *Jounée de travail* provided a forum for debating these issues on the basis of Robert Boyer's work. This was carried out within the framework of our thinking on the possible existence of a "European productive model". Given the European Union's current institutional context, it appears premature to talk about such a European model, not because of the varied nature of firms' productive models (a variety that is irreducible and which gives birth to the dynamics that drive a given sector) but due to the heterogeneity of the institutional environments inside of which firms actually operate. Of course, the single currency does exist, as do the institutions associated with it. All of this represents elements of the joint policies that the European Commission has implemented (competition policy and research policy, in particular). However, extremely different configurations subsist between countries with respect to their innovation systems, labour relationships and even financial systems (Anglo-Saxon corporate governance is far from being a rule!)

With the automobile industry's implementation of a wide variety of profit strategies (and therefore reliance on just as wide a variety of productive models), and given the fact that it operates in institutional environments that can diverge just as widely (compare for example Germany and Great Britain), there is a question as to whether the sector presents enough coherency for us to be able to define a European automobile system that can be differentiated from the world's other regional markets (notably North America and Japan). The answer to this question is not only interesting from an intellectual or metaphysical point of view (does such an entity as an automobile system actually exist?). It depends on whether it is possible to define benchmarks and/or an inventory of possible actions that could be taken by firms managers, employees, or policy makers.

The upcoming CoCKEAS workshop in Berlin will be an attempt to supply elements of response. It will adopt a comparative approach that delves into the singular nature of this system, when compared with the world's other regions. Analysis will achieve this whilst integrating the internal diversity that lies at the heart of the system. This will be a stimulating intellectual challenge.

Nouvelles du programme – Programme News

COCKEAS WORKSHOP IN BERLIN, NOVEMBER 23/24, 2001

The Distinctiveness of the European Automotive System

The aim of the workshop is to discuss characteristic features of the European industry and their recent development from a comparative perspective.

The central question: Is there a specific European approach in co-ordinating competencies and knowledge? The call for papers goes to European and Non-European researchers to present their views and findings on this question.

Following the CoCKEAS framework discussion will focus on four subject areas:

1. Inter-firm relationship, and in particular the relationship between car makers and system integrators;
2. the relationship between car makers and design and engineering companies and the integration of new activities such as recycling and services;
3. corporate governance structures and their changes due to financialisation and strategic shifts into sector matrix activities (finance, car-user services etc.);
4. regional clustering of automobile activities and the development of (new) automobile districts, e.g. geographical impacts of structural changes in the auto industry.

In order not to overstate European idiosyncrasies it will be important to provide an international comparative perspective to the structural changes occurring in the European auto system in view of :

1. the changes occurring in the two other main automobile systems (North American and Japanese) and
2. changes taking place in the emerging countries and their relationship to the European automobile system.

Deadline for the papers November 10th, 2001 (juergens@medea.wz-berlin.de).

The meeting begins at 9:30, November 23, and finishes at 13:00, November 24.

Débat

THE CASE FOR CAUTIOUS OPTIMISM (2nd part)

Takahiro Fujimoto

This is the second part of Takahiro Fujimoto's paper. The first part has been published in the issue 154 of the "Lettre du GERPISA", pp.4-7. Pour les lecteurs francophones, une version résumée des principales hypothèses discutées par Takahiro Fujimoto est disponible dans le chapitre 10 de l'ouvrage édité par Robert Boyer et Pierre-François Souyri* "Mondialisation et régulations. Europe et Japon face à la singularité américaine" *(Editions La Découverte, Paris, 2001, pp.131-137).*

IT AND CAPABILITY

Organization Matters in the Era of IT

Let's take an example of the first twist, where IT investment without appropriate organizational capabilities failed to create competitive advantages in manufacturing performance. This is the case of advanced Computer-Aided Design and Engineering (CAD and CAE) and its impact on product develop lead times. The key here is the organizational capability of «front-loading» problem solving.

Many of the Japanese automobile manufacturers suffered from relatively poor profit performance due to the stagnant domestic economy, appreciation of the yen, major strategic mistakes and so on. Some Japanese firms with worse financial performance had to strengthen strategic alliance with cash-rich foreign automakers such as Ford, Renault, Daimler-Chrysler and General Motors, with the latter holding minority equity and supplementing the former's ability of strategy formation. The strategic weak-ness of some Japanese firms was finally revealed in this post-growth period.

By contrast, by the mid 1990s, the Japanese automakers started another round of capability-building efforts to make up for the deterioration in their financial performance, and thereby improved manufacturing performance further. In product development lead times, most Japanese firms (including not only Toyota and Honda but also Nissan and Mazda) started to shorten lead times (from exterior design approval to start of sales) drastically. During the 1980s and the early 1990s, Japanese manufacturers' average lead-time was about 30 months against about 40 months for their U.S. and European counterparts.

Although better Western firms like Chrysler (its Neon project, for example) cut lead times significantly to less than 40 months by introducing project team organization and digital engineering, the Japanese lead time advantages remained.

The IT-LT Paradox

During the late 1990s, significant changes in both IT and lead times happened in the world auto industry. On the one hand, IT for product engineering, including advanced three-dimensional CAD and CAE, was rapidly adopted by automakers worldwide. Japanese firms tended to lag behind their U.S. and European counterparts in technological advancement and amount of investment in this area. On the other hand, lead time was cut more drastically in Japan: from about 30 months in the early 1990s to less than 20 months at the end of the 1990s. Although Western firms also made efforts to cut lead times to 30 months or even less, the lead-time advantages of the average Japanese firms actually widened in the late 1990s. How can we explain this IT-LT paradox or performance twist between information technology and lead-time?

The key to solving this puzzle is, according to the author's empirical analysis, again, organizational capabilities. This is the era of open system IT, which any major company can adopt. So it is naturally difficult to outperform rivals with IT alone. Some firms with higher capability of organizational problem solving, however, can utilize such IT much more effectively than the rest, and thereby widen the lead in manufacturing performance in areas such as lead times. In other words, inter-firm gaps in organizational capabilities are even amplified when certain performance-enhancing IT is introduced. This is the mechanism of the IT-LT paradox.

Front-loading as Early Problem Solving

More than anything, front loading was the most important organizational mechanism in explaining the lead-time cut among the Japanese (Fujimoto, *New Product Development and Production Networks, 2000; Thomke and Fujimoto, Journal of Product Innovation Management*, 2000). Let's explore its logic and practice. To the extent that we characterize a product development project as a system of numerous problem-solving cycles,

we can define front-loading as early acquisition of information for early completion of problem solving. Front-loading, in this sense, refers to a situation in which (1) increasing problem solving cycles at the early stage (activity front-loading) or (2) prior knowledge about past problem solving (knowledge front-loading) reduce the necessary amount of problem solving cycles at a later stage so that the overall resources and/or time needed for the entire product development is reduced.

Let's examine the case of activity front-loading within a certain task or stage, in which early and rapid problem solving cycles (CAE, for example) reduces iteration of long cycle problem solving (prototypes, for example) later on. For simplicity, suppose that there are two types of simulation models (figure3): physical prototypes and virtual computer models. Traditionally, physical prototyping tended to need longer lead times and had higher cost per cycle, but enjoyed higher fidelity (reliability of results of each run). By contrast, virtual simulations were relatively rapid, but their overall fidelity or representativeness was lower than for physical models (the lower saturation level in figure 3).

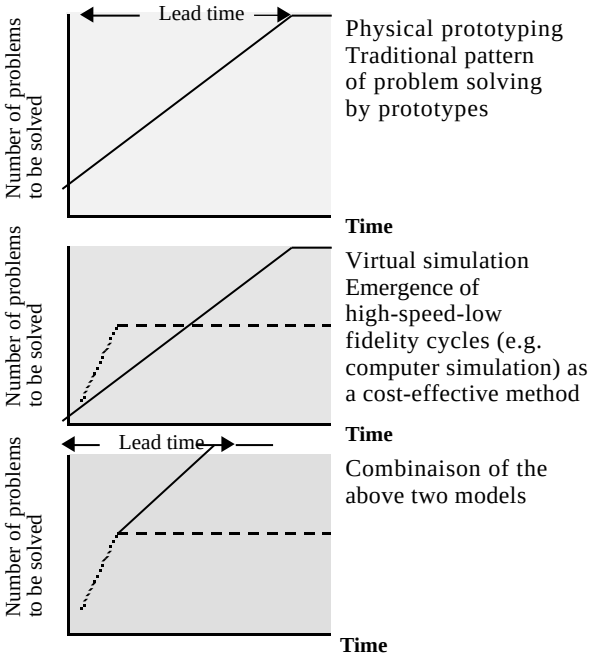

Figure 3. – *Early Problem Solving (Activity Front-loading)*

As fidelity of computer models increased (or unit cost to achieve the same fidelity decreased), virtual iterations became economically and technically feasible. Firms started to make many iterations of virtual prototypes (low cost, short-cycle time methods), which enabled the first physical prototype to be built closer to the ultimate target range so that the number of the latter iterations could be dramatically reduced. As a result, total number of iterations (virtual + physical) may increase, but total lead time is reduced.

The name of the lead time cutting game in the 1990s was to make the first engineering prototype (and prototype drawings) as complete as possible and cut the prototype iteration, or to solve as many problems as possible before the first prototype drawings are released. This is essentially what we mean by «early problem solving.» In other words, the bottom line is to solve target customers' problems through introduction of a new product as early as possible. Conceptually, this means shifting the cumulative problem-solving curve to the left (Figure 4). Let's assume a case of a full model change. The model is renewed because the auto-firm judges that the existing one does not solve target customers' problems any more. The gap between the existing model's functions and future customers' expectations is the overall problem to be solved, which can be decomposed into literally thousands of sub-problems. We can plot the number of such sub-problems found and solved on the vertical axis, with time on the horizontal axis, and draw a cumulative problem-finding curve, an alternative generation curve, and a problem-solving curve for product development. An organization's dynamic capability for shortening lead times is nothing but a firm's ability to shift this cumulative problem-solving curve to the left.

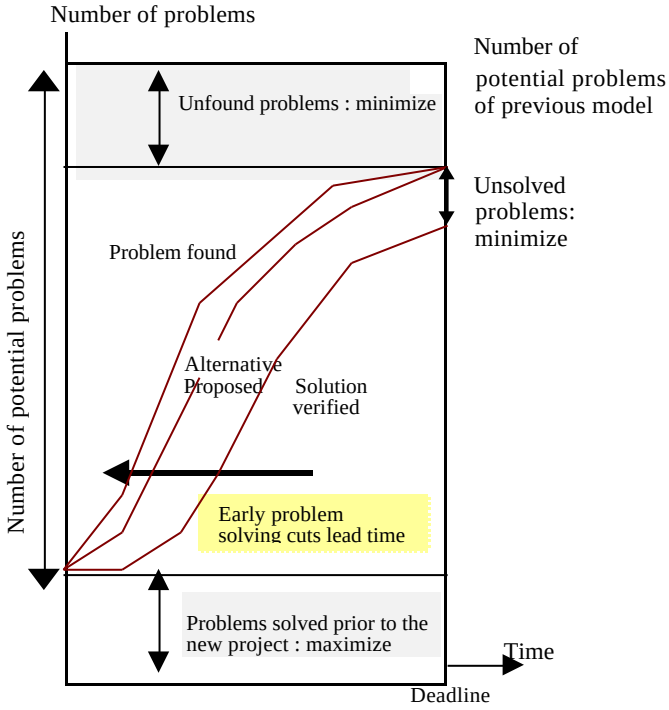

Figure 4. – *Shift of Cumulative Problem Solving*

Measuring Front-loading Capability

Most of the practitioners in product development understand the basic logic of front-loading explained above. However, understanding front-loading is one thing, implementing lead-time cutting is another. For example, very few companies actually measure the cumulative problem-solving curve, which represents the firm's product development capability. In order to control the lead-time cutting process, one needs to measure when and how a problem was found and solved. This requires tenacious organizational efforts, but to the author's knowledge, few companies do this, with the notable exception of Toyota.

Evolutionary Learning Capability

If a pattern of industrial evolution follows the Type A path, with stable and integral product architecture and intensive international competition, what is the necessary competence that companies need to possess in order to cope with the external shocks and crises in the 1990s and beyond? A certain dynamic capability of capability building, which I call «evolutionary learning capability,» is the key for survival and growth where the pattern of industrial evolution follows that of multi-path system emergence (Fujimoto, 1999).

Multi-Path System Emergence

In order to analyze the evolutionary dynamics of the system, the author classified patterns of system changes at Toyota Motor Corporation over the past half century into several types: (1) Random trials (pure chance); (2) Rational calculation (an organization deliberately chooses a new course of action that satisfies or maximizes its objective function by examining a feasible set of alternatives based on its understandings of environmental constraints and the limits of its capabilities); (3) Environmental constraints (an organization's scope of actions is constrained by objective or perceived environments); (4) Entrepreneurial vision (a desirable set of activities is directly chosen by entrepreneurs of the organizations based on their visions without much analysis of their capabilities and constraints); (5) Knowledge transfer (a certain pattern is transferred from one organization, inside or outside of the industry, to another).
Now, let's take the position of decision-makers on the spot. In the real world, effective manufacturing routines emerge through a much more complex process than straightforward competitive-rational decision-making. While it's often possible to identify a total system's competitive rationality after the fact, each element may have emerged for other reasons than competitive advantage, such as unforeseen historical imperatives or forced technology transfers.

When decision makers do not know which paths of system changes are realized in the future, we may call such a situation «multi-path system emergence.» The author's historical analyses generally indicate that Toyota's history of manufacturing capability building is best described as one of multi-path system emergence (Fujimoto, 1999).

Evolutionary Capability: Toyota's Ultimate Competence

As a part of this evolutionary learning capability, certain firm-specific abilities for converting unintended trials and emergent practices into competitive routines–opportunistic learning capabilities–may play an important role. This complex interaction between system emergence and evolutionary learning may explain why companies like Toyota could outperform their rivals in building effective capabilities–like the Toyota Production System and Total Quality Control–for so many years.

Historical analyses of some major components of the system, based on the above framework, revealed that the manufacturing capability of the effective Japanese automakers like Toyota gradually emerged as a result of complex interactions of entrepreneurial visions, historical imperatives, inter-firm and inter-industrial transfer of resources and practices, as well as pure chance.

The study clarified that the Toyota-style manufacturing system of the 1980s was formed not by ex-ante rational decision making by the founder-entrepreneurs of the companies, although the resulting system may have been ex-post rational. Thus, Toyota somehow had a distinctive ability to cope with the chaotic process of system emergence and thereby built competitive routines and capabilities earlier and quicker than rivals did. This dynamic capability may be called evolutionary learning capability (*Evolution of a Manufacturing System at Toyota*, Fujimoto, Oxford University Press, 1999).

STRATEGY-FORMULATING CAPABILITY

Finally, let's turn to the second capabilities that many of the Japanese firms of the twenty-first century need to strengthen: strategy-formulating capability.

Balancing Domain Selection and Capability Building

One of the basic principles of strategic management is to balance the following two tasks: (1) analyze competitive environments that the firm faces and select market and industry segments with higher business opportunities and lower threats; (2) build up distinctive competence for outperforming rivals in each of the selected segments.

In the last half of the twentieth century, major Japanese manufacturing firms tended to be relatively good at capability-building, the second missions, but were relatively poor at domain selection, the first aspect of strategic management. Typically, many Japanese manufacturing firms of similar capabilities tended to rush into the same seemingly attractive segments without careful environmental analysis, compete intensively in that crowded segment, build capabilities quickly for survival, and suffer from low profitability. While this may have been a good news for consumers, the Japanese firms in the first half of the twenty-first century may need to pursue better strategic balance between deliberate domain selection and tenacious capability building for financial survival.

Architectural Strategy

A careful architectural strategy would be necessary for many internationally competing companies to appropriate profits out of its capability mix. Quite simply, a typical Japanese firm would need to make the most of its strength in the business with the product architecture that it is good at (that is, according to the rough-cut analysis above, integral architecture products). In the business with product architecture that the company is not good at (open architecture products), by contrast, the same firm may need to learn intensively from the best-practice rivals, make strategic alliance with them, or buy them if necessary, in order to make up for its architectural weakness. Thus, the firm needs to pursue a «dual architecture strategy.» Or the firm may simply refrain from such adversarial areas and focus on the architecture that it is good at.

U.S. Truck Business of the 1990s

A remarkable example of the effective «dual architecture strategy» is the U.S. auto-makers in the 1990s. It is important to note here that the Big Three U.S. firms were

historically producing truck-architecture products with a body-on-frame structure, as opposed to the typical European and Japanese small cars of the 1970s and thereafter with their unit-body structure. Quite consistent with the above hypothesis, the truck architecture, with body and frame functionally separable, was a more modular one than the unit-body small cars, which tended toward integral architecture.

From Ford's Model T to GM's annual model change strategy, and to the high-profit strategy of large American makers like Cadillac in the 1970s, U.S. auto firms were relying almost entirely on truck-style architecture products until the early 1980s, when the second oil crisis finally forced them to shift to smaller cars with unit body structure –architecture that the U.S. firms were not good at.
To buy time for the major architectural change from the modular (truck) to integral (small car) architecture, the U.S. auto industry pursued restriction of imports of Japanese cars with integral architecture in 1981. They also started intensive learning of Japanese integrative management technologies, such as Toyota Production Systems, in order to catch up with the Japanese rivals in the integrative small car segment.

This was not all, however. The U.S. automakers, since the mid-1980s, started to re-introduce various truck architecture products that traditionally they were good at: minivans, pick-up trucks, and truck-based sports utility vehicles (SUVs). Over half of the huge U.S. market of the late 1990s chose these types of vehicle, and the market grew rapidly. Thanks to the effective product and marketing strategies of the U.S. firms, strategic mistakes of the Japanese firms virtually ignoring the American truck-based segments, 25% tariff protection, the U.S. economic boom of the 1990s, and so on, the market for truck-based vehicles turned out to be quite a lucrative one. The category enjoyed a high growth rate and profit per vehicle over twice that for sedan-type cars.

This dual architecture strategy, which was quite effective until the end of the 1990s, is the main reason why the U.S. automakers enjoyed much higher profitability than their Japanese counterparts in the late 1990s.

Meanwhile, the Japanese makers were sticking to the single architecture strategy. Thanks to their integrative capability, Toyota and Honda could market their best-selling products (Camry and Accord) in the U.S. passenger car market and made decent profits, Japanese manufacturing performance.

The Lesson from the Dual Architecture Strategy

In an integrative business where product architecture matches the Japanese firm's existing capability, the firm should try to expand it by stressing the benefits of integrative products to the customers (performance advantages of optimally designed products, for example). In the open-modular business where better performers are likely to exist outside Japan, the firm should do benchmarking studies, find target best-practice companies to learn from, pursue alliance wherever appropriate, or quit the business whenever the obstacles are too big for the firm. In short, the dual strategy is an application of the very basic principle of strategic management: expand business wherever the firm is strong, and find complementary resources or learn from the best practice wherever the firm is weak. In many of the markets where the product's architecture is integral and customers appreciate product integrity, many Japanese manufacturers still enjoy competitive advantages in manufacturing performance. Although most of the rapidly growing sectors in the IT/Internet era consist of digital products with open architecture, integral architecture products still occupy a large portion of today's economy. In this type of industry, Japanese firms should not abandon their integrative business and rush into the open-modular business, but keep and expand the integrative business while at the same time strengthening their capability for open-modular business.

Regaining the Strategy-Operation Balance

For average Type A firms, there are at least two kinds of organizational capabilities they need to acquire for long-term survival: evolutionary learning capabilities and strategy-formulating capabilities. They may learn the former from Toyota; they may learn the latter from excellent companies outside Japan.

In any case, the Japanese manufacturing firms in integral architecture business should not underestimate the potential and actual competence of their own factories and technical centers. The real bottleneck is likely to be with headquarters that are unable to formulate grand strategies for appropriating profits from their manufacturing capabilities. In many cases, what they have to overcome would be the twist between manufacturing performance and profit performance, which stems from the capability gap between «stronger factory» and «weaker headquarters» vis-à-vis their Western rivals.

From this point of view, the Renault-Nissan alliance is an interesting case for the operation-strategy twist. This alliance should not be viewed as a simple matter of equity purchasing by Renault. We should focus on the more fundamental post-merger process of mutual learning between the two firms. In short, Nissan is learning from Renault in strategy formulation, brand identity management, and other areas of headquarter management, while Renault is leaning from Nissan's factory management and product engineering processes. Although it may be too early to draw any conclusion, the Nissan-Renault case may be a precursor of many Japanese firms' efforts to regain balance between their operational and strategic capabilities.

For many of the Japanese manufacturing firms, one of the most important challenges is how to deal with the performance twist. Headquarters' vision and leadership are critical.

* *
*

Les nouvelles des firmes – Firms News

FORD EUROPE : IN NEED OF REVITALISATION?

Tom Donnelly & David Morris

In recent years the Ford company has had to come to terms with the forces of globalisation, the challenges posed by the Japanese producers, the consequences of lean production in supply chain management and the emergence of new market segments. Ford's difficulties have not been confined to any one part of its empire, but are acute in Europe. The European market is the most competitive market in the world with around 30 companies contesting it. Profits are hard to come by and, at the volume end of the trade, margins are thin. Moreover, the region suffers from excess capacity, estimated at 3 – 5 million units. Effectively, this has an adverse impact on costs and is not helped by growing market fragmentation as demand moves more towards sports utility vehicles, premium brands, small city cars and what might be termed novelty vehicles such as Ford's own forthcoming SportsKa. This paper intends examining firstly, why Ford has performed so badly when other European majors proved profitable. Secondly, the paper will assess the effect of Ford's own structural difficulties and, lastly, there will be an evaluation of Ford's recovery plans, its attempts to restructure, control its costs, develop new models and move up-market through its Jaguar, Volvo, Aston Martin and Land Rover brands.

Ford Europe's Problems

The problems facing Ford Europe over the past decade must be seen against the backgrounds of globalisation, lean production and modularization. The fundamentals of these are so well analysed elsewhere that no recapitulation is required here.. Ford is often considered the archetypical global company. Shortly after its foundation, Ford became a pioneer of American overseas direct foreign investment and, 1913, opened an assembly plant in Britain. Until the 1960s, Ford's UK and its European operations functioned separately, but, in 1967, were united to form *Ford Europe*, giving a strong regional identification. Over the following two decades Ford Europe performed well and from 1980 until 1986 its profitability helped offset losses sustained in the American market. After this Ford Europe began to struggle, market share gradually fell to circa 8 per cent in 1999-2000 and between 1992 and 2000 annual losses accumulated to $2.6 milliard dollars

Ford's performance must be judged within its European context. By the middle 1990s, the European car market was almost in a state of saturation with an annual growth rate of only 2 per cent. New capacity was coming on stream faster than old facilities were being eliminated and matters were made worse by competition from both Japanese imports and from vehicles produced in Japanese transplant factories within Europe. Indeed, Japanese European produced output rose from 500,000 units in 1995 to 650,000 four years later.

Ford's specific difficulties were deep rooted and can be traced to poor model development, excess capacity, a failure to recognise the emergence of new market segments, cost control and the relative failure of *Ford 2000*.

The adverse effects of excess capacity are well documented and there is little doubt that these affected Ford as much as any other concern. Ford's build capacity in Europe until recently was in the order of 2.25 million vehicles yet its sales in 1999 were only 1.7 million units. The problem of costs are also reflected in the fact that on sales of $30 billion dollars in the same year, Ford earned a return of no more than $28 million dollars. This financial performance was mirrored by an equally dismal decline in market share. At the end of the 1980s annual demand for new cars in Western Europe stood around 10 million units and Ford regularly took second place in the market share league with around 10-11 per cent. Since then the market has expanded by nearly 50 per cent, but Ford's market share has grown by only 5 per cent giving it an overall share of between 8 and 9 per cent. In Eastern Europe the position was even worse. Ford in 2000 achieved a market share of a mere 6 per cent, taking seventh place in the league, while both Fiat and Volkswagen enjoyed rates of circa 18 per cent each, causing Nick Scheele, Ford's chief executive in Europe, to declare, 'Our European business situation was unacceptable'.

The reasons behind this performance are complex, but are bound up with a lack of model development and the fall-out from *Ford 2000*. The latter originated in an attempt in 1995 by the then Ford Chairman, Alex Trottman, to turn Ford America and Ford Europe into an integrated global company by the year 2000 by merging the American and European operations in 1996 with the Latin American and Asian facilities joining the next year. The intention was to slash Ford's annual costs by $3 billion dollars by eliminating duplication in product development, using fewer suppliers and improving productivity. Allied to this was cutting bureaucracy by sacking 20 per cent of top managers and creating multifunctional teams. Trottman intended breaking Ford's bureaucratic procedures and reducing the time to approve new projects to less than a month. *Ford 2000* envisaged geographical expansion in markets such as China, Vietnam, India and Poland and a complete restructuring in South America. Such aspirations presented challenges. There was a necessity for the American and Europeans to share power, learn to work more closely and so avoid power struggles that might inhibit the flow of new models. Pricing strategy had to change. Ford had for years relied heavily on discounts on sales when demand slackened to maintain its market share. It was, therefore, vital to get a proper pricing structure and so raise the profit per unit of output. Finally, in *Ford 2000*, the company admitted that it lagged behind the Japanese in developing markets.

Ford's excess capacity has already been alluded to, but more important than this were the centralising tendencies of *Ford 2000* which further compounded poor model development. Under the terms of *Ford 2000*, all decision making on model design and market development was located in Dearborn.

The company's desire to expand in Latin America and Asia seemed to relegate Europe to a position of secondary importance. This could not have happened at a worse time. European consumers were demanding more 'car' for less money, becoming less nationalistic and prepared to drive imports from the Far East. Ford found that it could no longer hike prices as it had in the past to raise its revenue; customers simply switched to other brands.

This situation was further complicated by the fact that Ford's volume models were ageing rapidly and fairing badly against European counterparts This was made worse by the fact that in key emerging sectors such as MPVs, sports models, convertibles or the monospace Ford had no presence. Moreover, cars such as the Scorpio, the Cougar, the Puma and the Ka failed to make a significant impact and it is no coincidence that these have been phased out of production. Even in the 4x4 class Ford had nothing to match the Toyota Rav4 in quality. The only recent success has been the Focus which has become Ford's best selling European model. Between January and July 2000, 500,000 Focuses were sold world-wide and 300,000 of these sales were in Europe. The failure of the Scorpio at the top end of the market was perhaps indicative of Ford's failure to break into the Premium Brand segment, while at the bottom end, its declining Fiesta models found it hard to compete.

An important additional factor was the failure to realise the importance of diesel engines in Europe where 33 per cent of all cars fall into that category. In comparison with European diesels Ford's own products were considered poor quality. Similarly, there was an equally significant failure to adopt turbo powered or fuel pump injection technology. Even as late as 1998 neither the Focus nor the Ka came with automatic transmission. Even the company's premium brands were failing to live up to expectations. Aston Martin which had been bought in 1987 had never shown a profit, while Jaguar's profits were fairly insignificant and in no way compensated for the relative failure of volume models to generate cash. Essentially, Ford became a weak and failing brand.

Restructuring Ford

Eventually Ford realised the seriousness of its situation in Europe and in 1998 Trottman promised 45 new models over the following five years, which in itself was an indictment of the serious deficiencies in *Ford 2000.* What the company required was almost a complete restructuring, a revitalised management team and the implementation of policies to enable the company to reduce costs, get rid of excess capacity, change relationships with suppliers, develop new models and to compete across all market segments. In other words a complete turnaround. This began when Jac Nasser succeeded Trottman in late 1998.

Nasser changed his senior Europe Management team. Nick Scheele was transferred from Jaguar in the UK to bceome Senior European Vice president under the tutelage of David Thrusfield. Mike Beasley replaced Scheele at Jaguar with Ulrich Bez being recruited from Daewoo to take over at Aston Martin. Of significance was the recruitment of Wolfgang Reitzle, a former BMW director, to lead Ford's newly created Premier Automotive Group in 1999. Overall Ford created a new strong management team with sufficient credibility to impress the markets and provide leadership.

Nasser differed from Trottman.The latter had tried to deal with the nuts and bolts issues affecting the firm, whereas Nasser's intention was to change Ford from being simply a car company into a 'consumer product and service company pursuing profit right down the value chain'. Crucial to this though was cost cutting. Scheele described the problem bluntly by saying, 'The only way we're going to get out of it is to get product and costs under control'. Most of the excess capacity that existed in Europe belonged primarily to two firms, Rover and Ford, with Volvo and GM being lesser culprits. In contrast almost every other major concern was working at near full capacity. The initial response was the closure of small plants in Poland and in Belarus and a withdrawal from a joint venture with Volkswagen, Auto Europa, in Portugal where the Galaxy model was made. Redundancies were effected in plants in Belgium and Germany where the work force was reduced by 2000.

In Britain Fiesta production ended at the Dagenham plant in London and the factory was turned over entirely to engine production. The Essex factory's plight was not helped by the strength of Sterling against other currencies, making it expensive to export to Europe. Finally, to reduce fixed costs further, Mazda will produce Fiesta clones at Ford's Valencia plant.

Factory closures were only a palliative and considerable reorganisation of production was required if Ford was to avoid the plant inflexibility which had so damaged its unit costs in the middle to late 1990s. In 2000 Ford's five major assembly plants were subjected to stringent business reviews. The outcome did not end complete specialisation in every plant but offers a degree of flexibility. Genk in Belgium, for example, will remain the main factory for Mondeos and Transits. The ultimate outcome is that all vehicle operations plants will become flexible bodyshops, based on modular assembly, located near supplier parks and operating on a three shift pattern This should reduce Ford's fixed costs by $2 billion dollars between 2000 and 2003.

Closures and reorganisation were only one facet in Ford's attempts to prune its costs. It is also attacking its variable costs. Between 2001 and 2004 raw materials costs will by cut by 10 per cent from their current 2000 figure of $18 billion dollars and spending on tooling and equipment will be reduced by $1.2 billion dollars a year over the same period. Concurrent will be an annual 10 per cent reduction in the work force. Indeed, over the year 2001-2002 alone expenditure will fall by over $2 billion dollars.

Ford's approach though is not all negative. It is aware of the need for new investment if new models are to be produced. Recently, Halewood has been almost entirely rebuilt after the cessation of Escort production there at a cost of $450 million to facilitate production of the new Jaguar X Type. Similarly, the revamping of Cologne to accommodate the new Fiesta has cost $275 million. Finally, Land Rover's ageing plant at Solihull has enjoyed new investment of up to $130 million dollars with another £500 million to follow to improve assembly facilities and above all quality. Despite the ending of car production at Dagenham, the site is poised to become a major world centre for engine development and production.

It will become Ford's main source of diesel engines in Europe and in the near future will receive nearly $40 million in new investment. Bridgend, too, is set to expand with Ford's announcing in February 2000 that the plant will get a capital injection of $236 million and 600 new jobs to make the new V 6 and V 8 engines to power Jaguars as well as other PAG vehicles, lessening the need for UK factories to import high powered engines from Detroit. A major strand in Ford's new strategy centres on spreading costs across models, in forging new relationships with suppliers and entering into joint ventures. Ford's weakness in diesel engine production led to its forming a partnership with Peugeot to produce a new series of state of the art small diesels, called the Gemini family. The first of these, the Duratorq at 1398cc, will deliver advanced fuel economy, driveability, low emissions and will first power the Focus and the new Fiesta. Future engines in the 3-4 litre class will be used in Jaguars from 2004 onwards and, when at full capacity, will give Ford an extra 750,000 new diesel engines a year, enhancing its market presence. Finally, Ford and Daimler Chrysler have agreed an engine sharing deal for European versions of the Ford Explorer.

Ford has also begun to outsource its non core activities. Perhaps the best example of the company's new found spirit is its decision to enter into a joint venture with Getrag, the German transmissions company. Formed in February 2000, the new $5 billion dollar venture, known as Getrag Ford Tranmissions Gmbh 2000, will see Getrag assume responsibility for producing all of Ford's manual transmissions in Ford's European plants at Halewood, Bordeaux and Cologne. The new Cologne based firm will produce 1.6 million manual gear boxes per annum and between 2001 and 2006, a new generation of manual and automated transmission systems will be developed, putting Ford at the forefront of power train technology.

Amortizing costs across models means that Ford is embracing modularisation. For example, the new Mondeo has been launched on a CDW 132 platform and of these Ford intends making 400,000 per annum, a volume viable only if shared across models. There is no doubt that the carry-over componentry and the experience gained in bringing the new Mondeo to market was of considerable help to Jaguar as the X Type was developed within 24 months as well as demonstrating how the PAG can benefit from the resources of the whole group. There is, however, a serious caveat if Ford wishes to extend commonality of modules across both its volume Blue Oval badged models and its Premier Automotive Group (PAG) vehicles. In following this route there is the danger of diluting the brand image of PAG cars. For instance, when the rumour broke that the Jaguar X-400 was to share the same platform, engine and transmission as the new Mondeo, it was postulated that the X-400 could turn out to be 'a Mondeo with steroids'. Clearly, Ford has to ensure that its PAG products deliver both the right quality and image or possibly lose customers.

In pursuing modularisation, Ford is pressing very heavily on its suppliers to improve their efficiency, effectiveness and also lower their prices. Thus, suppliers are being forced to help improve Ford's position and to an extent help finance it; the argument being that what is good for Ford in the long run will be of obvious benefit to the suppliers. In keeping with rivals such as Volkswagen, Renault and Fiat, Ford has created supplier parks, four of which are at Genk, Cologne, Saarlouis and Valencia. Taking the first of these as an example, Ford has teamed up in a joint venture with two conveyor and logistics suppliers to form Conveyor Services Genk to supply the plant for the new Mondeo. The idea of a supplier park is by no means novel, but it it the sheer scope of this project which emphasises its novelty. All parts for the car are supplied by a conveyor bridge from the park to the assembly lines and include modules/sub assemblies as varied as doors, engines, front corners, cooling modules, headliners, door panels and seats from suppliers such as Lear, Textron, SMD and TSD Essors. Each supplier had to purchase space on the park, and, as part of the purchasing agreement, had to agree to sell its spot in the park in the event of Ford cancelling its contract.

In a first for Ford, two equipment suppliers, the body work machinery makers, Comau and Kuka will own and maintain the equipment, but Ford's own workers though will staff the line. In the past suppliers of manufacturing equipment were paid up front for equipment installation, but at both Cologne and Genk, Ford has reversed this and suppliers will not be paid until the line is actually working. The partners will be reimbursed on a per unit basis for each body they build Ford call this POP (pay on production). Indeed, Ford's partners no doubt hope that future vehicles will become cash cows. Ford has laid stress on improving its brand image through new models and is intent on not making too many units as it did with earlier vehicles such as the Escort, Mondeo or Fiesta and then being forced to sell these at a discount. Supply will be matched with demand for the new Mondeo, for example, and so discounting and devaluing the brand will be avoided.

Strict control will be exercised over PAG products, which are targeted at specific market segments and which will be produced in increasing numbers. Jaguar's output will rise to circa 200,000 units a year, Aston Martin to 2,5000, Volvo to 600,00 and Land Rover to 220,000 cars per annum. Each will bear a specific image designed to appeal to different types of customers. Jaguar will carry the sleek, sporty image, whereas Volvo represents safety and environmental friendliness. Land Rover evokes 'British ruggedness' while Aston Martin is aimed at luxury customers such as the Sultan of Brunei. Each will be promoted as a separate brand and synergies sought through careful modularisation. and the sharing of best practice.

Conclusion

Finally, the objective of Ford's restructuring is to produce a range of models that can compete virtually every market segment. At the volume end of the trade where the market is virtually stagnant, this requires the ability to take share from rival concerns which will be far from easy. At the opposite end of the scale the market is expanding and this poses a different range of problems when competing against BMW, Mercedes and Lexus. Care will have to be taken to ensure that pag products are 'genuine' and not simply 'tarted up' fords, especially if there is too much of a perceived commonality between them and volume models. Similarly, there is a risk that expanding production of the pag models too quickly may lead to a dilution of their relative scarcity value, but volume expansion does not appear to have harmed either bmw or mercedes. It is to be hoped that Ford's strategy here is a carefully calculated risk rather than a foolish

gamble that may backfire. A final word of caution is essential. Although there are claims that scheele's actions have managed to turn round Ford's reputation, the current drop of 5.5 per cent in European cars sales expected in 2001 and the further anticipated drop of 4.1 per cent in 2002 may put a break on Ford's overall financial recovery even if its cost cutting and restructuring exercises have been successful.

PININFARINA AND PORTUGUESE AUTHORITIES AGREED TO STUDY SOLUTIONS TO FOSTER A NEW CYCLE IN THE LOCAL AUTOMOTIVE INDUSTRY

José Camacho

The Portuguese Minister for the Economy, Luís Braga da Cruz, along with Sergio Pininfarina, Chairman of the Pininfarina Group, met on 17th September to analyse the interim results of the P3 Project, which has been underway since the signing of a contract between the Portuguese Authorities and Pininfarina Studi e Ricerche S.p.A., at the beginning of the current year.

Interim results, were presented at the annual meeting of GAMC – Global Automotive Management Council that, this year, took place in Sintra, Portugal to an international group of specialists and representatives of the industry, point to the development of a new vehicle concept, and eventually to an approach involving an innovative, flexible, modular hybrid powertrain and platform, designed to target different market niches.

To date, the multi-disciplinary team project, co-ordinated by Pininfarina Studi e Ricerche S.p.A, have involved the collaboration of:

- The Massachusetts Institute of Technology, Boston, who has worked on the analysis of strategies associated with the lightweighting of vehicles, manufacturing and assembly processes and the use of alternative propulsion systems.
- The Pennsylvania State University, who has worked on the analysis of market potential and on the evaluation of the opportunity to launch new vehicles, given the systemic nature of the problem and the determinative role of regulation.
- Inteli - Intelligence in Innovation, Lisbon, who has worked on the analysis of industrialization processes in Portugal, including a rationale to support future approaches to international business partners.
- Instituto Superior Técnico, who has worked on the analysis of environmental performance of concepts, using life-cycle approaches and simulation techniques.

To the above-mentioned end, this team has built up an integrated knowledge base in areas such as spaceframes and flexible platform development, approaches to systemic urban problems and new vehicle designs, and environmental performance and regulation concerns.

Added motivation for the work carried out has come from a very supportive Portuguese institutional environment and the favourable nature of the national industrial base towards such evolution.

This innovative approach, the alliance of an engineering firm and national suppliers under the support and incentive of the Portuguese government, has been taking place in order to foster a new cycle in the Portuguese automotive industry, namely through an increased involvement in the design, development and engineering of products.

The current reconfiguration of industry turned to define a context in which Portuguese suppliers became, in some way, caught in a lock-in position.

In previous phases, foreigner direct investments (Renault and Ford / Volkswagen took an important role, along with others) were important factors to push Portuguese suppliers to higher stages of technological and organisational capabilities and to introduce companies in international markets.

In 1996, "autopart exports per 1000 vehicles produced" was the highest mark in Europe – 9.8 -, compared, for example, with Germany – 5.9 or with Spain – 4.2 and, nowadays, the most important companies have already settled producing facilities in Europe and in South America, as well as Technical Centres close to the most important development areas of their clients.

However, in current reconfiguration phase and compared with other important supplier companies in Europe, they still don't have enough dimension, technological strength or local networking supportive environment to compete in a long-standing position. On the other hand, they have, by now, become enough strong to compete and to achieve different clients, from the domestic ones, in international markets. The integration of companies in international supplying networks is effective but their position is "in between".

In this sense, the P3 Project is part of a broadest and coordinated set of actions that includes the launching of institutional platforms to host commercial and R&D projects involving Portuguese and MNC companies.

In what concerns the P3 Project, and given the results already obtained, both the Portuguese State and Pininfarina stated that they are confident of the conclusions of the project, due by the end of 2001.

Both parties are in agreement that they will work together in an attempt to find the necessary solutions, including partners, both financial and technological, to assure the future development of the project, which includes next phases like prototyping.

L'actualité du produit

Christian Mory

LA MINI : UNE MINE DE QUESTIONS

BMW lance donc cet automne sa sympathique Mini qui représente en quelque sorte le vestige de son aventure ratée avec Rover, la marque allemande ne conservant de cet épisode que le nom de la marque et une usine.

Le renom de la marque Mini constitue un héritage positif puisqu'il capitalise l'esprit automobile britannique et la sportivité. Il ne faut néanmoins pas en exagérer la portée car la Mini d'origine a connu l'essentiel de son succès dans les années cinquante et soixante et, depuis, plusieurs générations d'automobilistes européens ont accédé à la motorisation sans avoir usé leurs fonds de culotte sur la banquette un peu raide de la " so british " petite voiture. BMW dit en outre vouloir percer aux Etats-Unis avec la Nouvelle Mini mais quelle sera la réaction des Américains qui n'ont jamais connu la première Mini ?

De plus, la Mini d'origine constituait typiquement l'accession à la mobilité avec un prix modique comme la 2CV ou la Renault 4 en France, la Fiat 500 en Italie et la Coccinelle en Allemagne - et la Nouvelle Mini s'en éloigne tout à fait avec ses prix passablement élevés. Il est vrai que BMW aura fait le même raisonnement que Volkswagen avec la New Beetle : ceux qui ont connu la première génération de la voiture dans leur jeunesse ont désormais pris de la bouteille (ils sont donc devenus plus exigeants en matière de confort et de performances) et leur portefeuille est passablement garni. La clientèle visée est donc à peu près la même : celle qui s'est enrichie et qui, sur un coup de coeur, s'offrira une deuxième ou une troisième voiture qui leur rappellera la bonne époque tout en leur permettant de s'amuser un peu le dimanche.

Il n'empêche que la Nouvelle Mini soulève de très nombreuses questions. La premier est celle de la durabilité de son succès, question récurrente de la plupart des produits " coups de foudre " que ce soient les voitures " réminiscence " (la PT Cruiser ou la New Beetle) ou certaines voitures de niche (les coupés ou les coupés-cabriolets). Passé un premier feu de paille qui verra les délais de livraison atteindre plusieurs mois, comment la Mini tiendra-t-elle le coup sur le long terme ?

La deuxième question, un peu liée à la précédente est la logique industrielle du projet. Même si l'on comprend les raisons qui ont présidé au choix d'un site de production britannique (en fait, il n'y a probablement pas eu choix) , BMW a entre les mains une usine entière vouée à la production de ce petit bijou. Et chacun sait qu'une usine ne rapporte vraiment de l'argent que si elle produit grosso modo 200 000 voitures par an Or, les prévisions de production portent sur 100 000 unités par an, prévisions qui sont probablement réalistes les toutes premières années mais qui apparaissent plus problématiques sur le long terme avec l'essoufflement progressif de l'effet de mode. BMW sera donc contraint de faire vivre la famille Mini avec des événements produit et le lancement de dérivés comme un cabriolet ou un break, c'est à dire en allongeant la sauce des investissements. Mini est probablement destinée à devenir une marque regroupant plusieurs modèles, un peu comme comme cela se dessine chez DaimlerChrysler avec la Smart, mais cela implique de lourds investissements dans le produit avec une rentrée hasardeuse de bénéfices.

La troisième question est, elle aussi, d'ordre industriel : BMW fera-t-il mieux que d'autres en réussissant à produire des voitures à coût raisonnable et de bonne qualité dans un pays qui n'est pas spécialement réputé pour cela (mais tout peu changer !) et dont la devise tourne le dos à l'euro, monnaie de la plupart de la clientèle. ? La question ne se pose pas trop pour l'autre marque britannique contrôlée par BMW, Rolls-Royce, mais l'objectif de BMW reste quand même de gagner de l'argent.

Quatrième question : comment être assez habile pour vanter une voiture qui doit capter le souvenir des beaux restes de l'empire automobile britannique tout en mettant en avant la filiation germanique, gage de sérieux et de qualité ? Comment faire oublier que l'usine d'Oxford, certes modernisée, où sont assemblées les Mini a produit il n'y a pas très longtemps des Rover 600 et 800 ? On peut par ailleurs s'interroger sur le choix des motorisations (alors qu'il ne viendrait sans doute à personne l'idée de contester la compétence des ingénieurs bavarois en ce domaine), sachant que les moteurs à essence (de 1,6 l de cylindrée) résultent d'un accord passé avec Chrysler qui n'est pas spécialement réputé pour son avant-gardisme mécanique (l'usine, qui doit également fournir les moteurs de la Chrysler Neon, a en outre été construite au Brésil) et que les moteurs diésels seront empruntés vraisemblablement à Toyota (ceux de la Yaris). Il n'y a sans doute pas de quoi exalter les amateurs de rallye du dimanche.

De plus, l'on sait que BMW a l'ardente obligation de se conformer à l'engagement ACEA qui vise un niveau moyen de consommation des voitures neuves européennes de 140 g de CO_2 en 2008 et on voit mal les ventes des Mini (qui émettent près de 160 g en version essence) compenser la consommation des gros bataillons de limousines bavaroises.

Enfin, en terme de logique de gamme, on voit mal comment s'articule la répartition des tâches entre la Mini et la future BMW Série 1 qui sera produite à Leipzig. Si la Mini est sans doute plus petite que sa future cousine germaine, apparemment, la clientèle écrémée est à peu près la même. Si l'on en croit certains spécialistes (*Automotive News* du 4 juin 2001), le budget de développement de la Mini a dépassé de 30 % d'enveloppe budgétaire prévue afin de donner au modèle toutes les qualités de comportement qu'en attendent ses clients

potentiels et ajoute-t-on perfidement - pour corriger les choix techniques effectués initialement par le bureau d'études de Rover qui a travaillé sur le projet. La Mini pourrait bien ne jamais être un modèle rentable !

En conclusion, on ne peut que souhaiter à BMW de continuer à vendre ses traditionnelles berlines en grande quantité car celles-ci, après avoir financé la folle aventure du rachat de Rover, devront peut-être servir à payer la nouvelle danseuse.

Une année d'un constructeur

Kémal Bécirspahic dit Bécir

PSA PEUGEOT-CITROËN

(réalisé grâce à la *Revue quotidienne de presse* du CCFA)

Début juillet, la presse américaine, japonaise et européenne annonce la signature par M. Jean Martin Folz, président de PSA Peugeot Citroën, et M. Fujio Cho, président de Toyota, d'un accord de coopération portant sur le développement et la production en commun de petites voitures sûres, économiques et peu polluantes (elles pourraient émettre moins de 100 grammes de $C0^2$ par kilomètre) qui seront vendues à moins de 8000 euros sous les marques Citroën, Peugeot et Toyota.

Une société commune sera créée à la fin de 2001 et le site choisi pour l'usine sera connu à ce moment là. Cette collaboration devrait permettre aux deux constructeurs de capter 25 % d'un marché européen des petites voitures estimé à 1,2 million d'unités en 2005, mais *"rien n'interdira de commercialiser ce véhicule dans d'autres zones"*, précise M. Folz.

D'après les analystes, les bons résultats de PSA devraient se poursuivre. Le constructeur peut se targuer de nouveaux produits, de ventes en hausse au niveau international et de sa maîtrise des techniques concernant les moteurs diésel. La stratégie de partenariats avec divers constructeurs dans le monde constitue la grande force de PSA

Automotive News Europe écrit, fin septembre, que la petite voiture PSA-Toyota est en cours de conception et qu'elle sera produite à l'horizon 2004.

Le *Figaro* écrit, fin août, que le deux millionième exemplaire de Peugeot 206 est sorti le 27 août des lignes d'assemblage de l'usine de Sochaux. La production de 206, répartie sur sept sites dans le monde, passera de 3400 à 3500 unités quotidiennes d'ici à la fin de 2001.

L'*Argus* du 25 octobre 2001 annonce qu'avec 54 000 immatriculations au mois de septembre, la Peugeot 206 est devenue la voiture la plus vendue en Europe, détrônant la Volkswagen Golf (53 000 exemplaires vendus). *La Tribune* indique que Peugeot commercialisera au mois de novembre une 206 dotée du premier moteur diésel développé en collaboration entre PSA et Ford.

Financial Times, Wall Street Journal et la presse française du 23 octobre 2001 écrivent que sur les neuf premiers mois de 2001, PSA Peugeot Citroën a enregistré une hausse de son chiffre d'affaires de 19,3 %, à 38,9 milliards d'euros (à périmètre identique, la progression du chiffre d'affaires s'élève à 13,9 %).

Le chiffre d'affaires de la branche automobile a progressé de 13 %, à 31,3 milliards d'euros, grâce à des ventes mondiales en hausse de 11,6 %, à 2,3 millions de véhicules. En Europe de l'Ouest, sur un marché en recul de 0,9 %, le groupe a augmenté ses immatriculations de 9,1 %.

Alors que l'incertitude pèse sur le marché boursier à la suite des attentats aux Etats-Unis, le titre de PSA Peugeot Citroën est considéré par les analystes comme le plus sûr des titres des constructeurs d'automobiles, souligne le *Wall Street Journal* du 10 octobre.

En dépit d'un contexte économique morose, PSA peut se targuer d'une augmentation de ses ventes et de perspectives de bénéfices. M. Adam Collins, analyste chez Schroeder Salomon Smith Barney, déclare que, même s'il est difficile de prévoir ce qui va se passer, les bons résultats de PSA devraient se poursuivre.

Le constructeur peut, en effet, se targuer de nouveaux produits, de ventes en hausse au niveau international et de sa maîtrise des techniques concernant les moteurs diésel. Le seul risque éventuel pour PSA proviendrait du marché français. M. Graeme Maxton, du cabinet de consultants britannique Autopolis, explique en outre que la stratégie de partenariats avec divers constructeurs dans le monde constitue la grande force de PSA…

International Journal of
AUTOMOTIVE TECHNOLOGY MANAGEMENT
Vol. 1 N. 2-3

SPECIAL ISSUE ON
Buyer-Supplier Partnership in Product Development and Innovation Technology

The quality papers published in this double special issue bear testimony that the area of buyer-supplier partnership attracts significant interest and following among academia, researchers and organisations committed to focus the automotive filière on the management of product development and innovation technology.

This special issue is consisting of fifteen refereed manuscripts. On the whole, thirty authors have contributed, from seven different countries and three continents: Europe, South America and East Asia. Moreover, most of the papers are empirical analysis and refer to different methodological approaches as: technology management, organisation, marketing, supply chain, sociology, business and economics.

The issue can be divided in three parts and I am sure they all will contribute further to the understanding of the management process of collaborations on innovation and product development in the automotive supply chain.

The first part of seven papers is related to thorough analysis on the general aspects of product development.

The second part is composed of five articles focused on evidence from national cases, but, again, findings may be generalised.

The last part is dedicated to buyer-supplier relationship in innovation except for product development. The reader will find only two papers, and this is a clear evidence of unexplored fields of research.

IJATM is a vehicle to provide a refereed and authoritative source of information in the field of Automotive Technology, Automotive Management and related disciplines. It also aims to establish channels of communication between policy makers, executives in the automotive industry, both OEM and suppliers, and related business and academic experts in the field. The journal will publish any types of original contribution concerning the automotive industrial system in the field of: managing with technology. Contributions may be by submission or invitation, and suggestions for Special Issues are welcome.

IJATM is intended to be a resource to those interested in the growth of automotive technology management. This includes, but is not limited to, academic researchers and industry practitioners in all functions - management, strategic planning, purchasing, R&D, Design & styling, marketing, human resources, etc.- dealing with the aims of the review.

For this reason please do not hesitate in sending your papers to chanaron@esc-grenoble.fr or to g.calabrese@ceris.to.cnr.it.

In order to assure an adequate scientific standard, all submissions will be double peer-reviewed.

Contents :

Activités des membres

Pierre Bitard vient de soutenir sa thèse en économie sur les usages des technologies d'information et de communication : *Pour une économie des TIC. Une approche conventionnaliste de l'appropriation des TIC en conception automobile*, thèse ès sciences économiques, université Montesquieu-Bordeaux IV, le 13 septembre 2001 (mention très honorable avec les félicitations). À partir de cette thèse, une première communication a eu lieu à Paris, au Forum de la régulation, les 10-11 octobre 2001.

Bart Verspagen and Gijs Mom. The Eindhoven Centre for Innovation Studies (ECIS) has a vacancy for a Ph.D. student position (assistent in opleiding) for four years. The Ph.D. project is entitled: *Mobility Diffusion, the Automobile and the Road towards a Dutch Style Modal Split*. This project studies the quantitative diffusion of durable consumption goods, especially the automobile and other transport modes in Europe. The focus is on the role of the automobile within the history of the modal split in transport, with the Dutch automobile as a special case.

The project includes the analysis of a large, existing body of historical statistical data on infrastructure, vehicle ownership and performance and accidents and the development, testing and comparison of several diffusion models. Applicants should have an MA or equivalent level in history or economics, with some knowledge of the quantitative analysis of data. ECIS offers relevant Ph.D training, so prior knowledge of the specific field is not necessary. The position is salaried, with the salary ranging from 2261 gld. per month in the first year (plus a bonus of 692 gld.) to 4037 gld. in the fourth year.

The Eindhoven Centre for Innovation Studies is based at the Faculty of Technology Management of Eindhoven University of Technology.

The institute was established in 1999 and brings together top-quality researchers from various disciplines, including economics, law, history, management studies and sociology. This project will be supervised by dr. Bart Verspagen, Professor of Economics and Technological Change and dr. Gijs Mom, Assistant Professor in the History of Technology and Program Director Transport History at the Foundation for the History of Technology, Eindhoven University of technology.

For more information please contact b.verspagen@tm.tue.nl or g.p.a.mom@tm.tue.nl. A detailed project description is available on request.

Les membres publient…

Patrick Fridenson a dirigé la moitié du cédérom *Mémoires industrielles*, Paris, Éditions de la Maison des Sciences de l'Homme et Syrinx, 2001, intitulée "Berliet: le camion français est né à Lyon". À commander par www.syrinx.fr.

Nicolas Hatzfeld et Jean-Louis Loubet: *Les sept vies de Poissy*, éditeur E.T.A.I., Paris, septembre 2001, ISBN 2726885624, prix 179 FF (25,92 euros, poids 670 grammes.

Étienne de Banville: *L'usine en douce. Le travail en "perruque"*, L'Harmattan, collection "Mémoires du travail", Paris, 2001, 110 p., ISBN 2747507874, prix 70 FF (10,70 euros. - La perruque dont il est question ici est un objet travaillé pour soi, réalisé durant le temps et sur le lieu du travail, avec les matériaux et le matériel de l'entreprise. Travail non prescrit, donc, réalisé en principe en cachette de la hiérarchie : détournement de temps, de matériaux et d'usage de machines, selon une clandestinité à géométrie variable, parfois totale, parfois assez relative. Pratique très largement répandue dans le monde industriel, et plus généralement dans le monde du travail salarié, la perruque connaît des situations allant de la répression systématique à une quasi-institutionnalisation, avec tous les degrés intermédiaires de tolérance. Enfin et surtout, l'objet réalisé n'est pas une marchandise : il n'est pas vendu, mais seulement conservé ou donné à des proches.

La perruque demeure cependant ignorée par les discours officiels des organisations de salariés aussi bien que de patrons. Elle témoigne pourtant de la créativité des salariés, d'un plaisir au travail, permettant d'ouvrir de nouvelles perspectives. Abordée de manière latérale par d'autres travaux, la perruque est ici, pour la première fois, prise au sérieux dans l'ensemble de ses dimensions. (Sommaire: Des objets et des hommes - La perruque, mode d'emploi - Perruque, entreprise et culture - Une perruque dérangeante et dérangée - Le mot "perruque" dans les dictionnaires : enquête).

Le catalogue de la bibliothèque du CCFA accessible sur Internet

Le fichier de la bibliothèque du CCFA (Comité des Constructeurs Français d'Automobiles, 2, rue de Presbourg, 75008 Paris, France, www.ccfa.fr) est désormais consultable sur l'internet. Des recherches sont possibles par auteur, titre, mot clé, etc. Ce fichier est accessible sur le même site que la revue de presse, à savoir : www.medial.fr/autodoc. Les ouvrages sont consultables sur place, mais les collaborateurs des constructeurs d'automobiles peuvent bénéficier d'un prêt en s'adressant au CCFA.

The CCFA (the French Carmaker Association 2, rue de Presbourg, 75008 Paris, France, www.ccfa.fr) library catalogue can now be consulted on-line. Searches can be carried out by author, title, key word etc. The document can be accessed at the same html address as the press review, i.e., www.medial.fr/autodoc. Books may be consulted on the library's premises, with persons who work for a carmaker also able to advantage of the library's lending facilities by requesting further information from the CCFA.

Centre documentaire

Danielle Lacroix

LIVRES ACQUIS

ARAUJO GUIMARAES Nadya e MARTIN Scott (organizadores), *Competitividade e desenvolvimento,* Editora Senac São Paulo, 2001, 500 p.

ARCHAMBEAU Olivier et GARCIER Romain, *Une géographie de l'automobile*, Paris, PUF, 2001, 318 p.

BERSANI Alberto, FISSORE Paolo, *Dal disegno al design. Storia della carrozzeria in Piemonte dalla carrozza all'automobile*, Ivrea (Torino), Priuli e Verlucca, editori, 1999, 168 p.

BRESNAHAN Timothy F. and GORDON Robert J. (eds.), *The Economics of New Goods*, Chicago, The University of Chicago Press, National Bureau of Economic Research, 1997, 494 p.

DUHAMEL Olivier et MECHET Philippe (dir.), *L'état de l'opinion 2001*, Paris, Éditions du Seuil, 2001, 300 p.

LIKER Jeffrey K., ETTLIE John E. and CAMPBELL John C. (eds), *Engineered in Japan,* Oxford, Oxford University Press, 1995, 404 p.

LOUBET Jean-Louis, *Histoire de l'automobile française*, Paris, Éditions du Seuil, 2001, 570 p.

POUCHET Amélie (coordinateur), *Sociologies du travail : 40 ans après*, Paris, Éditions Elsevier, 2001, 370 p.

REVUES REÇUES

Economia e Politica Industriale, diretta da Sergio Vaccà, Franco Angeli, Milano, anno XXVII, n° 108, 2000.

Renault – Histoire, (Revue de la Société d'Histoire du Groupe Renault), Boulogne-Billancourt, n° 13, juin 2001.

UMKC, Law Review, University of Missouri-Kansas City School of Law, Volume 69, n° 4, Summer 2001.

LIVRES REÇUS

Automotive History Review, The Society of Automotive Historians, Alexandria, USA, Spring 2001, 40 p.

BNDES Setorial, Banco Nacional de Desenvolvimento Econômico e Social, no.11, março 2000, Rio de Janeiro, 152 p.

CARRILLO Jorge (coordinador), *Aglomeraciones locales o clusters globales?: Evolución empresarial e institucional en el norte de México*, El Colegio de la Frontera Norte, Tijuana, 2000, 233 p.

CARRILLO Jorge (coordinador), *Mercados de trabajo en la industria maquiladora,* El Colegio de la Frontera Norte, Tijuana, 2001, 141 p.

GARZA TOLEDO Enrique (de la), *Democracia y cambio sindical en México*, Mexico, Plaza y Valdés Editores, 2001, 265 p.

LOUBET Jean-Louis, *Carnet de Route Renault 1898-2001,* Boulogne – Billancourt, E-T-A-I, 2001, 175 p.

Revista Latinoamericana de Estudios del Trabajo, "El trabajo en los umbrales del siglo XXI", Associação Lationo-americana de Sociologia do Trabalho, Rio de Janeiro, ano 6, no.11, 2000, 223 p.

Revista Latinoamericana de Estudios del Trabajo, "Indice cumulativo 1995-1999", Associação Lationo-americana de Sociologia do Trabalho, Rio de Janeiro, ano 5, suplemento N.1, 1999, 89 p.

VAN TULDER Rob, VAN DEN BERGHE Douglas, MULLER Alan, *The World's Largest Firms and Internationalization,* Rotterdam School of Management, Erasmus University Rotterdam, 2001, 93 p.

VELOSO Francisco, HENRY Chris, ROTH Richard, CLARK Joel P., *Global Strategies for the Development of the Portuguese Autoparts Industry*, Editor IAPMEI, Lisboa, 2000, 243 p.

Serveur – Website

Carole Assellaou

Les communications de la Neuvième Rencontre Internationale sont enfin disponibles sur le serveur du GERPISA.
URL : www.univ-evry.fr/labos/gerpisa/rencontre/index.html.fr

Cliquer sur Communications de la rencontre
ou composer son URL directe:
www.univ-evry.fr/labos/gerpisa/rencontre/communications.html

Les communications de cette Rencontre sont classées par sessions. Pour votre information ces documents sont accessibles au format pdf. Si un ou plusieurs papiers vous intéressent cliquer sur son titre et enregistrer le fichier.

The papers presented at the 9th GERPISA colloquium are presently available on the GERPISA website:

URL : www.univ-evry.fr/labos/gerpisa/rencontre/index.html.fr

Go to Communications du colloque
or compose its direct URL:
www.univ-evry.fr/labos/gerpisa/rencontre/communications.htm

Papers are presented following the sessions organised during the colloquium. You can download the papers (in .pdf formate) and print them.

Location : http://www.univ-evry.fr/labos/gerpisa/rencontre/index.html.fr

Neuvième Rencontre Internationale du GERPISA

**"Les reconfigurations de l'industrie automobile :
alliance, cessions, fusion-acquisition, partenariats, scissions,..."**

Palais du Luxembourg, Paris, 7 - 8 - 9 juin 2001

PROGRAMME DE LA RENCONTRE
RESUMES DE LA RENCONTRE
COMMUNICATIONS DE LA RENCONTRE

Ces documents sont accessibles au format PDF
Pour les lire et les imprimer en PDF, téléchargez gratuitement le logiciel Adobe Acrobat Reader.

Appel à communications

Normes de présentation

Bulletin d'inscription

Lieu de la rencontre

Hébergement

CALENDRIER DES RÉUNIONS DU RÉSEAU 2001 - 2002

Comité international de pilotage
Berlin (Allemagne), 22 novembre 2001

"The distinctiveness of the European automotive system"

Workshop CoCKEAS
Berlin (Allemagne), 23-24 novembre 2001

Journée de travail
Paris (France), 7 décembre 2001

9h30-12h30 : secrétariat

14h-17h : séance plénière
Philippe LARRUE (INSEAD, Fontainebleau et IFREDE-E3i)
"*La coordination des activités de recherche au sein des consortiums pré-compétitifs sur les véhicules électriques et hybrides. Une comparaison Etats-Unis, Europe, Japan*"

Journée de travail
Paris (France), 18 janvier 2002

Journée de travail
Paris (France), 15 mars 2002

Workshop CoCKEAS
Bruxelles (Belgique), mars ou avril 2002

Journée de travail
Paris (France), 17 mai 2002

Comité international de pilotage
Paris (France), 5 juin 2002

10ème Rencontre Internationale du GERPISA
Paris (France), 6-7-8 juin 2002

LA LETTRE DU GERPISA

Sommaire du n° 155

E-mail des auteurs

Yannick Lung : yannick.lung@gerpisa.univ-evry.fr
Takahiro Fujimoto : fujimoto@e.u-tokyo.ac.jp
Tom Donnelly : bsx081@coventry.ac.uk
José Camacho : camacho@itec.pt
Christian Mory : cmory@ccfa.fr
Kémal Bécirspahic dit Bécir : Kemal.Becirspahic@gerpisa.univ-evry.fr
Danielle Lacroix : dlacroix@gerpisa.univ-evry.fr
Carole Assellaou : contact@gerpisa.univ-evry.fr

Supplément : Bibliographie

Direction : Yannick Lung
Rédaction : Kémal Bécirspahic dit Bécir

Collaboration : Carole Assellaou, Kémal Bécirspahic dit Bécir, José Camacho, Tom Donnelly, Patrick Fridenson, Takahiro Fujimoto, Danielle Lacroix, Yannick Lung, David Morris, Christian Mory

Traduction : Alan Sitkin

Mise en page : Carole Assellaou
Mise en page sur Internet : Carole Assellaou

Photo : PSA Peugeot-Citroën

Les manuscrits sont à envoyer avant le 20 du mois
The manuscripts have to be sent before the 20th of the month