

**SWP 34/91 FRENCH AND BRITISH TOP MANAGERS'
UNDERSTANDING OF THE STRUCTURE AND
THE DYNAMICS OF THEIR INDUSTRIES:
A COGNITIVE ANALYSIS AND COMPARISON**

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April 1991

This paper is drawn from a wider research programme across seven European countries, called MODEM (Managers On the Developing European Market), undertaken as a collaborative project between Groupe ESC Lyon, France; Cranfield School of Management, Loughborough University, Brunel University, UK; SDA Bocconi, Milan; University of Luneburg, Germany; and Aarhus University, Denmark. The authors would like to acknowledge the contributions to the research and critical contribution to this paper of participants in the MODEM project.

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ABSTRACT

This paper presents the findings of an exploratory study of the content of and differences between managerial frames of references with regard to the structure and dynamics of competitive environments. Since these frames of references are examined and compared at both the industry level and the country level, the paper contributes to the field of comparative management, as well as the growing interest in cognitive analysis in the field of management. The study is particularly significant since (a) its context is the rapidly changing industry environment of Europe and (b) the managers involved are all involved in the development of strategies for their firms.

33 top managers (16 English and 17 French) were interviewed in four industries (brewing, car manufacturing, retail banking and book publishing) on their understanding of their industry and the strategy of their company. Content analysis of the transcribed interviews surfaces cognitive constructs which facilitate the identification of similarities and differences between managers (a) within industries, (b) across industries, (c) within countries, (d) between countries and (e) between countries within the different industries. The analysis also provides means whereby the constructs can be represented in the form of cognitive maps.

A COGNITIVE PERSPECTIVE ON INDUSTRY ANALYSIS

In the field of strategic management and strategic analysis, the notion of the manager as a rational analyser has tended to persist. Yet many of the assumptions underpinning this view have been fundamentally questioned and challenged. Systematic environmental analysis is not necessarily a precursor to strategic decision making (Mintzberg et al, 1976; Lyles, 1981); strategic options are not systematically analysed (Fahey, 1981) and objectives often ill-defined, diverse and not agreed upon (Norburn and Grinyer, 1973/4), unstated, or very generalised (Quinn, 1980). The formulation of strategy is better explained as a relatively unstructured, highly iterative, socio-political process (Pettigrew, 1985; Johnson, 1987).

This is not to say that managers are irrational. Rather that strategies are formulated within cognitive limits (Stubbart, 1989) and a context of action. Indeed Schon (1983) suggests that it is a mistake to think of managerial thought and managerial action as separable: management is characterised by 'reflection in action', the continuing interweaving of cognition and action. Certainly, faced with the variety of events and actors in daily life, we all - managers included - have to classify and categorize. We could not act if we had to consider each actor and each event as unique. Moreover categorizing events and actors gives a signification to such categories and also facilitates thinking about the future in a less uncertain way (Hewstone et al, 1988).

Further, it is argued that cognitive dimensions are not purely individual phenomena. There exists in organizations a 'relatively coherent sets of beliefs that bind some people together and that explain their worlds in terms of cause and effect relations' (Beyer, 1981, p.166). It is an organizational view of the world which helps interpret the changes the organization and the individual within it meet. These sets

of core beliefs and assumptions at the organizational level are referred to, for example, as 'myths' (Hedberg and Jonsson, 1977), 'dominant logic' (Prahalad and Bettis, 1987), and 'paradigms' (Sheldon, 1980; Johnson, 1987). However the extent of their homogeneity within an organization is a matter of debate (Saffold, 1988): it may be that, whilst differences occur within an organization, managers within that organization subscribe to a more common set of assumptions than between organizations. Moreover managers in different organizations within an industry may subscribe to a more common set of assumptions - the industry 'recipe' (Grinyer and Spender, 1979; Spender, 1989) - than those outside that industry.

With regard to the analysis of industries, Lenz and Engledow (1986) suggest that "cognitive analysis" can make a valid contribution, though their paper neglects to address the practical values of such an approach. In this paper we recognize and build on the centrality of managerial cognition in the processes of strategic management: however we also explore quite precisely how such an approach to analysis can yield useful insights to our, and managers, understanding of competitive industry environments.

Studies in comparative management have also shown the influence of national cultures on managers perceptions of their environment and on strategy making processes. Hofstede (1980) has studied the cultural differences between nations in the workplace. He found discriminant dimensions between countries. For example "attitude towards uncertainty" could influence the extent of search for information. Also French are much higher on uncertainty avoidance than the British who in turn are higher than the French on the search for performance. Other researchers have focused on comparative studies of management systems across countries and have given possible cultural interpretations of differences. For instance Hoffman and Hegarty (1985) show international differences in scanning behaviour. A number of studies have also compared the Japanese Managers' way of thinking to the

Americans' for example in terms of the perception of events as threats or opportunities (see Dutton and Jackson, 1987) and intuitive modes versus analytical modes of thinking (see Keegan, 1983).

All this implies a contingency of individual cognitions, according to experience, to cultural context and information received, and potentially, to layers of cognitive structures according to such interaction. In relation to this study such layers might reflect interaction within the management team, with those active in the industry (competitors and customers for example) and with wider industrial, economic and social contacts perhaps within a national context.

Huff (1982) has reconciled some of the preceding observations. Strategic concepts are transferred from past analogous experience at the single organization level. They are also derived from industry experience, though arguably a distinction should be made between two different levels, the "strategic group" (as defined by Hunt, 1972) and the level of "the industry" (as conceived by the industrial economist). Moreover, the industry level itself is defined by shared or interlocking metaphors or world views. Huff adds a third influence: strategic concepts also originate in experience with other industries in some kind of common knowledge across industries. The model that Huff proposes to explain the influences on managers strategic concepts is more integrative than previous ones but nevertheless ignores the influence of the culture and systems of the main country(ies) where a firm is based.

Putting together these possible influences on managers perceptions of their organizational world, we can conceive of an integrative model as shown in figure 1.

[Insert figure 1 about here]

Whilst there has begun work which has sought to study the nature of competitive industry environments from a cognitive point of view (Porac et al; 1989 Birnbaum - More and Weiss, 1990; Reger, 1990;), it has not directly addressed the issue of the existence of levels of collective cognition that the debate about organisational, industry and country influences would suggest. This research sets out to address this by examining the extent to which there exist industry, or national managerial frames of reference relating to the competitive nature of industries.

RESEARCH TASKS AND METHODOLOGY

Our first aim was to uncover and describe the frames of reference (FORs) employed by top managers in making sense of their competitive industry environments. In so doing we have employed the notions of schemata and schemes (Piaget, 1973). In the context of this study, managerial schemata correspond to the perceived structure of the industry defined as the set of constructs and links between constructs perceived as being significant in the industry. Schemes correspond to the perceived dynamics of the industry, defined as the forces and the relationships between them perceived as being significant in the transformation of the industry. Our analysis of frames of reference is therefore undertaken at both these levels of managerial knowledge.

Second, our aim was to explore the notion that such FORs are layered; that they exist at different levels of generality, with different scopes. Specifically, we recognize that there must be individual manager's FORs and that there are likely to be organizational FORs. Uncovering FORs at these two levels requires data of a comparative nature from within firms and is not the subject of this study. However we must expect there to be wider FORs at the industry and at the country level. The industry specific FORs can be regarded as the combination of perceptions

shared by the top managers in a given industry on the structure and / or the dynamics of that industry. Defining them requires the identification of the most frequent and important concepts, and linkages between concepts and an identification of those specific to that industry. The country specific FOR can be regarded as the combination of perceptions shared by the top managers in a given country.

Our third aim was to examine the differences that exist between FORs. In particular how top managers in the different industries and in different countries of Europe differ in how they make sense of their changing industry environments.

In this study, the FORs we sought to uncover were identified and reconstructed in a systematic fashion from top managers' discourse on their company's strategy and the nature of its competitive environment.

Gathering Data

We interviewed the chief executive, or a member of the Executive Board, in 17 French companies and 16 British companies involved in four industries : brewing, car manufacturing, retail banking and book publishing. The industries were selected to represent a spectrum in terms of products and services, levels of concentration (from low in retail banking, to high in car manufacturing and variable by country in brewing), the geographic scope of the market (from mainly national in retail banking, to global in the car industry) and degrees of local specificity (very variable in brewing and in publishing with regard to language, for example). Further, we sought for an equal number of firms in each industry in the two countries, and, whilst seeking a diversity of firms, two of the major competitors in each country/industry. The sample is presented in table 1.

[Insert table 1 about here]

24 chief executives participated personally, and 9 members of executive boards, all directly involved in the formulation of the strategy of their company. The interviews took place in the period from January 1990 to April 1990. The interviews were loosely structured, though grounded on two broad questions designed to surface managers' strategic thinking about their industry and their firm : (a) "What main changes do you expect in your industry in the 90's ?" and (b) "What changes are you thinking of for your company in the 90's ?"

The interviews lasted from one hour and a half to two hours and a half, and all were tape-recorded and translated into English. About two thirds of the interview were focused on the first part, though many managers mixed discussion of their company with discussion of industry and competitive forces, confirming that the conventional distinctions between environmental and organizational factors are ignored in managers understanding (Dill, 1962). Many of the interviews were highly discursive in nature with managers ranging over issues they chose to emphasize. Where managers were less forthcoming two forms of prompts were employed. First, neutral conversational prompts; and second more specific prompts based on conventional frameworks of industry analyses. However, in the latter case, in order to reduce the biases created by such prompts, we distinguished systematically in the analysis between spontaneous answers from prompted answers, deleting all answers to prompts which did not prove to be a crucial point further on in the discussion.

Content Analysis

Content analysis (Holsti, 1969) was used as a means of analysing the transcribed interviews, starting in each case with the identification of the following :

- i) The perceived constructs and links between constructs with regard to the industry structure perceived by managers. The perceived constructs identified in the system appeared to be: the company, customers, distributors, suppliers, competitors in the industry (and possible new entrants), regulators (government, EEC, etc...) and lobbies. The perceived links between constructs were very diverse but included: acquisitions, share holding, alliances, cooperation, piracy, pressure, integration, direct competition, differences in behaviour.
- ii) The concepts describing the perceived dynamics in the industry which, a posteriori, could be classified in six broad categories; changes in context, strategic moves of actors, changes in structure, technology, industry output and key success factors.
- iii) The perceived links between concepts relating to the dynamics of the industry, which, a posteriori, could be classified in three categories : proximity, causal relationships (positive or negative), equivalence of concepts (Huff, 1990).

At each step, we looked for an evident ground and an evident bias related to a perception. By ground, we mean an assumption which underpins a perception, such as a fact given as a proof (an example, statistics, etc); or a personal basic assumption (such as : "beer does not transport easily", or "Germans are chauvinistic", etc...); or a prototypical element for a category (cf. Rosch, 1975);

or common knowledge, or the reference to the opinion of an authority (Moscovici, 1961). We distinguished between types of bias. Bias arising from the interviewer, for example answers given to prompts, were corrected before further analysis. On the other hand, bias arising from the interviewee became part of the analysis.

We also made an evaluation of the importance of each concept, weighting each in terms of the extent to which they met four criteria : spontaneity, priority, length of the discussion on the theme, and explicit mention by the manager of importance. This weighting is shown in figures 2, 3, 4 and 5 by the use of asterisks, four asterisks meaning high on the four criteria. "One asterisk" concepts were deleted as a precaution against bias from interviewers' prompting.

Cognitive mapping

Huff argues that:

"Cognitive mapping is a form of content analysis.....(but) in cognitive mapping it is the relationship between cognitive elements that is being studied. Some cognitive maps are subject to quantitative analysis, but the central benefit of the cognitive map, in our view, is that it encourages holistic synthesis rather than reductive analysis of the actor's view of the world. Cognitive maps encourage the reader to move back and forth between an understanding of the whole and its reduction and analysis by parts." (Huff and Fletcher, 1990 pp 403-404).

Since our study is concerned not only with cognitive constructs as independent elements, but also with the relationships between these, cognitive maps representing such relationships were drawn for each manager. In each case two maps were

drawn. The first map on the perceived structure of the industry corresponds to generic families 1 and 2 described by Huff (1990) : "Maps that assess attention and importance of concepts" (family 1) and "Maps that show dimensions of categories and cognitive taxonomies" (family 2). The second map on the perceived dynamics of the industry corresponds to the generic family 3 described by Huff "Maps that show influence, causality and system dynamics".

To reduce possible biases, separate content analysis, weighting and mapping was undertaken by two analysts and then compared. Where weightings differed by a factor of 2 or more, the weightings were averaged. However differences by a factor of 3 or more in the weightings were only found for a total of 5 concepts across 3 of the 33 maps.

Figures 2, 3, 4 and 5 illustrate some of the most contrasting cognitive maps (both schemata and schemes) in the brewing industry. Figure 2 presents the cognitive schema and figure 4 presents the cognitive scheme of the top manager of a medium sized regional British brewery. Figure 3 presents the cognitive schema and figure 5 presents the cognitive scheme of the top manager of a big international French brewery. We do not comment here on the differences between the maps. Rather, the aim is to show what cognitive maps on structure and dynamics look like and to illustrate graphically some of the differences that will be analyzed further in the paper.

[Insert : Figures 2-5 about here]

Comparing cognitive maps

In order to compare cognitive maps across industries and countries, it was necessary

to standardize the list of constructs and concepts mentioned by the managers. The reduction was again done by checking similarities by two analyzers. For instance terms such as : "automatization", "computerisation", "flexible manufacturing" were grouped in a common concept called "automatization"; terms such as : "market share", "scale economies in marketing", "scale economies in production", "size", "volume" were grouped in a common concept called "volume". The resulting data were 73 variables describing the constructs of perceived structures and 71 variables describing concepts relating to industry dynamics. Whilst we accept that this data reduction must bias our findings, it was felt to be acceptable to permit comparative analysis. To do this, two broad kinds of data analysis were performed: statistical analysis and a qualitative analysis of differences. Table 2 summarizes the data analysis methods used. It is recognized that the number of observations for undertaking statistical tests (X² and F) on the data across industries is rather less (at 33) than required: so results should be viewed as indicative.

[Insert Table 2 about here]

RESULTS

The results of the analysis of the concepts in the transcribed interviews with managers show patterns of similarities and differences at both the industry and country level.

INDUSTRY FRAMES OF REFERENCES

Table 3 shows the structural constructs which were perceived as important by

managers in each of the four industries studied ; with a distinction made between constructs specific to a particular industry at the top and commonalities between the four industries at the bottom. Table 4 shows similar findings for the concepts relating to the dynamics of the industries. The figures also give the results of the statistical tests of differences between industries where significant.

[Insert table 3 and 4 about here]

The figures show that managers across industries use some common concepts to make sense of the structure and dynamics of their different industries. The constructs at the foot of table 3 are those common to at least 3 of the 4 industries and show the extent to which segmented markets, overseas competition, the significance of adjacent markets (eg. Germany, Southern Europe and the UK) are widely held constructs across the industries. As for the dynamics of industries held in common (part of table 4), it emerges that the importance of scale economies and volume, the importance of being in growth segments and of having quality products and services are common in the four industries; and the development of new products or services is common in three of the four.

However there are also important differences in the ways managers understand their industries. We now review the constructs and dynamics which are held in common for managers within industries but differ between industries. We also provide a contextual interpretation of these differences.

The Brewing Industry

Managers see a marked distinction between international (particularly European wide) versus local competitors; this is perhaps associated with their distinction

between big and small competitors in the industry. It is a finding which is in line with the increasing polarisation in the last decade in the industry between groups which have become, or are becoming international, and small highly focussed brewers. This is especially so within Europe with Heineken, BSN, Carlsberg and Interbrew (Stella Artois) all having a strong European presence, whilst the market with the greatest consumption, West Germany, has highly fragmented competition. The West German market is also seen by managers as important in itself, both because of its size (with a volume of 100 million hectolitres per year), whilst at the same time being fragmented and with substantial entry barriers because of past legal constraints and current cultural constraints on the consumption or production of non German beers.

The managers are also concerned with the international expansion of the Dutch and Danish brewers: Carlsberg, Heineken and Grolsch have all followed active international expansion policies.

The concern with over capacity and market saturation is understandable given that there is about 30% over capacity in the industry in Europe, and closures of breweries have continued for some years. The differences in distribution channels is seen as important by the managers too: as are the differences in key success factors as between sales through pubs (as in the UK), restaurants and cafes and through food retailing chains (as is mainly so in France,). Further the integrated nature of wholesaling within brewing (especially so in the UK, Germany, France and Netherlands) is evident. The substitution of soft drinks and wine and spirits is also seen as important by the managers in the industry.

Government control on mergers and acquisitions is seen as important: a view which can be seen to reflect, in particular, the current debates in the UK arising from Government intervention in the industry through the Monopolies and Mergers

Commission. It is a dimension which also links into the perceived importance of lobbying in the industry, throughout Europe by anti-alcohol and health lobbies. It is a feature of the industry which is also reflected in managers' perceptions of health issues being important.

In terms of industry dynamics managers in brewing see the growing importance of brand image as a key marketing dimension, the continuing growth and concern with health and the quality of life, and the likelihood of the industry becoming more and more polarised.

The Book Publishing Industry

Managers in the book publishing industry also see an important distinction between large and small competitors and, though to a lesser extent than in brewing, they see that this is a distinction which will continue. For managers in the industry across Europe, competition from the large publishers in the Netherlands such as Elsevier and Wolters Kluwer, and also from the low cost producers in Taiwan, is seen as significant. Piracy of publishers' work either by photocopying or by copying (eg. of books) is also commonly seen as a problem: so, too, is the threat of substitutes from TV and video.

In terms of dynamics the sale of rights and licenses is seen as becoming more and more important, especially as a means of international growth. The growth of acquisitions and mergers is also seen as another way of overcoming linguistic and cultural barriers to European growth.

The Car Industry

The importance of the volume and value of the West German market is high for managers in the car industry. Different sources of competitive threat are seen as important, particularly from Italy where Fiat is based and is number two in Europe; and from Korea as a newer competitive entry in the field. Quota restrictions on car imports is important in this context. There are currently such restrictions on imports from Japan to France, Italy and Spain; and EEC policy on such quotas has been a matter of debate in recent years: indeed the managers view pending decisions on this as one of the key future dynamics in the industry. They also see environmental concerns, and EEC policies with regard to this, as important in the car industry. Both of these factors may reflect the importance managers place on lobbying by pressure groups.

Managers also tend to make a distinction between exclusive dealers and large dealers (although the latter are not as large or as powerful as in North America); luxury car manufacturers are trying to differentiate more and more by exclusive distribution and service.

As well as developments on EEC policy, the managers also see increasing processes of automatization and the increasing pressure from Japanese competitors as key dynamics in the industry, as well as improvements in development and training to cope with industry changes. Finally the developments in Eastern Europe are seen as important opportunities for European car manufacturers.

Retail Banking

The perceived importance of networks of branches typifies managers in retail

banking; networks which for most banks represent a heavy investment in assets. They also show common concern about Government intervention, particularly on mergers and acquisitions, historically significant throughout Europe; and in 1990 when the French freed up the French banking system.

As for the dynamics of the industry, the likelihood of acquisitions and mergers throughout Europe is seen as important, as is the likelihood of alliances, agreements and joint ventures: in both cases this can be seen as linking in to their concern about networks of branches, a key issue in the industry and difficult to build up by internal development to achieve pan-European presence. This concern with branch networks also relates to other concerns about adaptation to meet market segment needs and in terms of the marked perceived need to adjust capacity. Increasing automatization of the banking process is also seen as important, as is training and development of personnel to cope with all the changes taking place.

MAIN COUNTRY FRAME OF REFERENCE

In their discourse it is evident that managers do conceive of competition in terms of countries, they frequently refer to "German competition" or "the Japanese" for example. However more systematic, significant differences were found in managers' perceptions between the U.K. and France across all the industries studied. These can be seen in table 5.

(insert table 5 about here)

Differences Between British and French Managers Across all the Industries

First, in terms of the structure of the industries, the French make a clearer distinction between big and small companies and emphasized more the diversity of distribution channels in the industries. They also put more emphasis on the segmentation of their respective markets. Perhaps these French tendencies to segment and classify can be explained by the Cartesian, rationalistic nature of their educational system and culture.

British top managers see licences and sales of rights as a more important link between elements in industry structure, especially so in brewing and publishing: this might be explained by a more developed practice of this in the UK in the industries studied, given the wider international use of English in publishing, leading to sales of rights to and from North America and other English speaking countries; the reliance of British brewers on their licensing of lager production; and Rover's links with Honda.

British managers mention government anti trust control more than the French, with particular reference to the Monopolies and Mergers Commission. Historically the UK government has instituted bodies such as the MMC to avoid monopolies and promote competitions, whereas in France quasi monopolies are accepted, and protection of national state companies has been more pronounced.

The French executives also stress more than the British the importance of substitutes; though we fear this may come from a bias in our sample because the French companies in the sample showed more related diversification than the British, which might lead to managers talking more readily about related businesses and products. French managers also talk more about Eastern Europe as a market; though not statistically significant as a finding, we mention this result as it could be

explained by the cultural links France has with Eastern Europe (links which managers themselves mentioned), and perhaps by the closer geographical proximity than the UK.

Differences are also found between British and French managers perceptions of the dynamics of their industries.

The UK managers stress more than the French the necessity to be involved in growth segments. British managers are more oriented towards performance than the French managers, evidenced by the "masculinity" scores (approximating to performance orientation) of the two countries found by Hofstede (1980). There are some indications, too, that UK managers also regard profits and shareholder value more highly than the French. Though there is weaker statistical support for this, it does perhaps, reflect the short termism of UK management noted elsewhere (Williams et al, 1983) perhaps related to the banking system and expectations of financial institutions in the UK; and it may also support Hofstede's findings on cultural archetypes noted above.

The French managers also emphasize more than the British the development of new products and the need for improvements in quality of products and services; a finding which confirms the common image of the French as more innovative managers. The French also stress more than the British growing pressure of retail chains. In France powerful retail chains have developed (Carrefour, Casino, FNAC) which are becoming a threat to companies involved in brewing, book publishing and even retail banking.

Differences by Country by Industry

Differences between countries within a given industry appear to be even more

pronounced than between countries in general. This can be shown by breaking out the differences in constructs at the industry level within countries. Here, of course, the data are not such as to allow statistical tests and findings are therefore based more on a search for extreme differences and an interpretation of such differences in terms of documented information on the businesses.

Differences between the French managers and the British managers in the brewing industry emerge and can be seen as relating to industry and country context:

- British managers see licences as a key link between constructs (3 compared to 0 French) : in the U.K. lager brands are produced under licence of foreign brewers whereas generally in France they are not.
- British managers stress the integration of distribution channels (3 compared to 0): in the U.K. a high percentage of pubs are owned by brewers (the "Tied House System").
- British managers are concerned about the control of mergers and acquisitions (4 compared to 0): the Monopolies and Mergers Commission recently intervened in acquisitions in the brewing industry and has recommended a limit on the number of pubs owned by brewers. The British also expect the restructuring of the brewing industry between manufacturing, wholesaling and retailing (pubs) (score 7 compared to 0): the British brewing industry is now vertically integrated, but market pressures combined with the MMC decisions are seeing the beginning of the disintegration of traditional industry structure.
- French managers stress the importance of retail chains (4 compared to 0 British): in France more than 70 % of the beer is sold in the food channel (in the U.K., about 30 %).

- French managers see Germany, the Benelux and Southern Europe as potential export markets (4 compared to 0) and the U.K. as an important export market too (4) whereas no British manager mentioned France as an export market : some major French brewers already have international positions whereas the British firms mainly serve their home market.
- British managers believe it is important to be present in growth segments (score 7 compared to 0). The UK industry relied historically on steady growth of ale sales: this is no longer taking place. Further the brewers are heavily reliant on licensing of lager production. In France, however, beer sales still show signs of growth. Arguably the British brewers are therefore more concerned about finding opportunities for growth.
- French managers see technological innovation as a key success factor (score 3 compared to 0): French competitors have tended to invest more than the British in product and process development in this business.
- French managers emphasize high and growing investments in marketing (score 4 to 1): French brewers have always invested more in marketing than the British, to resist the higher pressure of retail food channels and to support international strategies.

Differences between the French managers and the British managers in the car manufacturing industry also emerged. Here the scores are very low, but they do represent the whole population of firms:

- French managers emphasize home country preference (2 compare to 0 British): this is the convention in France where the home market is protected by indirect quotas against the Japanese. The French also stress the fierce competition

arising from the Japanese invading Europe (score 5 compared to 0 British): until now the French have protected their home market from imports of Japanese cars and are threatened by the prospect of their entry after 1993 ; whereas the British have been more receptive to Japanese ventures in the U.K.

- The French are concerned about the role of the E.E.C. in the deregulation of the market (2 compared to 0): the E.E.C. will probably forbid protectionist policies in the next years, and the French are much more protectionistic than the British in this business.
- French managers stress the importance of suppliers of components and partnership with suppliers (2 compared to 0): this may reflect the increase in subcontracting in the French industry and the way in which the French car manufacturers have encouraged the concentration of component manufacturers.
- The British emphasize that efforts are needed to improve brand image (score 2 compared to 0 French): the British may have a more competitive attitude; however, this may also reflect past difficulties of the British car industry and the efforts of the managers to overcome a poor reputation.

Differences between the French managers and the British managers in the retail banking industry also emerge:

- The British raise the issue of competition with Australian banks (3 compared to 0 French): Australian banks have already acquired British banks (for instance N.A.B. took over Yorkshire Bank).
- The British managers emphasize the role of the Monopolies and Mergers

Commission (4 compared to 0 French): there is nothing like the MMC in France.

- French managers stress the segmentation of the market (4 compared to 0): for decades the French banks have had to specialise ("Banques de depots", "banques d'affaires", "Credit Agricole"); there may be a residual influence from this period, and certainly the notion of a universal bank, developed in the late 70s and 80s is now questioned in France.
- French managers stress the importance of improvements of products and services (score 10 compared to 0 British): this may reflect the nature of the interviews; the French tended to talk more energetically about the quality of service especially to high net worth individual clientele: the British on the other hand were more reserved, tending to talk more reflectively and historically about their firms.
- French managers emphasize the importance of human resource development (score 7 compared to 0): the French rapid progress in automatic banking and computerised systems from a starting point less well developed than the British may pose a particularly difficult problem of retraining employees.
- British managers stress the importance of selecting growth segments (score 4 compared to 0): we do not have a clear interpretation of this specific to the banking industry but it may reflect cultural differences referred to earlier.

Differences are also to be found between the French managers and the British managers in the book publishing industry:

- British managers are more concerned with competition with U.S. publishers (3

compared to 1 French): U.S. publishers compete with the U.K. publishers in the English speaking world. British managers also see the U.S. market as important (4 compared to 1): English publishers have established positions in the USA and the English language opens a market of 250 million readers.

- British managers mention the importance of the Commonwealth market (5 compared to 0 French): the Commonwealth is a natural influence zone for English books.
- British managers are concerned with the role of the E.E.C. on the harmonisation of taxes (3 compared to 0): they fear that the E.E.C. decisions will change the V.A.T. on books which is now 0 % in the U.K. (whereas it is 5.5 % in France). However, the French managers are concerned with the coming deregulation at the E.E.C. level (score 6 compared to 1): the French fear that the E.E.C. will abolish the regulation on the set price of books.
- The French managers emphasize the importance of retail chains (4 compared to 0): the bargaining power of chains like Carrefour, Casino or FNAC is a greater threat to French publishers than the bargaining power of retailers in the book publishing industry in the UK.
- The French managers raised the importance of direct sales (4 compared to 1 British): in our sample one of the French firms owned a huge book club: and three other French firms published what the managers referred to as "heavy" products - dictionaries, encyclopaedias and artbooks - which often sell directly to readers. So this finding may reflect our sample rather than the French industry as a whole.
- The French managers stress the segmentation of their market (6 compared to 2):

the French propensity to classify has already been discussed. The French managers also see Eastern Europe as an important market for books (3 compared to 0): again this has been discussed above in the context of overall national differences. Similarly British book publishers emphasize more the importance of profits and shareholder value (score 3 compared to 0 French); again reflecting an overall national characteristic perhaps.

- French managers stress the importance of substitutes (4 compared to 0): this may reflect the greater related diversity of the French firms and, therefore, the likelihood of managers conceived of substitutes more readily.
- French book publishers stress the growing pressure of retail chains (score 5 compared to 0): moreover, French book publishers also emphasize the growing importance of direct sales (score 6 compared to 2): this may reflect the growing pressure of retail chains in France and the desire to circumvent this.

AGGREGATE MAPPING AND INDUSTRY ANALYSIS

So far we have shown the value of cognitive analyses in identifying and helping us understand similarities and differences between groupings of managers in industries in the way they make sense of complex strategic issues. However there is also value in cognitive analyses and mapping at an aggregate level.

Figure 6 is a representation of the brewing industry in Europe drawn up by aggregating the constructs used by French and British managers in the industry. It shows the constructs they use, the weightings of those constructs (as explained above), the main areas of divergence in managerial views and, by means of arrows, the dynamic linkages between constructs. It is not the representation of any one

manager's understanding; nor can it claim to be a representation of the understanding of some collectivity of managers. Rather it is a rich picture of the industry which is of value to the industry analyst. It shows that an holistic, open systems representation of industry dynamics can be drawn up on the basis of cognitive analysis - an approach not dissimilar from scenario construction through expert canvassing (Calori, 1989). The benefits to the analyst of such an approach are a richness of understanding likely to exceed that gained through any one other framework of analysis such as industry structure, organisational field, ecological and resource dependence or era models (Lenz and Engledow, 1986); and it is an understanding which builds on and reflects the understanding managers have of the industry in which they operate and develop the strategy for their firms. As we have already shown, this overall industry map can also be disaggregated to provide insights into both industry and management characteristics.

(Insert figure 6 about here)

DISCUSSION AND CONCLUSIONS

The strategies of organizations are the product of managerial decisions which, in themselves, are influenced by the cognitive frames of reference of managers. If we are to understand how strategies come about it is, therefore, important to understand these frames of references. These may be elicited in a number of ways, but a most obvious one is to allow managers to discuss their views on what they see as most significant about the situations they face, and their responses to those situations.

This research has also showed that cognitive analysis models and techniques can be usefully applied to analyse such discussions to gain an understanding of their industries; the model of Piaget (1983) - schemata and schemes - and cognitive

mapping (Huff, 1990) help uncover frames of references on which strategies are built, which was one of the aims of this study. The cognitive maps presented in figures 2, 3, 4 and 5 are useful representatives of individual managers' FORs. Such maps of the structure and of the dynamics of an industry give a simplified but comprehensive view of the scope of the environment considered by a manager; of actors and linkages between actors the manager considers to be important; of the taxonomic structure of the industry (for example in terms of market segments and groups of competitors); and of the dynamic relationships between forces in the competitive system. Comparisons between figures 2 and 3 and 4 and 5 show that managers in the same industry have quite different views of both the structure and dynamics of their industry. Such insights can be helpful in understanding differences in operational and strategic responses to environmental and competitive forces.

This research has allowed an examination of the extent of commonalities and differences of understanding at the industry and country levels. It has demonstrated that there are commonly held constructs within frames of references between industries and between countries and, more interesting; that there are systematic differences between industries and between countries. The results therefore contribute to the integration of research in comparative management and research on industry influence on strategy formulation (Huff, 1982; Spender, 1989).

We have considered cognitive differences between countries - in this case France and UK across the four industries studied - and we might propose three complementary explanations of these differences. First, that industry structure may be different between countries: for instance the British brewing industry certainly is more vertically integrated than the French. Second, the differences which exist in political and macro economic systems between countries: for instance the control of mergers and acquisitions and the liberal policy of Britain compared to France.

Third, differences existing between national cultures: for example the higher performance orientation of the British managers, the higher product orientation of the French managers.

In this research we did not examine the existence of "supra industry" FORs and "strategic group FORs" across industries. Nor could we examine two other levels of frames of references: the individual level and the organisational level, since this would require data of a comparative nature from within firms. However the research does demonstrate that FORs do exist at industry and country levels.

There are also two main practical values of such work. The first is that it provides a useful basis to understand the dynamics of industries. The aggregate map of an industry such as the one presented in figures 6 appear to be a useful complement to conceptual models of industry analysis. Indeed, we would argue that insufficient attention has been given to the "cognitive model", particularly if we recognise that top managers' understanding of their competitive systems influence their decisions and acts and in turn do shape their environment (Weick, 1979). Arguably, then studies which seek to forecast likely future developments in industries can most usefully be based on top managers' views. For example, the MODEM project of which this study is a part (Calori and Lawrence, 1991) originated because of a frustration amongst those studying developments in Europe, with the commentaries rooted essentially in economic and political analyses; and the little that was based on an understanding of such changes from a managerial point of view.

A second practical value we have found is that the surfacing of such frames of references and their explanation in narrative form or by mapping, can provide a useful basis for feedback to managers, for instance in training programmes. For example Eden and Radford (1990) have employed cognitive analysis and mapping in management development. The resulting findings and maps can be used to

demonstrate to managers the implicit structure of their thinking, and the extent to which it corresponds to or differs from colleagues or others in their industry. As firms are becoming more and more international, uncovering commonalities and differences between countries at the cognitive level should also become a powerful training or consulting approach.

As for implications for research, further studies could reduce the methodological biases that we have mentioned in this paper. The developing interest in managerial cognition will also, undoubtedly improve methods of content analysis and cognitive mapping applied to strategic thinking.

A particularly interesting issue which emerges more sharply from this research is how, and to what extent, different managerial frames of reference interact and influence managers' understanding of their environments and the formulation of strategy. An exploration of the interaction of the different frames of reference noted in figure 1 would be of considerable interest, for example. However such research would require both in depth studies within firms and across industries and countries - a daunting but challenging prospect.

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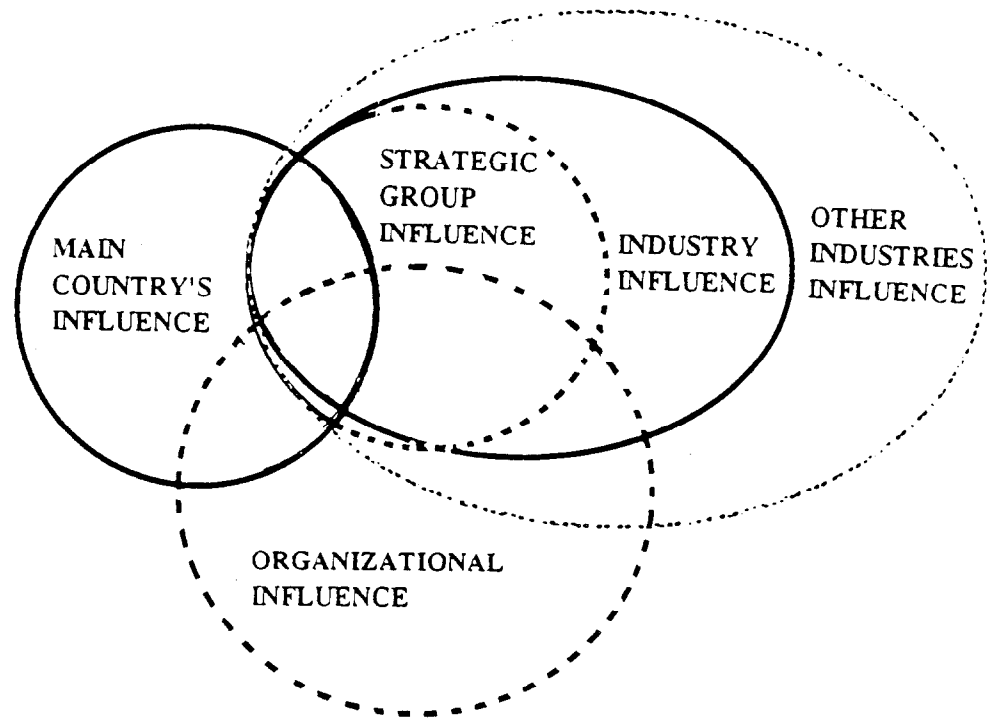


Figure 1 : An integrative model of influences on top managers perceptions of the structure and the dynamics of their business

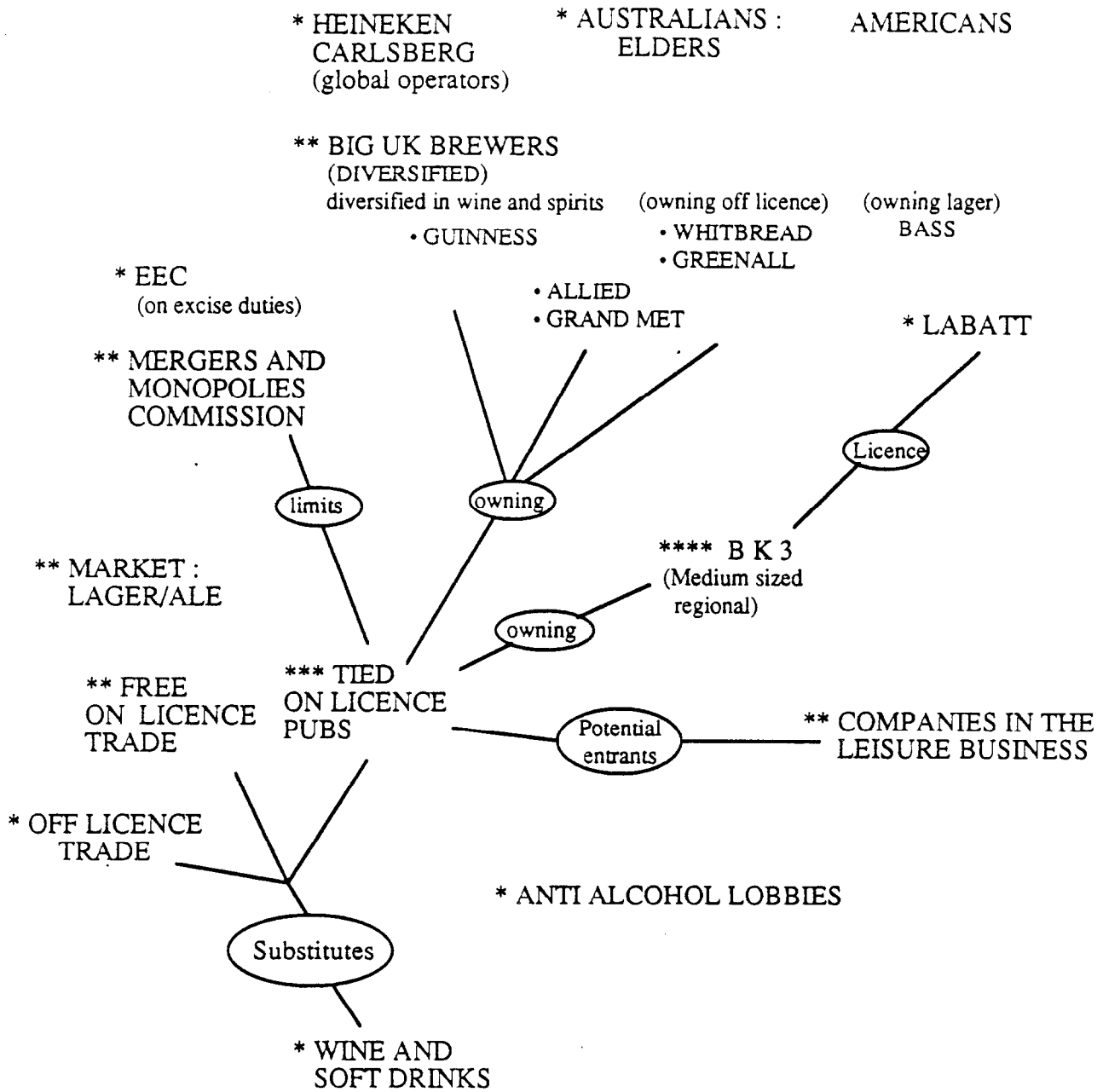


Figure 2 : Cognitive map - structure - top manager of firm B K 3
United Kingdom - Brewing industry.

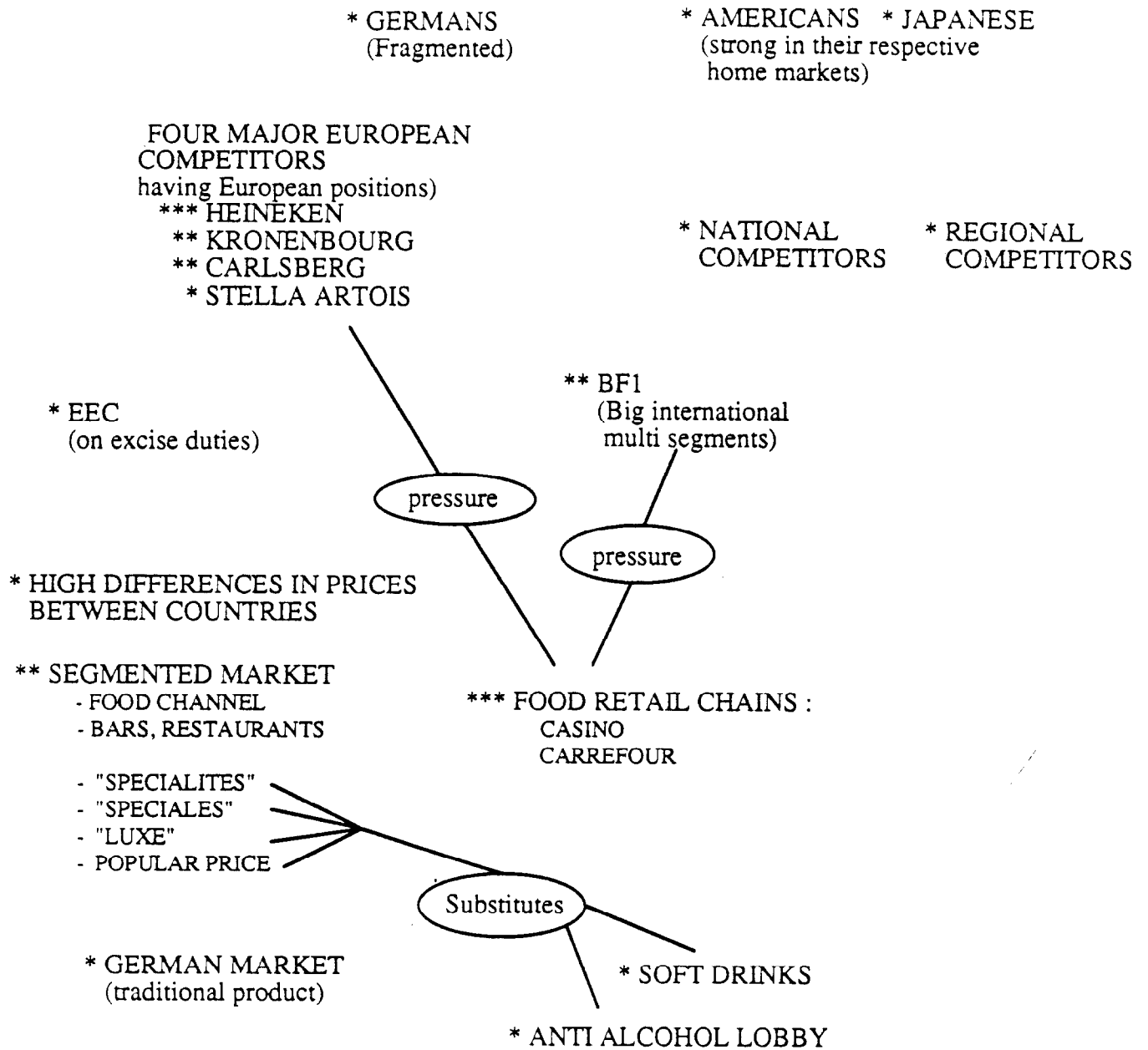


Figure 3 : Cognitive map - structure - top manager of firm BF1.
France - Brewing industry

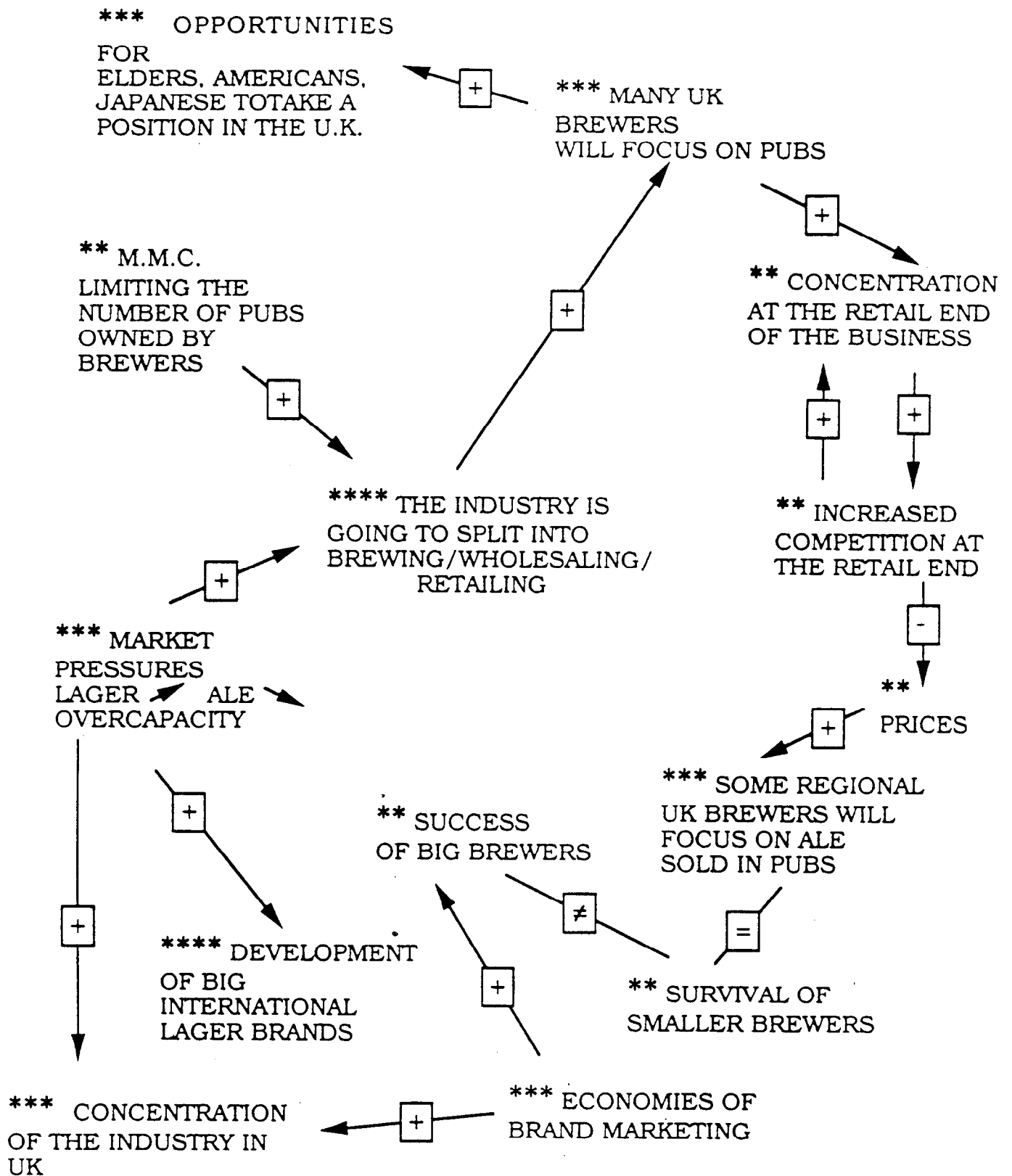


Figure 4 : Cognitive map - dynamics - Top manager of firm BK3 United Kingdom - Brewing industry

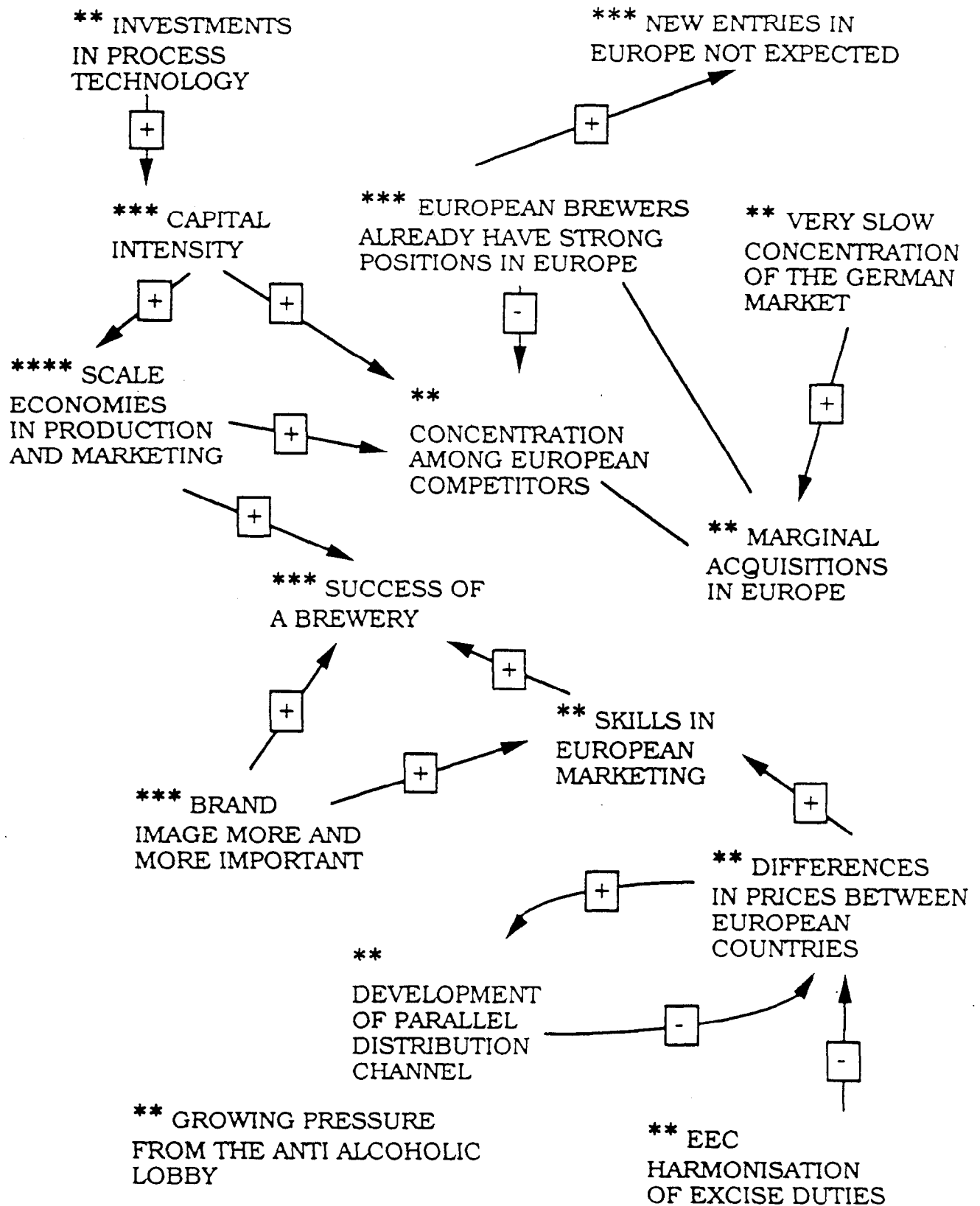
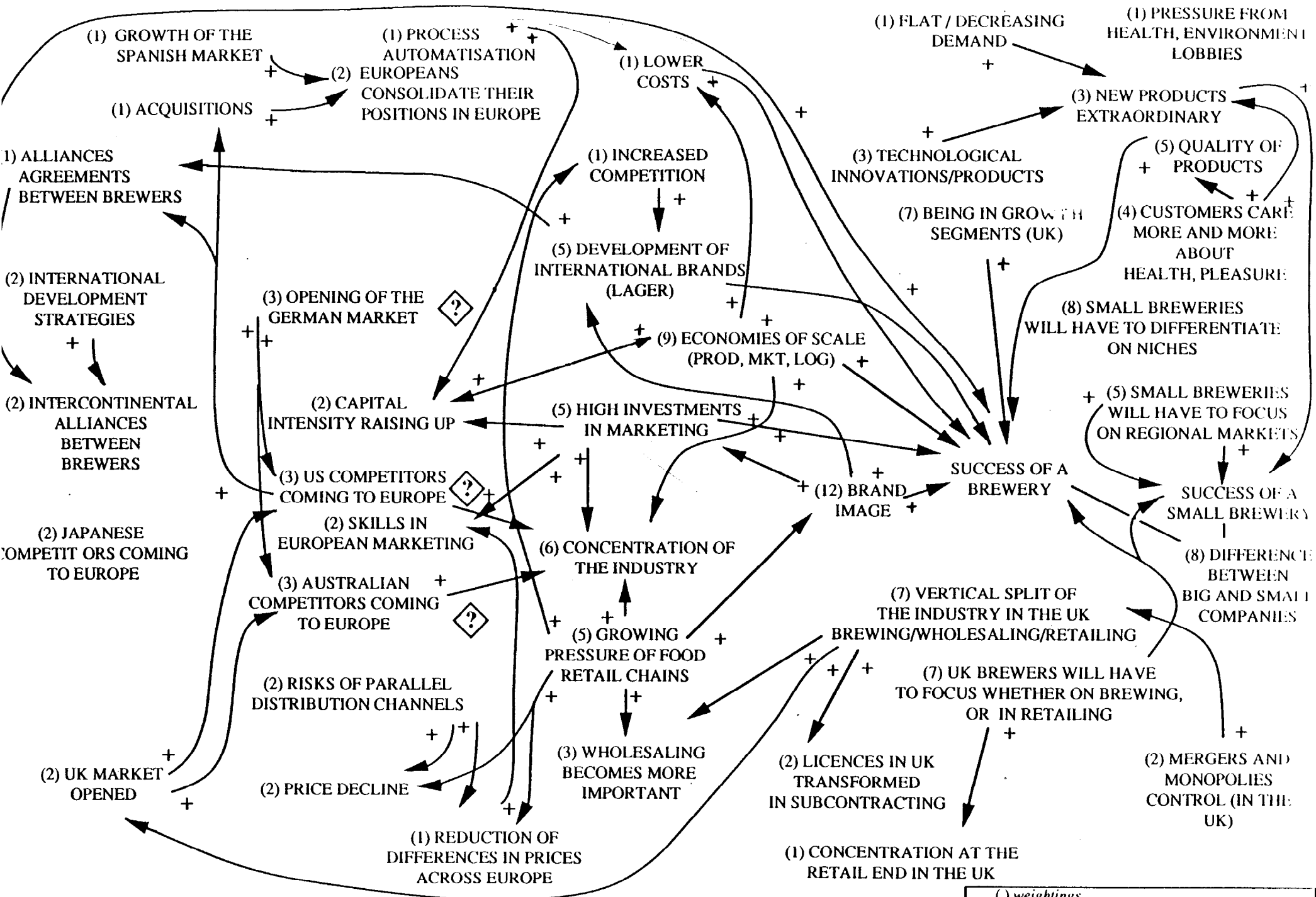


Figure 5 : Cognitive map - dynamics - Top manager of firm BFI France - Brewing industry



() weightings
 ◇ ? Divergences between managers on the concept

Figure 6 : Aggregated map of the dynamics of the Brewing industry (French and British top managers)

| | Brewing | | Car | | Retail Banking | | Book Publishing | | Total |
|-------------------------|---------|----|-----|----|----------------|----|-----------------|----|-------|
| | FR | UK | FR | UK | FR | UK | FR | UK | |
| Focus | | 1 | | 1 | | | 3 | 2 | 7 |
| m | 2 | 1 | | | 1 | | | 1 | 5 |
| All segments | 3 | 2 | 2 | 2 | 3 | 4 | 3 | 2 | 21 |
| National | 1 | 2 | | | 1 | 2 | 2 | 1 | 9 |
| m | | 1 | 1 | 1 | 3 | 2 | 3 | 2 | 13 |
| International | 4 | 1 | 1 | 2 | | | 1 | 2 | 11 |
| Internal development | | | | | 1 | | 2 | 1 | 4 |
| m | 1 | 3 | 1 | 3 | 3 | 4 | 1 | 4 | 21 |
| External development | 4 | 1 | 1 | | | | 3 | | 9 |
| Small | 1 | 1 | | | | | 4 | 2 | 9 |
| medium | 1 | 1 | | 3 | 1 | 2 | | | 8 |
| Big | 3 | 2 | 2 | | 3 | 2 | 2 | 3 | 17 |
| Independent | | 3 | 1 | | 1 | | 4 | 2 | 11 |
| Sub of a national group | 3 | | 1 | 1 | 3 | 4 | 2 | 1 | 15 |
| Sub of a foreign group | 2 | 1 | | 2 | | | | 2 | 7 |
| | 5 | 4 | 2 | 3 | 4 | 4 | 6 | 5 | 33 |
| | 9 | | 5 | | 8 | | 11 | | |

Table 1 : Sample of companies

Influence of the industry FOR

- 1 Selection of the constructs and concepts frequently mentioned and perceived as important by the top managers of the industry
 - structure constructs counted
 - dynamic concepts scored according to criteria of spontaneity, priority, length of discussion and managers' view of importance
 - 2 Identification of the constructs and concepts specific to one or two industries
 - structure
 - Khi square Tests (4 industries / construct mentioned or not mentioned)
 - dynamics
 - Analysis of variance using F test (4 industries / scores of the concept)
- Identification of the main constructs and concepts common to the four industries and the distinction between those specific to one industry

Influence of the main country FOR

- 1 Identification of the significant differences between countries (across all industries)
 - structure
 - Khi square tests (2 countries / construct mentioned or not mentioned)
 - dynamics
 - Analysis of variance using F test (2 countries / scores of the concept)
- 2 Identification of the differences between countries in a given industry
 - structure
 - dynamics
 - Comparison and interpretation

| BREWING (9) | CAR MANUFACTURING (5) | RETAIL BANKING (8) | BOOK PUBLISHING (11) |
|---|--|---|---|
| <p>[8] Major Europe-Wide competitors (28.2/3/0.00)</p> <p>[8] Competition from Netherlands, Denmark (14.9/3/0.00 and 28.2/3/0.00)</p> <p>[7] International and local competitors (16.9/3/0.00)</p> <p>[7] Big and small companies (9.5/3/0.02)</p> <p>[7] Distinct distribution channels (14.1/3/0.00)</p> <p>[6] Substitutes (softdrinks) (11.5/3/0.01)</p> <p>[6] Lobbies (antialcoholic) (11.6/3/0.00)</p> <p>[5] German market important (11.4/3/0.01)</p> <p>[5] Integrated wholesaling (11.9/3/0.01)</p> <p>[4] Overcapacity (8.9/3/0.03)</p> <p>[4] Market saturated (8.9/3/0.03)</p> <p>[4] Control of mergers and acquisitions (10.0/3/0.02)</p> <p>[3] EEC decisions on environment (11.4/3/0.01)</p> | <p>[5] EEC position/importations from third countries (33.3/3/0.00)</p> <p>[5] Competition from Italy (14.7/3/0.00)</p> <p>[5] German market important (11.4/3/0.01)</p> <p>[4] Exclusive v.s. mega dealers (25.5/3/0.00)</p> <p>[3] EEC decisions on environment (11.4/3/0.01)</p> <p>[3] Korean competitors (10.9/3/0.01)</p> <p>[2] Lobbies (11.6/3/0.00)</p> <p>[4] Suppliers (Components)</p> <p>[3] Spanish competitors</p> <p>[3] Eastern Europe market</p> | <p>[7] Network of branches (27.8/3/0.00)</p> <p>[4] Control of mergers and acquisitions (10.0/3/0.02)</p> <p>[5] EEC deregulation</p> <p>[4] Alliances, agreements</p> | <p>[5] Piracy (11.8/3/0.01)</p> <p>[4] Big and small companies (9.5/3/0.02)</p> <p>[4] Substitutes (11.5/3/0.01)</p> <p>[4] Competition from the Netherlands (14.9/3/0.00)</p> <p>[2] Competition from Taiwan (printing) (10.9/3/0.01)</p> <p>[5] Direct sales</p> <p>[5] Differences, preferences across Europe</p> <p>[5] US market important</p> |
| <p>[7] Market segmented</p> <p>[8] US competitors</p> <p>[7] Japanese competitors</p> <p>[5] French market</p> <p>[8] UK market</p> | <p>[3] Market segmented</p> <p>[5] US competitors</p> <p>[5] UK competitors</p> <p>[5] Japanese competitors</p> <p>[5] French competitors</p> <p>[4] German competitors</p> <p>[5] Southern Europe market</p> <p>[5] French market</p> <p>[5] UK market</p> | <p>[7] UK competitors</p> <p>[5] Japanese competitors</p> <p>[7] French competitors</p> <p>[7] German competitors</p> <p>[6] Southern Europe market</p> <p>[5] French market</p> <p>[6] UK market</p> | <p>[8] Market segmented</p> <p>[4] US competitors</p> <p>[8] UK competitors</p> <p>[9] French competitors</p> <p>[6] German competitors</p> <p>[6] Southern Europe market</p> <p>[9] French market</p> <p>[7] UK market</p> |

Table 3: Managers Frames of Reference: differences and commonalities of industry structures
 (figures in brackets indicate: X^2 /degrees of freedom/significance level, when differences are statistically significant.)
 (figures in square brackets indicate number of times stated)

| BREWING (9) | CAR MANUFACTURING (5) | RETAIL BANKING (8) | BOOK PUBLISHING (11) |
|---|--|--|--|
| <p>[12] Brand image (6.9/3&29/0.00)</p> <p>[8] Increased differences between big and small competitors (4.08/3&29/0.02)</p> <p>[3] High investment in marketing (3.35/3&29/0.03)</p> <p>[4] Customers care more about health and pleasure (3.52/3&29/0.03)</p> <p>[5] Growing pressure from retail chains</p> <p>[8] Small competitors will differentiate on niches</p> <p>[6] Concentration</p> | <p>[9] Increased pressure from the Japanese competitors (34.97/3&29/0.00)</p> <p>[7] EECs attitude towards importation (11.6/3&29/0.00)</p> <p>[6] Increasing automatisisation (6.47/3&29/0.00)</p> <p>[5] Human resources development (5.08/3&29/0.01)</p> <p>[3] Future development in Eastern Europe (4.61/3&29/0.01)</p> <p>[3] Alliances, agreements</p> <p>[3] Technological innovation</p> <p>[3] Increased capital intensity</p> <p>[4] Reducing costs</p> <p>[5] Improve productivity</p> <p>[3] Profits share-holder value</p> | <p>[16] Adaptation of the networks of branches (16.7/3&29/0.00)</p> <p>[14] Alliances, agreements and joint ventures (3.66/3&29/0.02)</p> <p>[13] Increasing automatisisation (6.47/3&29/0.00)</p> <p>[7] Human resources development (5.08/3&29/0.01)</p> <p>[7] Adjustments of capacity (5.52/3&29/0.00)</p> <p>[6] Acquisitions and mergers (2.78/3&29/0.05)</p> <p>[5] Shorter products/services life cycles</p> <p>[5] Improve productivity</p> <p>[8] Profits share-holder value</p> | <p>[8] Development of the sales of rights/licences (3.66/3&29/0.02)</p> <p>[8] Acquisitions and mergers (2.78/3&29/0.05)</p> <p>[2] Increased differences between big and small competitors (4.08/3&29/0.02)</p> <p>[8] Improve logistics</p> <p>[8] Development of direct sales</p> <p>[8] International strategies</p> <p>[7] Partnership with authors</p> <p>[6] International/local segments</p> <p>[5] Growing pressure from retail chains</p> <p>[5] Piracy</p> |
| <p>[9] Scale economies volume</p> <p>[7] Being in growth segments</p> <p>[5] Quality of products/services</p> <p>[3] New products/services</p> | <p>[7] Scale economies, volume</p> <p>[2] Being in growth segments</p> <p>[3] Quality of products/services</p> | <p>[10] Scale economies, volume</p> <p>[4] Being in growth segments</p> <p>[10] Quality of products/services</p> <p>[3] New products/services</p> | <p>[5] Scale economies, volume</p> <p>[3] Being in growth segments</p> <p>[7] Quality of products/services</p> <p>[5] New products/services</p> |

Table 4: Managers Frames of Reference: differences and commonalities of industry dynamics
(figures in brackets indicate F scores/degrees of freedom/significance level, when differences are statistically significant.)
(figures in square brackets indicate number of times stated)

| FRENCH TOP MANAGERS | BRITISH TOP MANAGERS |
|---|---|
| <ul style="list-style-type: none"> ▪ Distinction between big and small companies ($X_2 = 5.5/1/0.02$) ▪ Distinction between diverse distribution channels ($X_2 = 4.7/1/0.03$) ▪ Segmentation of the market ($X_2 = 17.5/1/0.00$) ▪ Importance of substitutes ($X_2 = 4.7/1/0.03$) ▪ Eastern Europe as a target market ($X_2 = 3.4/1/0.06$) ▪ Development of new products ($F = 3.9/1 \text{ e } 31/0.05$) ▪ Importance of improvements in quality of products and services ($F = 4.5/1 \text{ e } 31/0.04$) ▪ Growing pressure from retail chains ($F = 4.2/1 \text{ e } 31/0.04$) | <ul style="list-style-type: none"> ▪ Licences and sales of rights are important links between actors ($X_2 = 6.4/1/0.01$) ▪ The government anti trust control ($X_2 = 11.2/1/0.00$) ▪ Necessity to be involved in growth segments ($F = 15.9/1 \text{ e } 31/0.00$) ▪ Importance of profits and share-holder value ($F = 2.8/1 \text{ e } 31/0.10$) |

Table 5: Summary of the differences between French and British managers cognitions, main country FOR
 (figures in brackets indicate X_2 /degrees of freedom/significance level
 F /degrees of freedom/significance levels, when differences are statistically significant.)