

# **The Role of Bureau de Style in the Entrepreneurial Network for Textile Product Innovation<sup>1</sup>**

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## **Abstract**

The aim of the paper is to examine the theme of textile product innovation, with special reference to interactions between textile firms and bureau de style -creative actors of the fashion network- in order to analyze their contribution of information and knowledge to the process of innovation. The relationship approach for innovation (interaction and networking) has considerable current importance, if one considers that in the textile sector, which has long been considered mature, product innovation constitutes a fundamental strategic alternative to face the problem of increasing competitive pressure.

In textile firms the innovation process is based above all on accumulation of knowledge acquired by experience, the fruit of processes of learning by doing and learning by using, which jointly contribute to constructing a well-rooted and widespread capacity for innovation. In these firms, innovative elements are extensively rooted in the locally derived endogenous heritage of knowledge, competences, skills, know-how and capabilities that are difficult to render explicit and are learned through experience and tacit routines. In addition to this valuable store of flexible abilities which are not easily redeployable, an important role is also played by knowledge of the market; this required constant observation of the behaviour of the demand and of competitors.

Interaction with bureaux de style is traditionally a part of relationship activities of textile firms. Product innovation in the textile sector requires integration with competences produced by the style office of textiles firms and external knowledge which is created by actors definable as suppliers of knowledge of a creative type, such as bureau de style consultants, or by components of the network that can be identified as consisting in making-up firms, quick fashion garment makers and large distribution chains. The latter are closer to the final consumer and therefore have access to information concerning on-going trends in this sector and purchasing behaviour. In addition to the above-mentioned creative sources and market sources, a broad range of other actors also fulfil an important function, such as fibre producers, outsourced suppliers – spinners, weavers, dyers, finishers etc. – equipment and machinery manufacturers, all of whom contribute with their constant research activity, their know-how and their experience to textile product innovation.

In conclusion, the paper tries to answer to the following questions: which bureaux de style and textile firms engage in inside interaction behaviour; the contribution (increasing or decreasing) of this interaction to the innovation process of the textile firms; the role played by interaction in the accumulation knowledge activities produced by bureaux de style.

Our research is based not only on study of the literature and on analysis of the results of research into this question, but also on primary sources composed of information collected through interviews (case analysis) with members of the top management and of the creative teams of

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bureaux de style located in Italy and in France. We will use the methodology of case analysis in order to define the nature and role of the bureaux de style within the network and to provide a definition in qualitative terms of the way their knowledge contributes to product innovation.

## **1. Network knowledge for textile product innovation**

For many firms, development of a new textile product represents a necessary solution in order to be competitive in a traditional and mature sector (Baden-Fuller and Stopford, 1995; Burresi, 1989). But at the same time, it is a risky and complex phenomenon. The *risk* element is linked above all to the timing of the fashion cycle, which requires textile firms to design their products far in advance of the reference season (Burresi and Guercini, 2002), while the *complexity* is determined by the variety of relations the textile firms sets up with the various players in the textile production system. Such relations arise in an almost natural manner, and represent a route to supporting and enhancing the body of knowledge, experience and skills that can be combined when production processes are carried out (Richardson, 1972). In fact, they form an indispensable premise for the creation of innovative products.

It follows that the development of textile products cannot be understood simply by limiting the investigation to analysis of production processes, organizational patterns and management policies concerning the creation of the pattern book. Rather, it requires a study of the “cognitive relations” between the textile firm and the other players in the textile production system, in order to identify the cognitive contribution of the various players to textile product innovation (Guercini and Ranfagni, 2002). The cognitive network model is proposed in this paper as the tool that sheds insight into the theme of product innovation in a strongly competitive sector, where innovative product design is characterized by a high level of complexity. In such a situation it is indispensable for the individual firm to become part of a relational structure that can foster a sort of co-evolution of its own learning processes through constant exchange and sharing of cognitive resources. This subject has become an increasing focus of attention in recent decades, and there are now many studies in the literature which analyze the specific cognitive contribution to innovation deriving from subjects that belong to a specific *inter-organizational network*. Particular emphasis is placed on the contribution from customers (Cooper 1979; Cooper and Kleinschmidt 1987; Von Hippel 1978, 1988), from distributors (Nilsson and Host 1987; Pellegrini and Zanderighi 1990; Jones and Ritz 1991; Rangan, Melvyn and Mayer 1992; Pellegrini and Bertozzi, 1994) and from suppliers (Von Hippel 1988; Clark and Fujimoto 1991; Nonaka, 1990, 1994, Leonard-Barton, 1995).

The basis premise that forms the starting point of these studies is the conception that the inter-organizational network, representative of the textile production system, is composed of firms that constitute social organisms (Kogut and Zander, 1992) capable of producing specific internal knowledge (Penrose, 1959). The textile production innovation process is then fuelled by exchange of various types of knowledge between the textile firm and the various players in the production system. In some cases the exchange involved encodable knowledge, which can thus be transmitted through a formal, systematic and to a large extent tacit system. That is to say, it is a system composed of cognitive elements that are related in a complex manner to mental models of representation of reality, know-how and concrete skills (Johnson-Laird, 1983).

In particular, in the sector investigated it proves to be impossible to establish a univocal relationship linking the generative, integrative and adaptive nature of the knowledge produced by the various players in the system (Guercini and Ranfagni, 2002) to the explicit and encodable character of knowledge. Thus if we take a simplified analysis of the inter-organizational network, one might state that the encodable and transferable knowledge possessed by a textile firm, i.e. the knowledge that is needed to support the innovation process (Teece, 1986), may present: (1) technical content, if it is produced by subjects upstream in the

textile system, such as mechano-textile firms, fiber yarn producers; (2) a content summarisable as representations of the final market trends if it is supplied by external subjects identifiable as fashion house representatives, bureaux de style (style bureaux) or customers – making up firms, quick fashion enterprises and large distribution chains – who have already established relations of trust and close cooperation with the basic textile firm. However, this distinction is inadequate to represent the processes of generation and transfer of types of knowledge which, in concrete reality, cannot so easily be defined merely on the basis of the difference between tacit and expressed knowledge.

The reason is that the players in the textile production system do not produce merely encodable and “migratory” knowledge (Badaracco, 1991). They also produce contextual and “embedded” knowledge, rooted in specific competences, and consolidated through experience and the performance of certain actions, procedures, practices and what may effectively be termed routines (Nelson and Winter, 1982). The stratification of abilities, experience and routines over time, and their interaction, jointly shape the collective dimension of that aspect of an enterprise’s knowledge that has tacit and non encodable nature. In this interaction between the textile firm and other firms in the sector, the transfer and subsequently the internalisation of this knowledge consisting of sensations, intuitions and shared experiences that form an integral part of the firm’s genetic heritage makes the knowledge itself hard to represent and express. It is as if the individuals or organizations involved had internalised the action-results relations while at the same time forgetting their causes – or as if they applied the know-how without remembering the know-why. Thus when one seeks to identify the cognitive contributions made by the different players in textile product innovation, it has to be taken into account that independently of the adaptive, generative or integrative nature of the knowledge produced, these different players transfer both extended and encodable knowledge and also tacit knowledge.

Another important point needs to be stressed. We believe – and the literature supports this approach – that in order to understand the activities linked to the process of innovative product development it is not sufficient to examine relations with the external network. It is also necessary to consider the sources of knowledge internal to the firm, examining the way the firm can successfully exploit its own competencies, effectively assimilate the external stock of knowledge and thus produce new knowledge. This means that the spotlight should be trained on the specialistic interface roles that are in charge of managing relations with the external sources and examine how these roles interact with the sources of knowledge internal to the firm. Thus the question to be elucidated is how this interaction succeeds in enhancing the firm’s overall knowledge heritage and internalising contributions arriving from outside.

In this perspective, the process of new product development is encouraged by knowledge integration between an inter-enterprise and an *intra-enterprise* network that has been analyzed in the literature on the functions of Marketing (Rothwell, 1972; Cooper, 1979; Hill, 1988, Mahajan e Wind, 1992; Workman, 1993), Research and Development (Allen, 1971; Cooper, 1984; Griffin e Hauser, 1994; Pisano, 1994), Design and Production (Hauser and Don Clausing, 1988; Whitney, 1988; Bruce and Morris, 1995; Davies-Cooper and Jones, 1995) and Purchasing (Williams e Smith, 1990; Axelsson and Hakansson, 1990). Therefore, analysis of textile product development requires study of the integration between knowledge deriving from the external network and that produced within a given enterprise, between knowledge deriving from the style office and that from the commercial area, seeking also to understand how these interact with accumulated experience, especially that which is sedimented within the top management (Burresti and Guercini, 2001).

In a sector where product innovation seems to play a major role, both in relation to supply push and market pull factors, the process of rationalization and institutionalization of seasonal trends by the *bureaux de style* (style bureaux) becomes very important, as it represents a necessary response to the requirements of the textile sector. Today the process of forecasting

and developing new trends is fairly formalized: it is based partly on the search for and sharing of information, and partly on personal interpretation of the tendencies by the firm itself. In this process the *bureaux de style* (style bureaux) fulfil an important role precisely because they can act both as creators and interpreters of trends. We thus plan to analyse the processes of knowledge creation by bureaux de style (style bureaux), investigating the way they acquire and shape knowledge of new tendencies and their relations with the other players in the textile system, most importantly with other textiles firms seen as purchasers and coproducers of knowledge about new trends.

This makes it possible to overcome the inter-enterprise/intra-enterprise dichotomy, so that the attempt to analyse how bureaux de style (style bureaux) produce and transfer knowledge translates into the need to identify the figures within a textile firm that interact with the style bureaux. To this end, we will first focus on individuation of the theoretical reference model for interpreting the process of knowledge creation adopted by the bureaux de style (style bureaux) in their shaping of trends; we will then describe this process and proceed to an analysis of relations with the other players in the textile system.

## 2. Generating knowledge is creating its environment

The role of knowledge in corporate management processes has been addressed from two main viewpoints in the framework of managerial and organizational theories: a “*scientist*” orientation, to which authors such as F.W Taylor and H.A. Simon belong, and a “humanistic” perspective, to which one may trace the approach adopted by such authors as E. May and K.E. Weick. The former approach considers human beings as stimulus-response systems with little knowledge-generating ability, while the latter, which is linked to studies on organizational culture (Schein, 1985), has shed light on the nature of organizations as an epistemological system. That is to say, the “humanistic” perspective underlines the role of organizations as systems of shared meaning capable of learning, changing and evolving over time through social interaction among its members. Therefore this approach is more strongly oriented towards in-depth research on the implicit nature of knowledge.

In line with this humanistic approach and with the growing role of knowledge requirements for managerial processes, scholars of management have focused attention on analysis of the *nature of knowledge resources*, distinguishing between “know-how” and “know-that” (Russel, 1913; Ryle, 1947), the former being tacit and the latter explicit (Polanyi, 1967). In addition, in this approach a further distinction is drawn between “procedural knowledge” and “propositional knowledge” (Scheffler, 1965), and emphasis is also placed on study of the level to which knowledge is possessed, thus separating the individual from the meta-individual (collective) dimension of cognitive resources (Durkheim, 1964; Russel, 1948).

From the 1980s onwards, learning theories also made their appearance in the literature, as well as approaches to strategic management based on resources, competences and the fundamental corporate capabilities

*Learning theories* pointed to learning organizations (Senge, 1990) as an enterprise model that sees generative (active) learning and adaptive (passive) learning as the sustainable sources of competitive advantage. These are organizations whose *raison d'être* lie not only in a shared mission and in team work, with members bringing their different competences to bear, but also in the ability to act according to the logic of “systemic thought”. This implies “a change in mentality from a vision of ourselves as beings separated from the world in which we live... to a vision of problems as the outcome of external forces or persons” (Senge, 1990, p.12). Such an approach entails that the problems and issues we experience be recognized as the result of our own actions.

The constant interest in the relation between knowledge, resources, capabilities, competences and competitive advantage of the firm has led, as mentioned above, to the rise of further new lines of study, including the Competences Approach (Selznick, 1966; Prahalad and Hamel, 1990) and that of Corporate Capabilities (Leonard-Barton, 1992; Teece, Pisano and Shuen, 1997), as well as

the resource-based view (Wernerfelt, 1984; Rumelt, 1984) and studies identifying knowledge as a constitutive resource of the firm (Winter, 1987; Nonaka, 1991; Kogut and Zander, 1992; Grant, 1996).

While the *Competences Approach* identifies the *distinctive competences* consisting of shared knowledge internal to the firm, which comes into play during corporate processes, the *capabilities approach* defines the capabilities as the set of experiences, knowledge and skills that can be combined in corporate management. In this context, an important contribution has been made by Teece (1982), who identified the organizational capabilities as residing in the routines that underlie productive processes. Such routines are considered as modes of accumulating knowledge through the formation of a collective memory. With reference to the evolutionary nature of capabilities, the Dynamic Capability approach assumes the firm as a *locus* in which internal knowledge is constructed, integrated and reconfigured, with a view to rapid change in the competitive scenario. It follows that knowledge integrated through dynamic capabilities is composed partly of the resources embedded in corporate processes, and partly also of the routines, collective competences and core competence. Other important contributions that form part of this approach include that of Kogut and Zander (1992), who define combinative capabilities as the creation of new knowledge on the basis of existing knowledge, and that of Leonard-Barton (1992) who proposes a knowledge-based view of the firm and defines the core capabilities as components of the knowledge heritage managed by the firm. This heritage is constituted by the capabilities of individuals: it lies partly in the knowledge embedded in the productive activities which are the foundation of the firm's technological principles, but also in the managerial and operational systems through which a firm creates knowledge and in certain guiding values that are components of the firm's cultural approach to creating and managing new competencies.

In the 1990s, the conception of a firm that grows on the basis of its own resources and capabilities, developed by Penrose (1959) and Rubin (1973) influenced strategic studies, and in particular the *Resource-Based View*. This line of analysis considers that the main source of competitive advantage lies in the heritage of intangible resources, and in particular in the collective knowledge (know-how) that can be traced back to organizational, technological and human resources. However, the growth of the firm is fuelled not only by these resources, but also by the firm's capabilities, which represent a process of integration of resources (Grant, 1991) and therefore constitute organizational routines composed predominantly of contextual/tacit knowledge. The Resource-Based Theory of the firm, which considers *knowledge as a source of competitive advantage*, is the fundamental premise for an understanding of the two scientific paradigms into which many of the studies on corporate knowledge can be grouped. We refer in particular to the cognitivist paradigm, which considers corporate knowledge as a repertory of individual representations, and to the constructivist paradigm, which defines corporate knowledge as a system of meaning-generating interactions that converge in a collective environment.

It will be clear that in this part of our study, the analysis we intend to carry out will not focus predominantly on study of the cognitive heritage of the bureaux de style (style bureaux), nor do we mean to identify the learning mechanisms of organizations (Argyris and Schon, 1978; Vicari and Von Krogh, 1992; Nonaka and Takeuchi, 1995) that belong to the textile system and which form the nodes of a web of relations with the style bureaux themselves. Rather, we plan to spotlight the processes of knowledge generation produced by these creative subjects according to an analytical approach that considers *knowledge* not as an act that is merely representative of the situation under investigation, but instead as a *generative act* which effectively constitutes that situation.

More in detail, the bureaux de style (style bureaux) that engage in the activity of fashion trend creation can be considered as organizations which are endowed with specific cognitive patterns: as such, they become active subjects in knowledge generation, in the context of an environment that includes not only the corporate structures belonging to the textiles/apparel sector, but extends to include the entire social context. It is through analysis of this social context that new latent tendencies can emerge. Note, however, that this broad social context is neither objective nor

independent, and within this framework the bureaux de style (style bureaux) exploit the cognitive patterns they have at their disposal. In effect, “they activate different portions of environment and in this manner they constitute their own environment” (Weick, 1969) and create new knowledge.

It would therefore be correct to say that in the analysis we propose, the theoretical reference models for interpretation of the style bureaux’s process of knowledge generation are those characteristic of constructivism rather than of the cognitive paradigm. The latter considers corporate knowledge as a repertory of individual representations and the individual as one who seeks knowledge, i.e. as a subject who, on the basis of a belief system, interprets the events of the world and selects the actions s/he regards as most suitable for the pursuit of his/her ends (Provasi, 1995). Therefore, according to the cognitivist paradigm, since the object of the thought processes is constituted of symbols structured through processes of encoding and elaborating information, the resulting knowledge is composed of representations concerning an objective, real world, existing outside of the subject. Starting out from the presupposition that the information elaborated by the individual is produced by the environment, subject and environment are thus two separate entities, each constituting its own world. Only in the way in which it presents itself to him/her can the subject be receptive to the environment, since the subject has no possibility of modifying it. In this paradigm, considering individual and organizational knowledge as a set of representations means that knowledge itself must be reified. Knowledge is downgraded to information, and the only part that is taken into consideration is the explicit part encoded in cognitive patterns modelled and therefore transferable within the organisation. Knowledge is and remains the fruit of a process of elaboration of information conducted by individual members of the organization or through interaction among members of the organisation.

In the constructivist approach, on the other hand, the creation of knowledge – in the specific case the generation of knowledge in the form of fashion trends – can be considered as a generative act. It is not purely a revelation of an objectively given situation, because knowledge generation has a significant meaning for organizations and in particular for the bureaux de style (style bureaux): it means creating a reality and actively influencing the surrounding circumstances, which it contributes to shaping (Von Glasersfeld, 1981).

One of the founding concepts of the view of knowing as a generative act – a concept that is helpful to interpret the manner in which the bureaux de style (style bureaux) create knowledge – is that of enactment, or *activation*, to use Weick’s term (1969), as a preliminary stage prior to knowledge generation and transfer. Based on the theoretical constructs of the constructivist approach, we argue that the model of analysis that best allows an interpretation of the style bureaux’s knowledge generation process can be subdivided into stages:

- (a) activation of the environment and enhancement of knowledge;
- (b) selection on the basis of the search for causal linkages;
- (c) retention of the constructed environment.

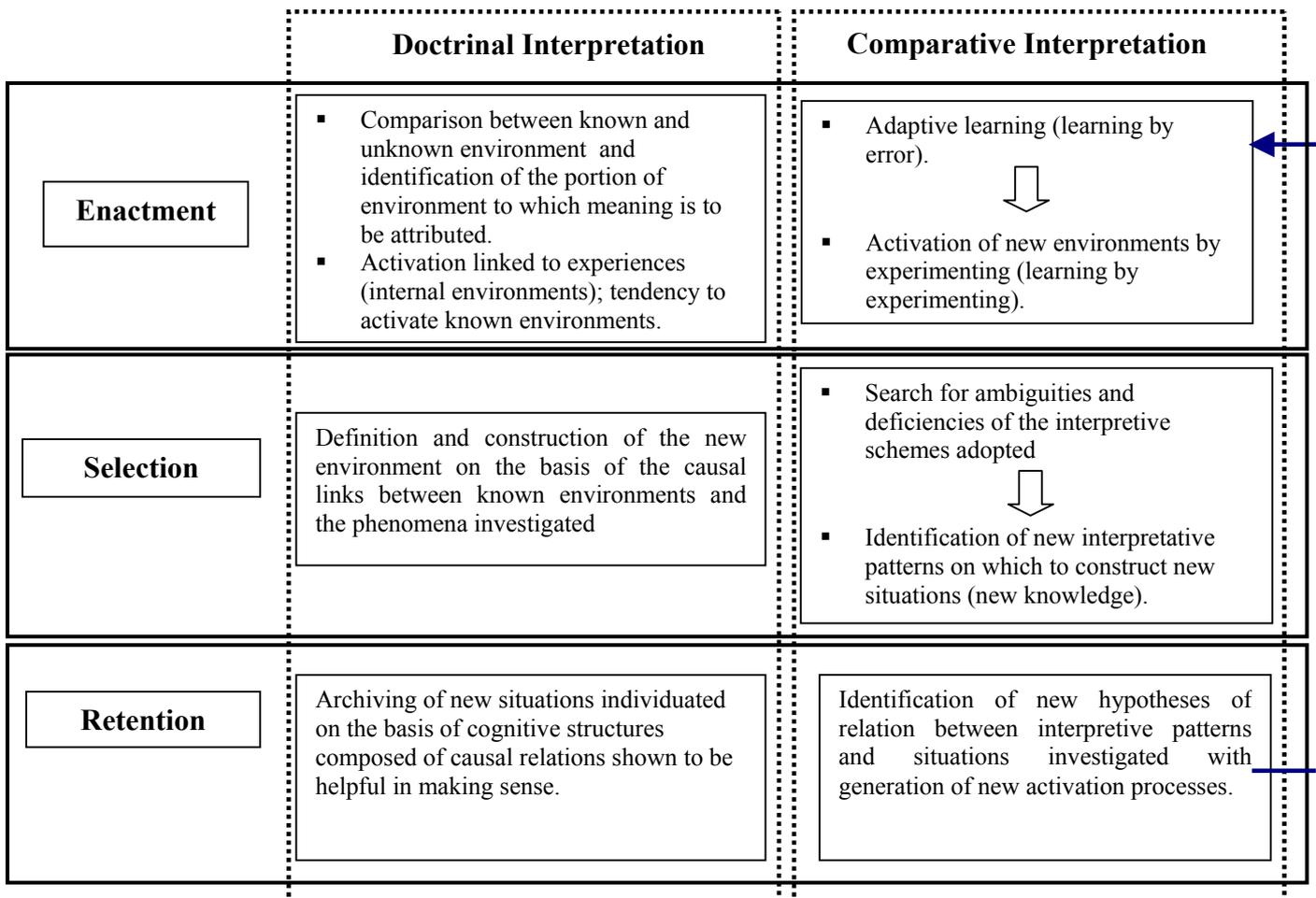
In fig.1 we present our interpretation (Fig.1 comparative interpretation) which proposes, as will be shown, aspects that are not covered in the three stages by the reference model proposed for knowledge generation.

Starting out from the presupposition that the environment is not objective, is not given and is not independent of the player, every subject - through his/her own actions - activates portions of environment different from those activated by other subjects, and thereby constitutes his/her own environment. With *activation* (Fig.1 doctrinal interpretation) the subject makes a distinction between what belongs to his/her own environment and what belongs instead to the unknown and therefore non-existing environment. The activation stage is preceded by what Weick calls “ecological change”, which stimulates the subject to focus on a part of the environment, highlighting it and throwing only a part of it into sharp focus. “Ecological change supplies the environment in which constructive intervention can be performed”, while activation produces the raw data on which meaning is bestowed. If activation is linked only to the outcome of experience, it is clear that the parts of environment activated are those known and already tested. In such a case

the subject acts as a seeker of consistency and creates no knowledge that is new in absolute terms, as she/he endeavours, by resorting to processes of event interpretation, to maintain a consistent coherence between belief system and events, and between the system and behaviour.

To create new knowledge it is necessary, in our view (Fig.1 comparative interpretation), for the firm to activate an unexpected environment either intentionally or casually, also generating a new system of representations, new interactions and thus new knowledge. This is in line with the arguments put forward in the theory of adaptive learning (March and Olsen, 1976), on the basis of which the organizational model of increasing knowledge derives from the retro-action of performed actions on expectations. If this knowledge proves to be aligned with expectations, then the latter are confirmed; if on the other hand the results of the action lead to a divergence as compared to expectations, then an error arises (Argyris and Schon, 1978). Detection of an error leads to an intervention for the purpose of error correction and removal, which will result in a change in the actual knowledge of the organizational system. To avert the risk that organizations may tend to activate a knowledge that is based on accumulated past experience, it is necessary to activate processes of “learning by experimenting”, as learning is based on “the highlighting and amplification of errors” (Vicari and Von Krogh, 1992). In particular, experimenting may be planned or provoked, setting the conditions for errors to occur casually. While the effectiveness of the first type of experimenting will be flawed by the self-referentiality with which systems tend to interpret external events, if experimenting comes about quite by chance and is perceived by the cognitive system, then it will be far more likely to expand knowledge.

Fig.1 *Doctrinal Interpretation and Comparative Interpretation in the style bureaux knowledge generation.*



To this should be added that experimenting may occur when exploring two different territories: the as yet unactivated external environment, for which the firm does not yet have any significant representations, or the already activated environment that represents the reference market already familiar to the firm (Vicari and Troilo, 1995). By virtue of the different degree of intentionality (planned vs. casual) and the different localization of the experiments (external environment vs. activated environment), it is possible to identify four types of learning that are available to the corporate cognitive system: experimenting tout court, on the basis of which the firm sets in motion a process of experimenting in the as yet unknown environment; recombination in which the intentional act is addressed to the already activated environment; an alteration in which the cognitive system perceives a chance experiment conducted in the external environment; finally, the transformation in which the chance experiment takes place in the already activated environment (Vicari and Troilo, 1995).

This activation stage is preliminary to the *selection* stage which consists in imposing the effect of a built environment on the raw data emerging from activation of the subject's cognitive structures (Fig.1 doctrinal interpretation). "This process hosts the decision-making process, but it is vital to bear in mind that the decision-making process in the model or organisation means selecting some world interpretations and a variety of series of extrapolations from the chosen interpretations, and using these compendiums as a limitation on the subsequent action" (Weick, 1969). Selection can be thought of as a sort of black box whose inputs are composed of the raw data emerging from the activation and from the causal mappings which were found in the past to be effective in the construction of given situations. The output of this process consists of the creation of environments which, inasmuch as they are the outcome of the use of causal mappings used for the setting up of already constructed environments, will in many respects prove to be consistent with, and not too divergent from, those built up previously.

We believe that in order to avert this risk, which would lead to the impossibility of creating new knowledge, it is important to revise the available interpretive patterns that put an interpretation on a situation. It is equally important not to underestimate all the ambiguities and interpretive differences that can be engendered when comparing the potential of causal mappings applied for the construction of already existing environments and assessing their deficiencies, if indeed they have been utilized for the establishment of new situations (Fig.1 comparative interpretation). Only thus can one avoid the possibility that the constructed environment constitutes a simple surrogate of already existing situations, allowing the emergence of a new portion of environment whose informational and cognitive content will be all the greater, the less it can be traced back to prior knowledge. Thus new knowledge creation takes place when new interpretive models are applied to new information and thus to new situations that have been investigated. In this case the process of new knowledge generation is more radical, since both new information and new ways of interrelating different bits of information appear in the network of connections that constitutes the knowledge system. This plunges the organisation into a completely new environment, the fruit of a process of activation that expands and deepens its cognitive territory.

The patterns that are found to be useful in reducing ambiguity or which have been utilized for the interpretation of new situations are *filed in the archives*; in this manner, the subject retains in memory a series of patterns that represent enacted environments, i.e. cognitive structures composed of causal relations that have been found useful in producing meaningfulness and which will in turn influence the subsequent processes of enactment (Fig.1 doctrinal interpretation). In actual fact we argue that during this stage it could be worthwhile to hypothesize new action-result relations to be submitted to the test of experience through action, thus triggering a new cycle of enactment. In this way retention is a form of vicarious learning in which knowledge remains in a hypothetical form and is susceptible of being modified as a function of later reflection following the test of experience (Fig.1 comparative interpretation).

The doctrinal interpretation can act as a "tool" for interpreting the manner in which (bureaux de style) style bureaux operate in generating tendencies. Its applicability for purposes of interpreting

the phenomenon investigated is facilitated in its revisited version (comparative interpretation), which takes into account two elements that characterize the way style bureaux operate. Firstly, the *bureaux de style are not closed systems* as far as their process of knowledge production is concerned. This means that even if the world they construct is internal to them, it is enacted through constant observation and experimentation of an external environment which does not fail to enrich already constructed environments and already possessed knowledge. Bureaux de style (style bureaux) don't usually active known environments. Therefore while the transformation of their observations into knowledge is a predominantly internal process, it takes place on the basis of constant comparison with external situations and with environments that at times may be completely unknown. Furthermore, in the generation of new knowledge the new environments constructed by the style bureaux cannot be identified with those that are easily interpretable on the basis of the *causal mappings* that identify an association between already constructed situations and phenomena investigated. In the majority of cases, what arises are worlds and new knowledge that has been produced by chance in a spontaneous manner, and which would be difficult to justify with rational logical arguments and casual linkage.

### **3. Trend creation as a process of generation of convergent knowledge**

Our research is based not only on study of the literature and analysis of the results of research on this topic, but also on primary sources consisting of information gathered through interviews (case analysis) with managers of some of the major (bureaux de style) style bureaux in France and Italy. We selected (bureaux de style) style bureaux which, according to the opinions of the textile manufacturers' associations, are said to play a major role in trend generation. The interviews (Woods, 1999) were divided into two parts: the first aimed to analyze the process of new knowledge generation in terms of new trends proposed by the (bureaux de style) style bureaux, while the second focused on the relation between the bureaux de style themselves, textile firms and the other players in the textile system, seen as co-producers and simultaneously also as recipients of new knowledge.

In their function of generators and creators of fashion trends, the (bureaux de style) style bureaux are perceived as the creative players of the textile system. Arising in France in the mid-1980s to meet the needs of the prêt-à-porter component of the textile industry, they can be described as small-sized organizations, specialized mainly in the production and sale of information on fashion trends which is gathered together in the so-called *cahier de tendance* (tab.1 and 2). These cahiers, published as loose-leaved folders, are composed of photos, colours and fabrics, and thus act as tools for representation of trends in the sphere of apparel – menswear, women's fashions, children's clothes, sportswear, lingerie and interior decoration. The two cahier which, as shown in tables 2 and 2, characterize the production of the (bureaux de style) style bureaux interviewed for this study are the colour section and that of the concepts (or impulses). The former provides indications concerning colour trends, while the latter is a representation of alternative styles, identifying specific tendencies.

At the moment the bureaux de style have become "*style agencies*" and therefore they carry out research for the definition of new tendencies in the textiles/apparel sphere; however, they also seek out new styles that could be applied in a variety of different environments.<sup>2</sup> The definition of these new styles leads to new solutions in terms of interior decoration, organization of the layout and the physical environment of sales outlets belonging to large distribution chains, foodstuff packaging, design of electrical appliances, colours and upholstery of capital goods (automobiles, etc.). As a result of this interpretive activity by the bureaux de style, with its endeavour to constantly broaden the range of application of new style concepts, they are now considered as companies that also carry

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<sup>2</sup> Such environments include the automobile (interior and exterior), cosmetics, catering, interior decorating, electrical appliances, food products and large-scale distribution chains.

out consultancy activity, i.e. as supplying “information and assistance to a person or a system that requires help in the framework of a voluntary and temporary relationship that is mutually advantageous” (Bell, Nadler, 1985).

In the textiles sector, their consultancy activity is carried out above all in the form of assistance to textiles firms in interpreting the trends and translating them into a pattern book, and assistance to making-ip firms for the creation of new collections and thus of stylistically innovative garments, production material, colour matching and fancy motifs. In some cases this activity includes help in defining corporate communication policies, such as choice of brand image, a specific plan for communication via the media, or orientation as regards the organisation of sales outlets (merchandising). On the cognitive level, the role played by bureaux de style in textile product innovation is primarily of a *generative nature*, as they offer creative elements and information (colours, motifs, fancy patterns, fashion tendencies, etc.) that are prompted above all by awareness of social and cultural phenomena, i.e. phenomena that are not purely random or occasional and are directly linked to fashion.

As clearly emerges from the above interviews, the creative staff at the bureaux de style attribute considerable importance to observation of lifestyles and the overall mentality of the surrounding society; they also direct their attention to travel and thus to the discovery of new situations (the emergence of new cultures, discovery of traditions) in order to identify affinities and correlations between trends noted as social phenomena and new trends on the plane of fabrics (new colors, patterns, shapes, the way a fabric feels to the touch) and garments. By observing the external environment, the creative staff focus attention on the identification of all the different phenomena (social, cultural, etc...) that make up the social situation currently being investigated. They thereby seek to detect early signals that forecast new trends. Once the ideas have been collected, they are interpreted by the artistic director and also by the creative staff themselves; working jointly with the president and the director of the bureau de style, sometimes with the support and the aid of sociologists, they identify proposals for new trends. These trends become effective and are thus concretely expressed in the cahier de tendance, but only after a phase of exchange of ideas in which the various different bureaux de style take part, with the goal of reaching a convergence of ideas about possible trends so that the proposals can be made as homogeneous as possible and reflecting a shared approach.

	<b>Structural data</b>	<b>Activities</b>	<b>Cahier de tendance</b>	<b>Competences</b>
<b>Alfa</b>	Alfa was set up in Paris in the 1970s as a bureau de style, and then was turned into a style agency;... at the moment there are 65 people employed, 21 agents world-wide (USA, Canada, Brazil, Japan, Taiwan, Hong Kong, China, Australia, France, Belgium, Germany, United Kingdom, Italy, Spain, Portugal, Greece)..... “an emphasis on the practical and on creativity characterize the bureau de style”.....	“...We draw up cahiers of tendance, consultancy services for firms (creation of collections, choice of brand positioning); we carry out communication activity (organisation of trend forums) and promotion... trends and styles are created by looking at different environments (fashion, cosmetics, food products, large distribution chains, automobiles, etc.)... Since for the last ten years or so “fashion has been in fashion”, we have now decided to go beyond fashion and conduct style studies for different sectors .....”	“Overall we draw up 18 publications at specific times of the year; the most important are: <ul style="list-style-type: none"> <li>■ Colours (summer: early September; winter: early February)</li> <li>■ Impulses (summer: mid July; winter: mid January)</li> <li>■ Lingerie (summer: end of July; winter: end of January)</li> <li>■ Knits (summer: end of November; winter: end of May)</li> <li>■ Women’s fashions (summer: mid February; winter: mid September)</li> <li>■ Men’s fashions (summer: mid September; winter: mid February)</li> <li>■ Teen-agers – age 6-14 - (summer: mid November; winter: mid May)</li> <li>■ Fabrics (summer: mid September; Winter: mid February)</li> <li>■ Impulses (identifying concepts that underlie trends: beginning of April)</li> </ul>	“The in-house competences are creativity and artistic capabilities... the presence of or recourse to sociologists is scanty...”
<b>Beta</b>	Set up in Paris in 1985, its mission is to “.detect, analyze, understand and create design and lifestyle trends... We offer a decoding of the current trends and propose innovative product recommendations that may serve as the basis of the future collections and their communication...”. International network of agents (Argentina, Brazil, Canada, Germany, Hong Kong, Korea, Portugal, Spain, Sweden, Thailand, Taiwan, etc..)	“...The creation of new tendencies constitutes the main activity and we can create new styles for a range of environments (electrical appliances, automobiles, cosmetics, sales outlets of large distribution chains, etc...). In addition, we carry out consultancy activity: selective consultations (presentation of trends), creative orientation dossiers (colors, materials, packaging), communication operations and operational marketing (creation of personalized trend books), design and creation of trend forums and stands at professional trade fairs; merchandising (boutiques)...”	<ul style="list-style-type: none"> <li>■ Cross-Disciplinary trend publication (Colors: an exclusive range of a minimum of 36 colors, presented in yarn and dyed-to-match fabric; Pilot: the indispensable reference point of the season, it is the most cross-disciplined and polysensorial of our publications, presenting in 4 themes both the style essential and the sociological directions expressing the current climate)</li> <li>■ Fashion Trend Books (Fabrics: 140 fabric samples classified by theme from a worldwide selection; Knits; Print &amp; Decoration; Lingerie)</li> <li>■ Lifestyle Trend Books (an inspiration tool for professional tracking and forecasting important lifestyle shifts)</li> </ul>	The sociological and creative component is strong and predominant. This in-house knowledge is integrated with external competences of a sociological and creative nature... One of the characteristics of our agency is its continuous studies on social trends. In contact with university professors in sociology or philosophy, we sound out the evolution of our society... Each season opens with a gathering of up to twenty creative people, both stylists and general designers, for a forecasting brainstorming session...”

Table 1. *The bureaux de style forming the object of the case analysis (For reasons of confidentiality, we have substituted the name of the firms investigated by Greek alphabetic letters).*

	<b>Structural data</b>	<b>Activities</b>	<b>Cahier de tendance</b>	<b>Competences</b>
<b>Delta</b>	<p>“...Set up in Paris in the 1950s as a bureau de style, today it is a style agency; at the moment there are 40 employees and 20 agents in a variety of countries (South Africa, Austria, Germany, Belgium, Brazil, Korea, Denmark, Spain, United States, Finland, France, Greece, Hong Kong, India, Japan, Holland, Portugal, United Kingdom, Sweden, Switzerland, Thailand, Turkey, etc...).”</p>	<p>“This bureau draws up cahier de tendance, offers consultancy services to firms (creating collections), communication activities (organisation of trend forums) and marketing (specific market studies, analysis of consumption behaviour, etc...)”</p>	<p>“...Our most important cahier de tendance are those of yarn, materials, impulses (general indications on seasonal tendencies), lingerie, menswear, women’s and children’s apparel...”</p>	<p>“..Creative capacity and involvement of the top management in definition of trends ....”</p>
<b>Gamma</b>	<p>“...I set up this bureau in Milan in the 1980s after a period of experience in France, where I was in contact with the major French bureaux... a bureau de style is a meeting point between creativity and intuition, artistic flair and marketing...”</p>	<p>“.. We draw up cahiers de tendance, but we work in a variety of environments... Several years ago we designed a new concept of a mineral water bottle for a customer... We are aware of the need for the style of the moment and the heures du temps to be filtered and distilled for the various different sectors... The customers of bureaux de style can come from an extremely varied range of sectors such as automobile manufacturers, or manufacturers of electrical appliances... The bureaux increasingly act as consultants and seek to set up a more and more exclusive relationship with their customers...”</p>	<p>“... We produce about 10 publications, including a cahier for menswear, women’s fashions, casual wear, prints, color (the most important at the moment), fabric for interior decoration, knitwear and jersey, and so we cover the entire range of textiles... The colour cahier is usually the most important and the most extensively sold, as it is the most neutral and it’s also the one that can be utilized for a wide range of uses (especially in the case of yarn and fabric producers)...”</p>	<p>We have a wide range of competences... of course you need a marked propensity for analysis of the social climate and its transposition into trends....”</p>

Table 2. *The bureau de style forming the object of the case analysis (For reasons of confidentiality, we have substituted the name of the firms investigated by Greek alphabetic letters).*

It is clear that during the identification of new trends the bureaux de style create new knowledge. This process can be explained in terms of the stages of activation, selection and retention discussed in the previous section.

In particular, it can be seen from Fig. 2 that the *activation* stage corresponds to the analysis of the social environment within which new styles and new tendencies are expected to emerge. Special emphasis is placed on *trend analysis*: this is not a scientific analysis, but rather an empirical survey founded on observation of all the social and cultural phenomena that can give rise to a trend. During this stage the creative staff endeavour to distinguish between what is part of their environment – and the past season’s trends can be traced back to this environment – and what belongs to the unknown environment, which is not yet in existence and will form the background for future trends. In this case it is clear that the activity of sense-making takes concrete form above all as *learning by experimenting*, that is to say in exploring an external environment that is not yet activated, for which the bureau de style does not yet have significant representations.

Fig. 2. Tools and knowledge goals of the bureaux de style

Stage	Tools	Goals
Enactment	Trend analysis (social and cultural phenomena, etc..).	Identification of the not yet enacted external environment (experimenting), of which the bureau de style does not yet have significant representations.
Selection	Interpretation of the situation observed by means of new interpretive frames .	Creation of new trends (new environments).
Retention	Meeting between the various bureaux de style for the definition of new tendencies.	Construction of a converging environment.

The *selection* stage corresponds to the *definition of new trends* by individual bureaux de style (style bureaux); to some extent the new trends correspond to certain social changes, but they are also partly individuated in a totally casual manner on the basis of the intuition and sensitivity of the creative staff. In addition to completely new styles, the cahiers de tendance may also contain consolidate tendencies which, having arisen and having been perceived as innovative, are destined to have a longer life cycle and thus to produce their effects in the medium term. But apart from long tendencies, the output of this stage is composed of the construction of tendencies and thus of environments that are the result of the utilisation of *new frames for interpretation of reality*; consequently they may have very little coherence with one another and may be quite distant from the previously constructed environments.

The *retention* stage coincides with the meeting between the different *bureaux de style*, which compare their analyses and the tendencies they have identified on the basis of the research they have each carried out individually, and then proceed to define the styles, seeking to achieve the greatest possible coherence and sharing of approaches and interpretations to be presented in their cahiers. Thus at the end what will be constructed is not so much a range of different tendencies resulting from the activity of the different bureaux de style as, rather, specific *converging tendencies*: it is as if they were making an overview of the many different constructed environments in order to extrapolate the common aspects on which to build up a single coherent situation. But in any case, the proposed tendencies will have to be tested out on the market, and they may undergo

variations once they have been interpreted by the textiles firms that translate them into fabrics, or by the making-up firms that translate them into garments; such further modifications will contribute over time to building up a new cycle of activation.

Within the overall textiles system, the bureaux de style (style bureaux) are the first to start off with the elaboration of trends, since they have to supply information in this regard to the fiber and fabric producers who represent the first ring of the textiles cycle, and this has to be done roughly two years before the sale season. On the question of the relation between the bureaux de style and the other players in the textiles system, a distinction should be made between “*relations for creativity discovery*”, which focus on the contribution to product innovation made by the different players, and “*relations for new style acquisition*”, linked to the interaction that arises between bureaux de style and the other players in the textiles system in terms of acquisition of products/services provided by the bureaux de style.

Tab.3. *Relations for creativity discovery and Relations for style acquisition*

Relation for creativity discovery					Relation for style acquisition				
Players in the Textiles System	Alpha	Beta	Delta	Gamma	Players in the Textiles System	Alfa	Beta	Delta	Gamma
Retailer customer	Medium	Low	Medium	Medium	Retailer customer	Medium	Medium/High	Medium	Medium
Making-up firm	Medium	Medium	Low	Medium	Making-up firm	Medium	Medium	Medium	Medium
Fabric manufacturer	Medium	High	Medium	High	Fabric manufacturer	High	Medium/High	Medium/High	High
Yarn manufacturer	Medium	Medium	Medium	Medium	Yarn Manufacturer	Medium	High	High	High
Fiber producer	Low	Medium/High	Low	Low	Fiber Producer	Medium	Medium	High	High
Agents and Reps	High	Medium/High	High	Medium					
Final consumers	High	High	High	High					

As can be seen from Table 3, there are some players such as the textiles firms which are not only the major purchasers of the cahiers, but are also those with whom the bureaux de style have the most intensive interactions during the process of new trend definition. Interaction takes place through continuous exchange of information, sensations and indications concerning the emergence of new styles and new fashions; such information, in turn, comes from the stable relation that the fabric manufacturers themselves have succeeded in setting up with their making-up and retail customers. Furthermore, the bureaux de style also engage in very intense relations with their agents, since the latter, who are in contact with the requirements voiced by their various customers, are capable of grasping and in some cases even anticipating new trends and new consumption patterns concerning apparel in their reference markets.

The bureaux de style’s relations with players such as fiber and yarn producers generally come to an end with the sale of the cahiers de style; once the fiber and yarn producers have acquired the cahiers de style, they can begin experimenting with possible new applications of existing fibers and also proceed to set up research activity to devise new fibers and new types of yarn.

#### **4.Process of knowledge transfer in relations between the textiles firm and the bureau de style: gap analysis**

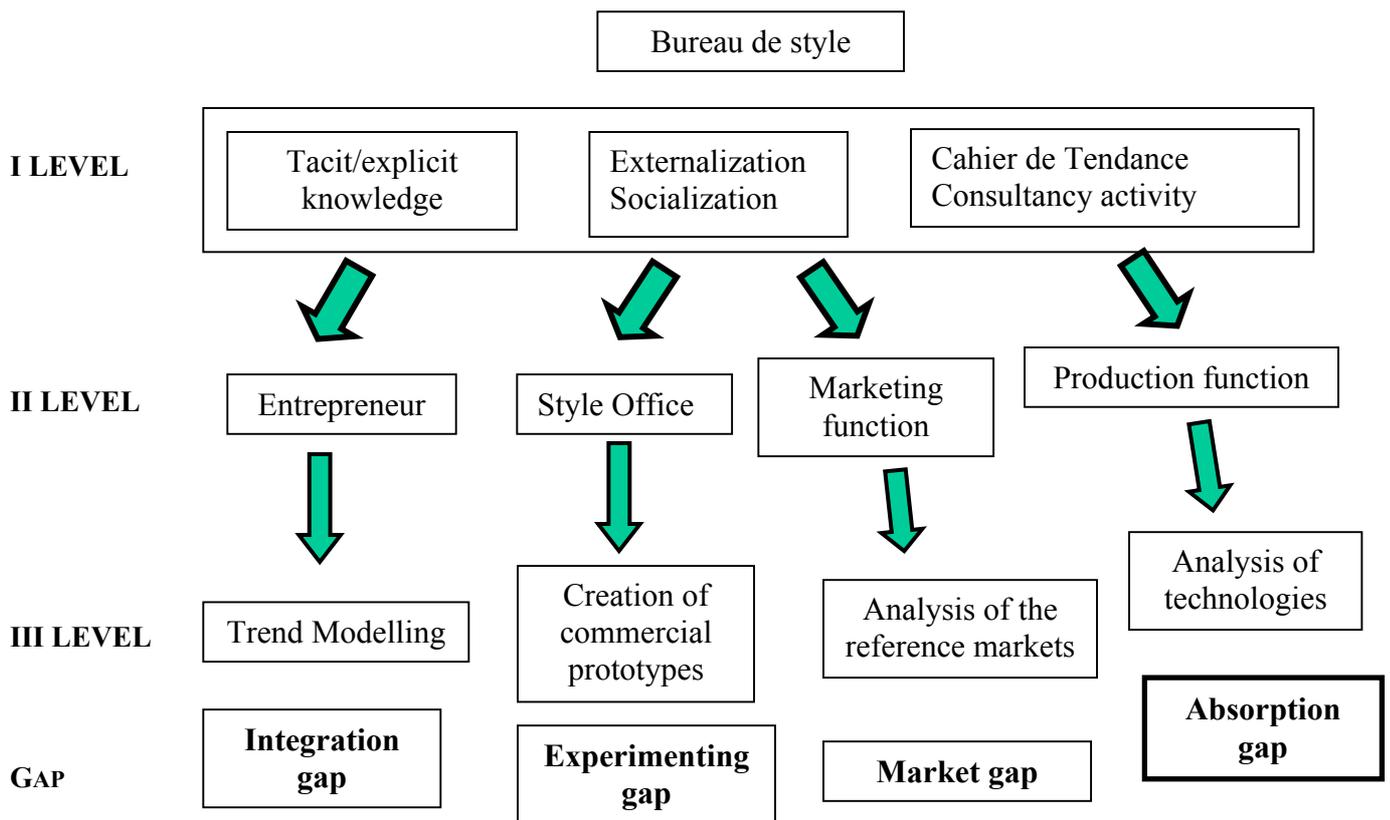
As will have become clear from our analysis, the bureaux de style (style bureaux) mainly transmit tacit knowledge, which they seek to transfer to the outside and particularly to their most direct clients, composed of the textiles firm. This transfer occurs mainly through a *process of externalization* as regards the cahiers de tendance, and mainly through *socialization processes* in the case of consultancy activity. Externalization takes the form of the attempt convey tacit knowledge through explicit concepts. This is a process of knowledge creation, in which tacit knowledge becomes explicit by assuming the form of a metaphor, analogy, concept, hypothesis or model. “When we try to conceptualize an image, we seek to express its essence above all through language... Linguistic expressions are often inadequate, incoherent and insufficient...” (Nonaka and Takeuchi, 1995). Thus externalization is triggered by dialogue and collective reflections; it constitutes the key element of knowledge creation inasmuch as it creates new explicit concepts starting out from tacit knowledge. Socialization, on the other hand, is a process of sharing experiences and creating forms of tacit knowledge such as mental models and shared technical skills. Such experiences are subsequently internalized within the individual’s tacit knowledgebase in the form of shared mental models or know-how, thus becoming an integral part of organizational culture.

Our research on the relation between the textiles firm and the bureaux de style shows that while the former is increasingly destined to take on the role of a learning organization, the latter fulfils the role of teaching organization (Hakansson and Johanson, 2001). A teaching organization, in this context, is to be understood “as the process of one organisation sending signals with the actual result of (re)constructing knowledge of other organizations.” In this relationship, the bureau de style engages in dialogue above all with the style office of the textile firm that is responsible for the creative component of the pattern book, and with the commercial office, which constitutes the interface of the mill with regard to customers and had a crucial role in measuring the level of success of the collections. Most of the bureaux de style interviewed declared that their salesmen had direct relations with the entrepreneur of the textile firm as well, and that the latter played a determining role in decisions concerning innovation and design of new textile products (Burresti and Guercini, 2002).

In this regard, it is possible to present a *univocal perspective* for study of the knowledge heritage transferred by the creative players investigated here. Study should begin from identification of the typology of the knowledge produced by the style bureaux, then proceeding to single out subjects within the textile firm towards whom this knowledge is directed as well as the utility/goals of the knowledge acquired. Finally, this should be followed by an analysis of the gap between the potential “areas of intervention” identified on the basis of the new knowledge acquired and its concrete activation.

On the first level (Fig.3), the aim is to identify the knowledge produced by the bureaux de style and in particular the tacit and explicit knowledge. On the second level, the study pinpoints the specific recipients of the knowledge produced, which is utilized (third level) synergically by the entrepreneur to devise their own modelling of tendencies (Burresti and Guercini, 2002; Guercini and Ranfagni, 2002), and by the style office to design the new prototypes. Indirectly, this new knowledge that has been produced will have consequences on the level of the production function, whose task it will be to verify the possibility of using the production equipment currently available in the firm were the decision to be taken to create products that are quite new for firm; it will also have consequences on the level of the commercial function, which will have to determine which markets should be the recipients of the new products resulting from the new trends identified. We believe it is inevitable that there will be gaps between the areas of action pinpointed by the different functions and the actual possibility of implementing the proposed actions.

Fig.3. Gap analysis in knowledge transfer to the textile firm



The concept of gap adopted here can be linked to the limits on the predictive ability of the bureaux de style, and this to the ability to generate knowledge on new trends.

As shown in Fig. 3, one can note integrations gaps that occur when, despite the construction of new forms of trend modelling, the entrepreneur manifests an attitude of resistance to innovation and change. Another gap concerns experimenting, and is linked to the inability of many firms and of their style offices to test new products: the restrict themselves to operations of restyling of already existing products. A further constraint on the application of new tendencies resides in the market gap that arises every time the Marketing function of the textile firm cannot orient the production that results from the application of new tendencies, because it is incompatible with the reference markets, the latter being composed of segments that are unable to “be receptive” to the new proposals. Finally, the last gap is that concerning absorption, which involves not only technological deficiencies but also cultural and structural inadequacies. Firms that become aware of this lacuna are not always in a position to introduce an appropriate remedy, such as enlargement of their Style Office, recruitment of new staff, or setting up a policy of strategic learning alliances. This gap is difficult to bridge because it is often caused by a lack of basic know-how which prevents conversation with other firms and hampers the development of new knowledge.

## Conclusion

This paper proposes an analysis of product innovation processes in textiles firm aiming to highlight the nature and the characteristics of the entrepreneurial network and the role of the bureau de style in this framework.

Our analysis shows that this particular typology of enterprise and the functional role it plays in the sphere of innovative processes is of remarkable interest from a number of perspectives. Firstly, the *nature of the contribution* made by the bureaux de style is of major significance, in that these

are effectively enterprises whose aim is the production of knowledge for product innovation in the textile sector. The bureaux de style are an emblematic case of an enterprise that produces and sells knowledge which is functional to the players in the textiles system. The extent of their contribution is heightened by the effect of the progressive expansion of the sphere of applications of the knowledge generated by this enterprise typology, which is able to supply its contribution to product innovation in sectors other than merely textiles and apparel. This extension of the scope and consequently of interest in the contribution of the bureaux de style is partly justified by the extension and pervasiveness of the phenomenon of “fashion”.

Secondly, the attempt to gain insight into the processes underlying knowledge generation in the framework of bureaux de style is particularly significant on the plane of a “*knowledge based vision*” of the factors behind a firm’s success, given the special nature of the product (cahier de tendance, consultancy activity) of this player and the role of the latter in innovative textiles and apparel processes. By virtue of the complexity of the task they perform (generation of knowledge concerning future fashion trends) and the reference context (fashion system, textiles/apparel system), they effectively constitute a paradigmatic case, a complex form capable of containing elements of explanation for the simpler forms. That is to say, we argue that interest in this enterprise typology goes beyond the extent of the economic phenomena that are directly involved: it is a typology that represents an emblematic case of the evolution of processes affecting enterprise networks.

Finally, another important aspect of this work concerns the significance to be attributed to the concept of *gap* which arises in evaluation of the different levels on which the knowledge produced by the bureaux de style comes into play. In particular, the significance of such gaps can give rise to differing interpretations where textiles firms are concerned.

A *positive value of the gaps* can indicate that the knowledge produced by the bureaux de style is efficiently transferred within the textile firm to the specific recipients, and has been integrated with the knowledge and competences of the latter, thereby enabling the textile firm to work out a differentiated and successful formula. But in actual fact this interpretation is not always correct.

Even if a *negative gap* arises within the textile firm, there may still have been an efficient integration between external knowledge produced by the bureaux de style and the firm’s internal knowledge, but it may not have been possible, given the characteristics of the top management (trend modelling), the available resources at the level of the Style Office and the Production function, the positioning and market choices (Marketing function), for this knowledge to be translated in concrete application in the form of operational choices pertaining to new product development.

This means that the presence of negative gaps may be the result not only of an inadequate integration of knowledge, but also of choices internal to the textile firm and justified by the need to pursue a specific strategic orientation. In this case, this may entail that the tendencies proposed by the creative players are rejected, or only partly accepted and shared..

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