

TIME AS PROCESS AND TIME AS PRODUCT IN BUSINESS NETWORKS*

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Abstract

This paper analyses the role of time in the interactions within business network. The main aim of the paper is to examine the relation between different concepts of time. To address this topic different time perspectives are investigated. Clock time and social time are reviewed in the literature. In this paper two concepts of time are proposed: *time as product* and *time as process*. The discussion of these concepts includes the study of the relationship with *market theories* and *interaction models* identified within the IMP theory. Some research hypotheses are proposed. In particular, the paper tries to highlight the following research questions: Can the concepts of time identified be conceived as autonomous one from the other? Which models can identify time in business network? What is the relation between time and interaction? Empirically the paper considers cases in the fashion industry. This sector is particularly relevant to a discussion of time issues, as it is strongly time dependent. The paper shows the result of a case analysis process of two focal firms and their interactions with suppliers and customers in the network. One focal interaction is identified and analyzed in detail. The paper ends with the discussion of the research hypotheses outlined in the theoretical part.

Keywords: time as product, time as process, interaction, case analysis, fashion

* Simone Guercini, Silvia Ranfagni and Andrea Runfola share the final responsibility for this paper. Simone Guercini wrote section 3, Silvia Ranfagni wrote sections 2 and 5.1. and 5.3, and Andrea Runfola wrote section 4 and 5.2. All the authors wrote sections 1 and 6.

1. Introduction

Time is a fundamental dimension of interaction and it is crucial for the formation of judgments, choices, and skills among actors in the network. Time produces path dependencies, and creates trajectories in interactions. Over time interactions and interdependences among actors occur, activities are implemented and resources are developed. During time learning processes emerge; they may be specific to one actor or another, fostering, in this way, interdependences. Time contributes to shaping the characteristics of interaction, defining the intensity of contacts, describing the evolution and the phases of the relationship life cycle. It is therefore an essential component of interaction processes that are the basis of business networks.

Moreover, time may still be considered a critical dimension for the measurement of the results achieved through individual interactions and by the business network as a whole. In particular, time may be a fundamental dimension of the product-service that the individual actor and the network generate. Time is, in fact, a parameter of efficiency and effectiveness in interaction, defining some critical attributes (punctuality, productivity, etc.). It is therefore a crucial element of the products created through the interaction between actors in business networks. The aim of the paper is to examine the relation between different concepts of time in business networks interactions. In this context, the paper try to fill a research gap regarding different market model theories and different concepts of time. The paper aims at reducing this gap by means of interaction models in business network to shed light on these issues. In particular, the paper aims to discuss some topics related to these questions: (a) What is the role of time in the business network? (b) Which concepts of time can be defined? (c) Can these concepts be autonomous one from the other? (d) Which models identify time in the business network? (e) What is the relation between time and interaction?

In order to achieve these objectives, the paper proposes a "systematic combining" of conceptual framework and case analysis of interactions between manufacturers and retailers in the fashion industry. The conceptual framework is the result of a review of the literature, while the case analysis regards fashion firms and points out in particular their relationships with suppliers and customers. The paper ends with final remarks on the relation between time and interaction by means of the discussion of some research hypotheses.

2. The concept of time in organizations: a review of the literature

Organizations exist and live in time. The topic of time is increasingly studied in management literature, even if the empirical research on it is still in a period of experimentation. Ancona et al. (2001) highlight that there has yet to be developed a dominant paradigm on time in organization studies. Philosophers (Reichenbach, Health), biologists (Coveney and Highfield), psychologists (McGrath and Kelly), anthropologists (Hall, Fabian) and sociologists (Durkheim, Hassard) have carried out different studies on time, obtaining important, but often heterogeneous results. So we expect important and different contributions, which show little integration among them. In management and organization theory, where all these contributions converge, time is studied as a "linear perspective" and as a "collectivity qualitative construction" (Hassard, 2001); in other words time is viewed as a limited resource organized in a linear way (clock time concept) and as a social construction of meanings (social time concept).

The *clock time concept* (table 1) reflects Newton's theory that considers time as an absolute, unchanging and linear constant; the past is unrepeatable, the present in transient and the future is infinite and exploitable. Time is homogeneous, objective, and divisible in structure; it exists independent of objects and events and it is measurable (Bluedorn and Denhardt; 1988; Hassard, 1991). This concept is the dominant one in our contemporary society and is closely associated with the development of industrial society (Clark, 1985). In fact as a society, we tend to agree with an objective concept of time that is unitary (subject to a common interpretation), linear (progressing

steadily forward from past to present to future) and mechanical (characterized by discrete and measurable moments) (Bluedorn and Denhardt, 1988). Time is a linear continuum whose units are uniform, regular and deterministic. The management contributions based on the clock time concept focus their attention on the relation between time and the organization of activities in the continuum. The activities' variables considered in their organization can be duration, the regular/irregular repetitions and the order in time; other variables are the presence/absence of time intervals between activities' repetition and their evolution through the life cycle (Ancona et al., 2001). In the analysis between time and activities, researchers concentrate their studies on:

(a) *Time as a limited resource to be managed.* Time is closely related to organizational productivity and it is viewed as a resource to be managed in the interest of organizational efficiency and effectiveness. An organization is considered productive or efficient when it shortens the period of time it takes to accomplish a given amount of work (Bluedorn and Denhardt, 1988). Time is a "valuable commodity" of the industrial process (Mc Grath and Rotchford, 1983; Hassard, 2001). It is in fact the instrument to measure the productivity of an organization and is viewed as a factor in production; it is scarce and so it must be used economically and rationally (Moore, 1963).

(b) *Time as a resource to be allocated.* Time as a resource presents the problem of allocation. Organizations which manage time tend to allocate limited time resources to a range of productive activities (Gulick, 1987; Hassard, 1991). In doing this, organizations have to allocate and relocate time on the basis of a better use of the workers' productivity and of a better planning of the productive system capacity as a whole.

(c) *Time orientation.* The management of time is directly connected to time orientation in the enterprise (Lawrence and Lorsch, 1967; Hill, 1956). This orientation depends on the kind of activities managed and is connected to their time-span of feed-back received from the environment. Some research highlights how people who work in functions (such as production or sales) which have a quick feed-back of their work from the market tend to be characterized by a short time orientation; functions, such as R&S, which are involved in long work processes, receive feed-back from the market only when their projects have ended and so they often have a longer time orientation. Jacques (1964) considers the time span associated with that assignment as a measure of task assignment; it follows that at the lower level of an organization different tasks produce effects in the short term and are carried out in less time than strategic tasks in higher levels of organizations.

(d) *Time pressure.* Time pressure and deadline effects influence the organization of activities over time. Bluedorn and Denhardt (1988) ask "how does the amount of time available to make a decision, affect the quality of the decision and the process used to make it". The characteristics of decision alternatives can influence the amount of time it takes to make a decision. March and Simon (1958) state that if time pressure increases, the search for alternatives will become more intense and the selective capabilities will increase. Deadlines (Gersick, 1988, 1989; Stalk, 1988) in project groups generate more integration and a deterministic way of working characterized by alternating inertia and revolution in the working behaviours.

In the clock time approach, time is considered as a linear process of objective moments; time is also the result of an efficient management of industrial processes. So time is not only a process, but also a product.

The *social time concept* is based on the idea that time is different to individual observers depending on how they are moving; the social time concept recognizes time as a subjective phenomenon and emphasizes how different social groups create or construct different types of time (Pronovost, 1986; Das, 1990; Hassard, 1991). Thus time is considered a social construction that varies among individuals, groups or organizations; in different social contexts we note different shared meanings of the continuum; a particular view of time determines the meaning one has on time. Lauer, (1981), Bluedorn and Denhardt (1988), Clark (1985) and Butler (1995) consider that clock time is a limited notion to analyze time in organizations; they argue that time is socially constructed and in order to explain this, they use expressions such as "social time", "organizational time", "plurality of time"

and “event time”. In particular management studies, based on this concept of time, attention is focused on the relation *between time* and *actors*. The idea is that time is the product of society and is subjective; so the study of time implies an in depth analysis of *temporal perception* and of *temporal personality*. The former looks at how actors perceive the continuum and the latter considers how actors act with regard to the continuum

<i>Table 1</i> Concept of Time and review of literature				
Concept of Time	Topics	Focus	Variable	Management contributions
Clock time concept (linear perspective)	- Time is a linear continuum whose units are homogeneous, uniform, regular, objective, precise, deterministic and measurable.	Organization of activities in the continuum	Organizational variable: duration, regular/irregular repetitions, order, intervals, evolution	<ul style="list-style-type: none"> • Time as limited resource to be managed: Moore, 1963; Goodman 1973; Mc Grath and Rotchford, 1983; Gershuny, 1986; Bluedorn and Denhard, 1988; Pronovost, 1989; Hassard, 2001 • Time as a resource to be allocated: Gulick, 1987; Hassard, 1991 • Time orientation: Hill, 1956; Jacques, 1964; Lawrence and Lorsch 1967 • Time pressure (deadline): March and Simon 1958; Bluedorn and Denhalt, 1988; Gersick, 1988. 1989; Stalk, 1988
Social time concept	-Time as a subjective phenomenon -Time is considerate a social construction that varies between individuals, groups or organizations.	Relation between actors and the continuum	Experience/event variable: novelty, regularity, immovability, concurrence, pace	<ul style="list-style-type: none"> • Lauer, 1981; Clark, 1985; Bluedorn and Denhardt. 1988; Pronovost, 1989; Das, 1990; Hassard, 1991; Butler, 1995 • Temporal perception: Kluckhohn, 1953; Berger and Luckmann, 1966; Hofstede, 1993; Hampden-Turner and Trompenear, 1994; Clark, 1985; Butler, 1995; Hedaa and Tornross, 2001 • Temporal personality: Gherardi and Strati, 1988; Stamper, 1988; Das, 1990; Failla and Bagnara, 1992; Butler, 1995; Lee, 1999; Shermann, 2001

The temporal perception of time is strongly linked to the personal time experience and thus to the personal understanding of time. In the experience people have of the present, the knowledge they have of the past and how they use this knowledge to envision the future is important (Butler, 1995). Some researchers underline that our conception of time depends on the culture or society in which we live (Kluckhohn, 1953; Hofstede, 1993; Hampden-Turner and Trompenear, 1994); so the experience of time varies across conditions and across actors; it relates directly to the perception of the passage of time (from past to present and from present to future) that is marked by “an inner flow” of “events” (Berger and Luckmann, 1966) that defines time boundaries distinguishing between past, present and future (Hedaa and Tornross, 2001). The events produce changes in the “state” of reality and identify the different important moments characterizing a personal time continuum (Clark, 1995). The past includes memories of selected and interpreted events (learning), while the future holds different alternatives of potential, expected events (intentions); so in the present we note a convergence and a coexistence of interpretations of future and of subjective pasts. Time is in the “events” (Clark, 1985) and the rhythm of these events needs not coincide with clock time. In particular according to Clark, time does not exist outside events, but time is in the events and events are identified by organizational members; so time is relative, non absolute. There are a plurality of times (Gherardi and Strati, 1988) and their analysis is important to understand specific organizational decisions and phenomena. The present is preceded by events that are layered and that are at the base of the experience’s codification. Codes identify response and analogues among situations; they specify “known trajectories of events” (Clark); they drive the analysis of events as they arise and the enactment they might produce. The variables of the experience of present time are linked to variables characterizing events such as their linearity, regularity, novelty, immovability, concurrence and pace. Events can be perceived as linear and regular; they can be characterized by their novelty and their immovability (changeable), because not always under control; they can be considered concurrent (alternative) and marked by difference paces. The temporal perception of time is connected to the temporal personality: the experience of time influences the way in which an actor interacts with time (Shermann, 2001) and so the manner in which an actor understands and acts with respect to the temporal continuum. Butler (1995) uses the

variable for the measurement of the time experience in the present and defines four different temporal styles (clock, organic, strategic and spasmodic time). There are four different ways to understand, explain and react to time. Das considers how differences in temporality may affect organizational processes; in particular he shows that planning actors with near a future perspective will prefer a shorter planning horizon than actors characterized by a distant future perspective.

Both the *clock time approach* and *social concept approach*, as we have analyzed in this part of our work, consider time as an independent variable. However in both the approaches time can also be a dependent variable; in fact management contributions underline how organizational and environmental factors such as market knowledge and technological development (Goodman 1973; Gershuny, 1986; Pronovost, 1989), can influence people's use of time (clock time approach), but also individuals' perception of time (social time approach) and their way of organizing time within organizations (Stamper, 1988; Failla and Bagnara, 1992; Lee, 1999). The two time approaches can be complementary: subjective time is in fact constructed in a linear continuum of moments; this means that "individual events" are part of an objective time and that time management in organizations is the result of the integration between the efficient organization of activities in the continuum and the individual way to react to it. In the postmodern society clock time is increasingly replaced with the "instantaneous time" (Macnaghten, and Urry, 1998); the decision makers are required to respond to an greater than ever complex world and they do this "instantaneously"; we note a time-space compression of physical and human experiences (Hassard, 2001) and so time and space appear compressed. Time horizons "shorten to the point where the present is all there is..." (Harvey, 1989, 240)

The two complementary views of time converge in the analysis of time with the interactions of the business market (Ford, 1990; Ford, Håkansson and Jahanson., 1986). Interactions are evolutionary processes that occur in objective time and that transform the participating actors, the activities carried out and the resources exchanged. Every interactive process is composed of a sequence of actions within a temporal space; and far from constituting an isolated actor, it comes alive and is influenced through the web of relational flows to which the various parties are directly or indirectly correlated. The interaction happens in a linear continuum, but is also the result of a subjective time perspective; time is a "container" of business interaction, but also an "individual process" (Halinen, 1998; Medlin, 2009) defined by past, present and future moments whose boundaries are marked by specific, subjectively important events (Hedaa and Tornross, 2001). In business markets the exchange interactions occur in the present and are the result of the coordination of resource ties, activity links and actor bonds emerged incrementally from past adaptation (Håkansson and Snehota, 1995) and are defined (planned) on the basis of future expectations. The interaction in the present is intimately connected to their past and future and cannot be separated from them. The past adaptation in interaction is linked to the memories of the individual, selected events that involve past actors' bonds, language and culture; all these are the context in which to manage and develop the present interaction. The future is built on the basis of selected potential events that can become a possible present; so the future is a context where interactions between firms can continue. Each actor in interaction can have a different perspective of the future and each "present" can create new futures: it follows that business relationships are dynamic and pursue indeterminate paths (Ford and Rosson, 1982). So time in business relationships can be considered an important topic in management literature (Hedaa .L., Törnroos J.A.,2008; Medlin, C. , 2004).

Time in interaction can be analyzed as a "process of different moments" (past, present and future) that identifies the "horizontal dimension of time" (Halinen, 1998). These moments are represented by specific events perceived as important by the actors. The way of identifying their boundaries and managing resources and activities in the interaction are influenced by social, organizational and cultural variables, and so by different time perceptions and experiences. It is just these subjective variables that identify the "vertical dimension of time" (Halinen, 1998). Different actors in the interaction can have different interpretations of time producing an "overlapping view" of past, present and future.

3. Development of research hypotheses

The literature proposes a wide variety of concepts of *time*, giving it specific meaning. Time allows one to understand many phenomena in business research. Consequently, time is a strategic concept that permits the integration of analytical categories and organizations. The concepts of *time as a product* and *time as a process*, we propose, are no exceptions in this respect, because their meanings are connected to those of product and process. Dealing with time as product and time as process leads us to discuss the boundaries and the interconnections between the two concepts.

These concepts have to be considered in relation to the assumptions regarding *market* and market functions. Neoclassical economists define the concept of market starting from the definition of the product which is the parameter of the market. In fact, the market is seen as the demand and the supply of a specific product or its substitutes (Tirole 1989). Market is defined by means of a product and by a set of buyers and sellers that exchange that product. According to this approach, the definition of the product precedes the definition of the boundaries of the market.

Snehota (1994) labels this neo-classical economics perspective as “market as a price mechanism” to be compared to that of “market as network approach”. As a network perspective “what characterizes and defines the market is the set of actors and relationships rather than the product” (Snehota 2004, 24). According to this view of the market, actors have predominance on what has been exchanged. Market is defined by the set of actors and the product is defined by means of interactions. “Product is a variable in the single exchange relationships and across relationships between actors”; moreover, the boundaries of the market are seen differently, because “setting boundaries becomes somewhat arbitrary” and the “market can be defined as a subset of relationships and actors that is ‘relevant’ for a certain focal actor” (Snehota 2004, 24).

The “market as price mechanism” and “market as network” distinction highlights different views of the product and different concepts of *time as a product*. Within the market as price mechanism perspective time can be seen as an attribute of the transaction. The offering of time attributes helps in defining the boundaries of the market. Basically, time contributes to define the market in the sense that set of producers/sellers and consumers/buyers are in the market if they can compete on the time attribute. Within the market as network, instead, actors are the parameter of the market. According to this perspective, time is first of all an element of the interaction rather than a “product” to be exchanged. Actors interact over time and time as a product emerges at the end as a result of the interaction.

Recently Medlin (2009), focusing on interaction in a time perspective, points out the distinction between “exchange” and “adaptation” (Medlin 2009, 10). Considering exchange, time is a product in the sense that the exchange takes the form of a discrete transaction with counterparts offering and agreeing to the “best” time. Considering adaptation, time is the dimension of the interaction which defines what we can produce. In other words, time has a central role as an element within which interaction occurs, while in the “exchange” view time has a central role as an attribute to be exchanged in the transaction. According to this interpretation, within the exchange concept time is basically a product, while within the adaptation concept time is basically a process.

Time is an independent variable in the product life cycle and relationship life cycle models. Adaptation involves an evolutionary vision of the market, as the actors continuously change by means of interactions. This implies that adaptive interactions call for the need of continuously adapt to the unstable and changing market. Consequently, actors in any relationship have to consider how the past and the future, will affect the present. In this context, the “use of a life-cycle metaphor for living advice on managing business relationships should be viewed critically” and “the quality of adaptive interaction is paramount to relationship success” (Medlin 2009, 12).

According to the time as product concept, time can be a fundamental dimension of the product-service that single actors rather than the network can generate. Time is a parameter of interaction efficiency and effectiveness, as it defines critical attributes (punctuality, productivity, etc.). Time as product is, for example, part of the offering to a customer. This can be defined as punctuality or as

the capacity to follow new trends and new technological solutions. If we consider the product as a bundle of discrete and defined attributes, then the market can be seen as a set of exchanges of attributes for a price (market as price mechanism). Time can be perceived as a product, and the product can be perceived in terms of time. In fact, time can produce a picture of the product considering the life cycle. Product can have a long life cycle (evergreen product) or a different evolution. According to this perspective, time seems to follow a “horizontal” view (Medlin 2009, 2), and mainly “linear” (clock time).

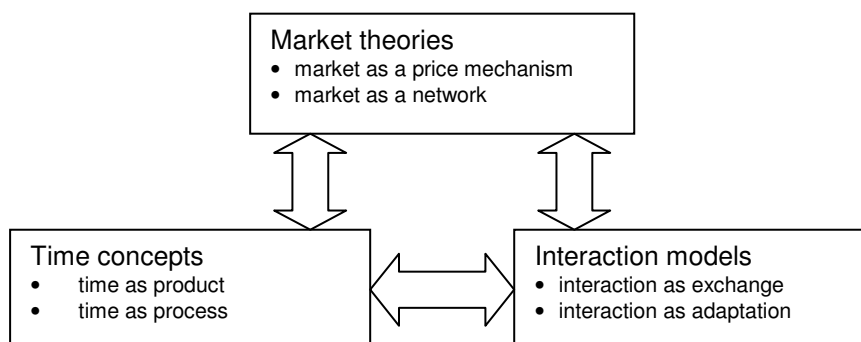
In keeping with the concept of time as a process, time contributes to defining interaction. Time frequency, in fact, contributes to defining the intensity of contacts. Moreover, the view of time is mainly “vertical” (Medlin 2009, 2) and “social”. Time is essential for the interactions which constitute the business network. Time as process (division of time in phases) characterizes even the perception of a relationship life cycle (Dwyer et al 1987). However, it seems to be a stable and strict situation, where adaptation among the actors is marginal. Relationships follow the principle normative assumptions of the life cycle if reciprocal learning is limited. This occurs, for example, if integration is scarce, if every contact is managed by the commercial unit, on the one hand, and by the sourcing unit on the other hand, if no contacts between other people occur or if no moments for sharing knowledge and information are provided. If, for instance, the product is continuously redefined by means of interaction, the relationship seems not to be well framed by the life cycle. Obviously, this reasoning does not imply that the relationship cannot come to an end.

Following these considerations, we try to point out what the relation is between time as product and time as process for the purposes of this paper.

Firstly, *the concept of time as product is in line with a view of the market as mechanism where buyers select sellers on the basis of discrete variables of the product, within which time assumes a central role.* According to this concept, the product still represents the parameter of the market as it can be defined before the interaction, and the market boundaries are defined on the basis of the bundle of variables that constitute the product. Time as product is the definition of such variables on temporal basis (delivery time, adherence to fashion trends, etc.).

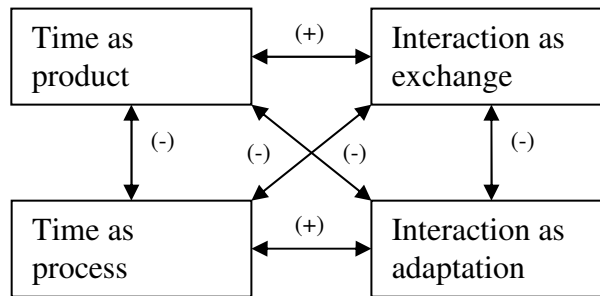
Secondly, *the concept of time as process is in line with a view of the market as network where the actors interact to produce different effects.* According to this concept, the product emerges by means of interactions rather than being the parameter to define market boundaries and, consequently, the means to include set of actors within the market. In other words, when we consider product as the parameter to define market boundaries and to select actors in the market, time as product precedes time as process; nevertheless, when product is considered as result of the interaction, time as process precedes time as product. The relation we adopt in the paper between theoretic categories of time, market and interaction is showed in figure 1.

Figure 1. – Relation between concepts of time, market theories, interaction models



The object of the paper is the relation between different concepts of time (as product or as process), market theories (as price mechanism or as network) and interaction models (as exchange or as adaptation). We assume that different market theories correspond to different interaction models. In particular, we assume that the market as price mechanism perspective implies a model of interaction as exchange, while that the market as network approach implies a model of interaction as adaptation. Even if it could be considered strict and rigid associations, these assumptions let us to propose a model which will be further analysed in the empirical part of the paper. The model is shown in figure 2. The model proposed does not define variables to be tested and verified with “inductive” research and quantitative analysis. Rather, it identifies theoretical assumptions by means of research hypotheses among different variables which are not pointed out by literature.

Figure 2. – Relation between concepts of time and interaction models



The test of the model proposed will be based on actors’ perceptions. Time perception is subjective, as “not everyone perceives time in the same way” (Quintens and Matthissens 2010, 92). In our model, we assume that it is possible to show a relation between concepts of time and interaction models on the basis of perception stated by actors. In particular, we presume that there is a positive association respectively between time as product and time as process on the one hand, and interaction as exchange and interaction as adaptation on the other hand. In other words that:

Hp1 – in the case of (perceptions of) time as process there will be (perceptions of) interaction as adaptation

and that,

Hp2 – in the case of (perceptions of) time as product there will be (perceptions of) interaction as exchange

Conversely, we presume that there are negative associations between concepts of time and interaction models:

Hp3 – in the case of (perceptions of) time as product there will NOT be (perceptions of) interaction as adaptation

and that:

Hp4 – in the case of (perceptions of) time as process there will NOT be (perceptions of) interaction as exchange

We then presume that there is a negative association between concepts of time and between interaction models as stated in the following hypotheses:

Hp5 – in case of (perceptions of) time as product there will NOT be (perceptions of) time as process

and that:

Hp6 – in the case of (perceptions of) interaction as exchange there will NOT be (perceptions of) interaction as adaptation

These hypotheses will be addressed in the empirical part of the paper and discussed in the final remarks.

Table 2 Hypotheses set

Hp1	Time as process	$\leftarrow(+)\rightarrow$	Interaction as adaptation
Hp 2	Time as product	$\leftarrow(+)\rightarrow$	Interaction as exchange
Hp 3	Time as product	$\leftarrow(-)\rightarrow$	Interaction as adaptation
Hp 4	Time as process	$\leftarrow(-)\rightarrow$	Interaction as exchange
Hp 5	Time as product	$\leftarrow(-)\rightarrow$	Time as process
Hp 6	Interaction as exchange	$\leftarrow(-)\rightarrow$	Interaction as adaptation

4. Methodology and empirical setting of the research

Our aim is to analyse time aspects in depth, by using the case study method to address the topic and to propose some evidence on the concepts of time, *time as product* and *time as process*, previously outlined.

Recent research in industrial management has pointed out the lack of consideration of time aspects and the need for observing “...business marketing phenomena...from a more time-embedded perspective” (Quintens and Matthysens, 2010, 98). We aim at enriching the academic debate by means of case analyses, because case studies are considered of particular importance in generating and testing theory (Eisenhardt and Graebner 2007). The cases presented in the paper are built using data collected from different sources. The cases, which have been selected on the basis of differences in several time dimensions, regard two firms considered as focal companies, Stefano Ricci and Lanificio Cocci and their perceptions on the relevance of time in their interactions with suppliers and customers. The firms have been selected also with consideration to previous contacts and case studies carried out by the authors, in an attempt to adopt a longitudinal approach in order to avoid some of the critical aspects which can occur when considering a time perspective in case study research (Stevens and Dimitriadis 2004). The cases presented here have been selected considering their position in the textile-clothing pipeline. In order to investigate different concepts of time on the actor’s perceptions we have selected a textile producer (Lanificio Cocci) and a garment maker (Stefano Ricci), representing two of the main phases of the textile-clothing supply chain.

We have firstly developed a case analysis on the focal firms and their consideration of time within interactions. Then, we identified a focal interaction to be analysed in depth with a counterpart of the focal company. Table 3 points out the methodological path followed.

Table 3 Research Methodology for data collection and analysis

Methodology	Aims	Sources	Firm's involved
Secondary research	<ul style="list-style-type: none"> • Search for secondary data 	<ul style="list-style-type: none"> • Published articles • Firm's Reports • Firm's Websites • Fashion magazines • Previous case studies 	<ul style="list-style-type: none"> • Stefano Ricci • Lanificio Cocci • Setaidea
Case analysis on the focal company	<ul style="list-style-type: none"> • Identification of temporal aspects considered relevant • Analysing time as product and time as process concepts • Identification of focal interactions with suppliers/buyers to be investigated in depth • Investigate a focal interaction considering temporal aspects on the focal firm's view 	<ul style="list-style-type: none"> • Preliminary contacts • Semi-structured interviews with firm's top management 	<ul style="list-style-type: none"> • Stefano Ricci • Lanificio Cocci
Case analysis on the counterpart	<ul style="list-style-type: none"> • Investigate focal interaction considering temporal aspects on the counterpart's view 	<ul style="list-style-type: none"> • Semi-structured interviews with firm's top management 	<ul style="list-style-type: none"> • Setaidea, supplier of Stefano Ricci

In the paper, we show findings investigated by means of semi-structured interviews with the top management of the two focal firms, Stefano Ricci and Lanificio Cocci, and one counterpart in the interaction, Setaidea, a relevant supplier of Stefano Ricci. Regarding the focal interaction of Lanificio Cocci, other than perception's of the focal company, we only collected secondary data in order to better describe the interaction with Clothing Company, a relevant customer, and with a yarn supplier (Alfa). The interviews were semi-structured and organized in order to collect a variety of information on the topics pointed out in table 4.

Table 4 Main topic addressed

Topic	Question raised
Time as product	<ul style="list-style-type: none"> • Is time a relevant attribute of the product-service offered in the interactions? • Can time substitute for price as a selection mechanism of suppliers? • Is punctuality important in the firm's relationships? • Is the capacity to propose new trends for the production important in the interaction? • Is adaptation to the changing trends over time relevant? Do evergreen products reduce time importance?
Time as process	<ul style="list-style-type: none"> • Can we divide time into units that are measurable? • Is there repetition in the succession of events? • Which events can divide times? • How does the process of time change the organization?
Focal interaction	<ul style="list-style-type: none"> • How does the firm relate to the counterpart over time? • How has the relationship with the counterpart evolved? • How does the firm consider time as product with respect to the interaction? • How does the firm consider time as process with respect to the interaction?

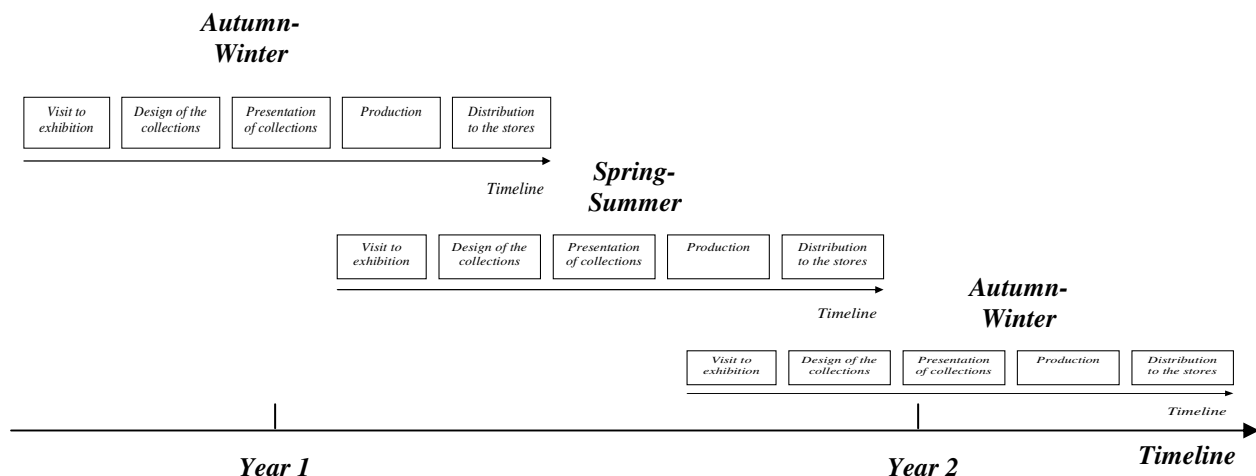
The empirical context of the cases is *textile-clothing*, the main sector within the fashion industry. This sector is particularly relevant for the issues investigated in the paper.

Time has always been relevant in this sector considering the specific nature of the product. Over time fashion trends emerge and decline, and over time fashion trends re-emerge and re-decline following a long-term cyclical path (Saviolo and Testa 2002).

However in the last decade, time has attracted major attention due to a generalised tendency by the clothing operators to shift the moment of decision on semi-finished textiles forwards closer to the time of sales in shops. This tendency is manifested by new business models which have emerged and included in the so called fast fashion formulas, where time has become central in the way firms do their business.

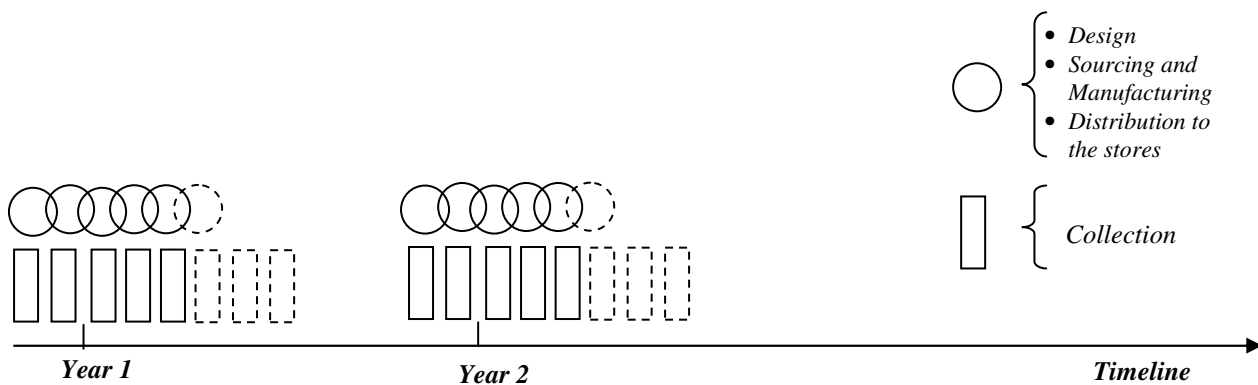
In fact, traditionally the textiles/clothing sector is described by dividing operators into different groups in terms of production management models, which differ as a function of the time scale involved in production and in the number of annual collections made possible by time to production (Guercini and Runfola 2004). The traditional way of doing business is connected to the *planned fashion model*. This model regards clothing operators (either manufacturers or retailers) characterised by an elevated capability for forecasting and proposing fashion trends. Such firms arrange the design of products long before the time of consumption and seem to consider time according to a *clock time vision* (Bluedorn and Denhardt 1988). According to this vision, time can be measured and divided into seasons, which are autumn/winter and spring/summer. Each season has a starting and an ending point and within each season one can identify critical events which can further divide season in sub-processes (such as the visit to an exhibition as preliminary activity for the design of collections). Moreover, apart from flashes (small collections launched during the season) and special collections (collections for particular events such as Christmas), simplifying, each season corresponds to a collection. The frequency of time involves very high repetition in the succession of the events, season by season, year by year. Moreover, the sequence of the season even if linear, is partly overlapped, in the sense that the ending of a season is generally after the beginning of the subsequent season and is not coincident with the conventional division of time in years. Obviously within this clock time frame, timing, in the sense of “...the moment at which a phenomenon, process, or part of process starts or finishes... (Quintens and Matthysens 2010, 93) can be *subjective*. The process dimensions of time are extremely relevant as they shape the relationships, which evolve over time according to the dimensions and divisions of time pointed out.

Figure 3. The dimension of time process in the planned fashion model: a simplified and linear flow and linear vision



In this context, during the last ten years, the phenomenon of *fast fashion*, has emerged and has received major attention both academically and in most of the fashion and business press (Barnes and Lea-Greenwood 2006). The fast fashion model refers to firms, like Zara and H&M chains, that compete with one another on the basis of their ability to combine the capacity to propose fashion trends and to reach flexibility in the production in order to reduce time to market, till the launch of more than forty collections per year. Moreover, there is an increasing tendency for manufacturers of fast fashion to assume a significant brand positioning, whereas previously branding was more closely associated with the planned model (Guercini 2001). Even such firms consider time in a *clock time vision*, with a beginning and an end. However, it seems that in fast fashion, differently from the *planned model*, time flows are not in one direction, even though the time concept is linear. In the planned model, the division into two main seasons which correspond to two new collections let the firm to identify well the past, the present and the future of the season, with a quite linear sequence (flow) of the activities: from the visit to exhibition to the distribution to the stores for each season. In the fast fashion formulas, time which is a linear concept, is considered more related to a flow which is continuous and less linear and where the firm is constantly and simultaneously involved in design, sourcing and manufacturing and distribution to stores for new collections.

Figure 4 . The dimension of time process in the fast fashion model: a simplified and circular flow within a linear vision



Time is measured, but the season becomes less important and the units of analysis seem to become the single collections which drive the process as pointed out in figure 4 and not correspond to the season. In other words, the number of new collections is so high that the unit of analysis of the season is no longer strategic but operational. This does not mean that some aspects are not important, like exhibition for understanding fashion trends, but that time considerations change the way of conducting business. Relationships inside the network evolve considering this time division, which, for example, leads to different strategies and implications in terms of supply chain management.

However, planned models and fast fashion can be considered two extremes where different mixes of production models proposed by single firms are situated. In any case, time can be the context or the product of the business network, where the meaning of the two concepts changes depending on the dimensions of time considered. Consequently, fashion represents a good context to analyse time issues as the relevance of *time to market* is increasingly affecting every business model.

The cases that we propose in the next sections mainly adopt planned production where timing is a more linear clock time related concept. This is important for our research as we aim at analysing how timing considerations are affecting the traditional way of doing business in the modern competitive scenario within which a fast response to the market is an essential attribute for all fashion companies. In the next sections, we analyse in depth the meaning of time as process and time as product in the firms' views.

5. Case analysis of interaction

5.1 Stefano Ricci: timing concept in a luxury retailer²

a) Origin of the firm

Stefano Ricci S.p.A. was started in Florence in the early Seventies and identifies a niche total look brand characterized by luxury and exclusive products, made in Italy. The Group employees about 200 people; its turnover reached 35 million Euros in 2009 registering a growth of 26% over the previous year. Even if Stefano Ricci produces a total look, shirts and ties represent its core business affecting sales by a percentage equal to 40%. The high brand positioning pushes the Group to prefer distribution choices that can ensure a direct control on the market and support brand enhancement strategies. Stefano Ricci has therefore decided to open luxury boutiques (owned and licensed) in exclusive locations (Shanghai, Monaco, Peking, Beverly Hills, New York, Paris, Moscow, Kiev and Baku); they generate 60% of total turnover. The Stefano Ricci brand has also entered into multi-brand stores and in important department store channels such as Niemen Marcus (USA), Harrod's (London) and Holt Renfrew (Canada).

Brand enhancement is reflected in the pursuit of excellence not only in distribution, but also in production. All activities proceeding and following production, and so design on the one hand, and quality control and logistics coordination on the other hand, are carried out by Stefano Ricci. In this way the Group can control the main differentiation sources of its products; they are based on creative research, product quality and efficiency in the services provided. Production is partly outsourced. While the accessories of jewellery, ties and shirts are made by highly qualified laboratories, other products of the collection i.e. knitwear, outerwear and shoes are made by Italian suppliers (located in Marche, Emilia Romagna and Lombardia). They produce following Ricci's stylistic project. The production timing are dictated by the two seasonal collections (autumn/winter, spring/summer) and by the restocking of stores (at least two/three times in a season).

In this section we examine the relationship between *Ricci* and *customer categories* (multi-brand store, licensee, department store); the interaction between Ricci and its suppliers will be analyzed in the next section.

b) Time concept in the interaction with customers

Time as product

In Stefano Ricci the attributes of *time as product* assume different levels of importance. Most of the products are not basic, but renewed from one season to another; they are formal men's wear and are not affected by fashion trends. Consequently, with reference to the temporal dimensions embedded in Stefano Ricci's products, the connotations "*evergreen*" and "*fashion content updated*" do not characterize them and do not constitute the variables of product sought by all its customers (table 5).

Time can also be understood as "*interaction with customer*" to define the offering. In Stefano Ricci this time attribute is not relevant except in cases of special products designed and carried out for important department stores. An example is the production of a minimum number of ties made with precious stones during the Hundred Years of Neiman Marcus; this is a production choice that, for Stefano Ricci, has generated more returns in terms of image than economic revenues.

The time in the attribute of *punctuality* in delivery represents the most requested attribute by Stefano Ricci's customers. Its level of importance, however, is differentiated on the basis of the distribution choice: in the boutiques the punctuality is less important than in department stores. In fact with regard to the boutiques a delay in delivery does not imply the risk of losing customers

² The sentences in inverted commands presented in the tables of the paragraph are statements of the interviewee on the theme of *time as product* and of *time as process*. With reference to them, the research group has tried to understand the level of importance.

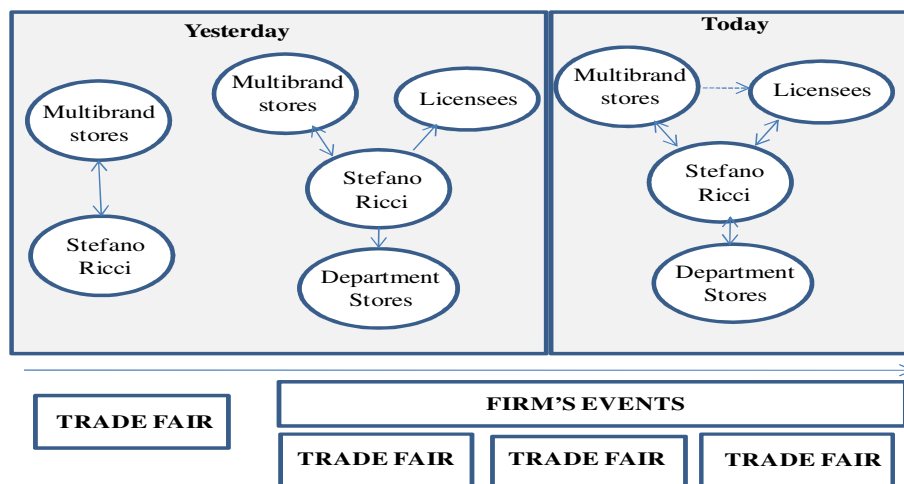
who, if faithful, may be willing to wait just to buy Stefano Ricci's products; while in the department store, the pressure from the sales force, especially at the beginning of the season, calls for the respect of delivery time. So companies which enter their products on the shelves first can sell before any slower competitors. In order to ensure time delivery in the American department stores, Stefano Ricci has decided to change the organization of the clothes labelling process: labels of department stores together with labels identifying the brand Stefano Ricci, are not placed by local distribution centres, but directly by Stefano Ricci which, after doing this, sends the products to department stores reducing delivery times and increasing sales. In the multi-brand stores the importance attributed to the timeliness of provided services is related to the expertise of their managers; in particular punctuality is essential for multi-brand stores characterized by an attention to market needs, to the development of an internal catalogue and to the continuous updating of sets.

Table 5 Time as product (Customer relationship)	
Stefano Ricci – Customers (multi-brand store, licensee, department store)	Importance Level
"We offer evergreen product"	Very low
"We offer updated products based on fashion trends"	Low
"The punctuality is an attribute sought by customers"	Very Important
"What we offer is predefined without customer interaction"	Medium

Time as process in the interaction with customers

Stefano Ricci is present with its product in important multi-brand stores. It has recently decided to activate *stable and intensive relationships* with its *customers* and especially with its *licensees* (Figure 5). We can consider that 9 of the 11 boutiques are licensed. The reason at the base of the development of these relationships can be different. In the former Russian Republics for example a category of licensee is becoming increasingly important; this category includes entrepreneurs, who are attracted by the spread of Stefano Ricci brand in relevant social positions (political classes,

Fig. 5 Interaction process Stefano Ricci and costumers



managers, etc....). They decide to run Stefano Ricci stores to develop important relations in social context and to access new luxury businesses. Another growing category of licensees is made up of managers who, encouraged by good sales results, decide to convert their multi-brand into a Stefano Ricci single-brand boutique. It is the recent case of a Parisian client. In the first category we see a social reason to open Stefano Ricci Store; in the second one the choice is pushed by economic reasons. The opening of licensed stores started in 2002; so now it is still difficult to understand the dynamic relationship between Stefano Ricci and its partners. However, the top management expects to maintain and *develop relations with the existing licensees* for at least ten years. This is in fact the

necessary span to recover the huge investments made in designing and implementing the different boutiques. The life cycle of relation is connected to the life cycle of the distribution form.

Stefano Ricci also points out the importance to "*find time to reflect*" and constantly improve interactions with its customers (licensees, department stores) apart from the *trade fair* dates. The interaction with them is based on their importance: the customers (especially licensees and department stores), that are considered most relevant in terms of turnover, are visited at least twice a month, while the less important customers (especially multi-brand) are visited at least twice a year during sales campaigns. This relational intensity increasingly characterizes licensees and particularly department stores in the American market where there are advanced deliveries. For autumn/winter the advance is approximately one month (June instead of July); for spring/summer the advance may be even two months (December instead of February).

This timing tends to undermine the role of exhibitions that are a moment to make promotion and not to present seasonal innovations. The collection in fact is presented in pre-buying periods taking place ahead of the trade fair; so the fashion time is increasingly dictated not so much by the seasons, but by market needs. In the interaction with licensees and department stores, Stefano Ricci "*operates as one organization*". The requirements arising from the relationship with the customer trigger a relational process that starts from sellers working in stores and involves the commercial/marketing function and ownership; this latter interacts with the production function and with suppliers to define the costs and lead times.

c) Relation between "time as product" and "time as process"

In *time as product* the punctuality is the most important attribute that is correlated to the dynamism of customers. It follows a concept of *time as process* characterized by events, different from season trade fairs that tend to define a new timing in fashion. Stefano Ricci interacts with the customer organizing specific pre-buying meetings before and after important trade fairs. In this way Ricci reviews its relations in the continuum of time in a "*clock time*" approach.

Time as a product also includes all variables that are inherent in a temporal fashion product (fashion trends, evergreen, offers default); these variables reflect the specific characteristics of the product (man, formal wear) which are the factors on which top management builds his perception of time in a logic of "*social time concept*". This leads us to conceive time as a process divided by "extraordinary events" that are organized for the different customers and that require a collective involving of the firm in the productive and commercial choices. In each of these events that make up the process, time is also a product: its attributes become important and discriminating variables to active economic exchanges with the market.

5.2 Timing in the focal relationship with Stefano Ricci: the supplier's view

The main relationship analysed regards the interaction between Stefano Ricci and Setaidea, a printing supplier of tie. Setaidea is a historical firm localized in the Como district, which is one of the main Italian textile district involved in the production of silk garments and accessories.

The foundation of Setaidea dates back to 40 years ago as a supplier for tie producers. The firm is a unique firm in the Italian fashion landscape as it proposes full art craft handmade products. The firm is composed of two divisions, one devoted to the commercial side, which employs six employees, and another dedicated to production, which employs approximately forty employees. Today the firm prints only ties, except for a small production of printed yarn. The customers of the firm are mainly Italian (roughly 80% of the total) and mainly localized in the Como district. All the customers operate in the high-end market with a luxury positioning. Most of them are garment makers, while only Stefano Ricci has a strong presence also in retail. The manager interviewed states that "...Stefano Ricci has many differences with respect to the other customers...and it has specific needs..".

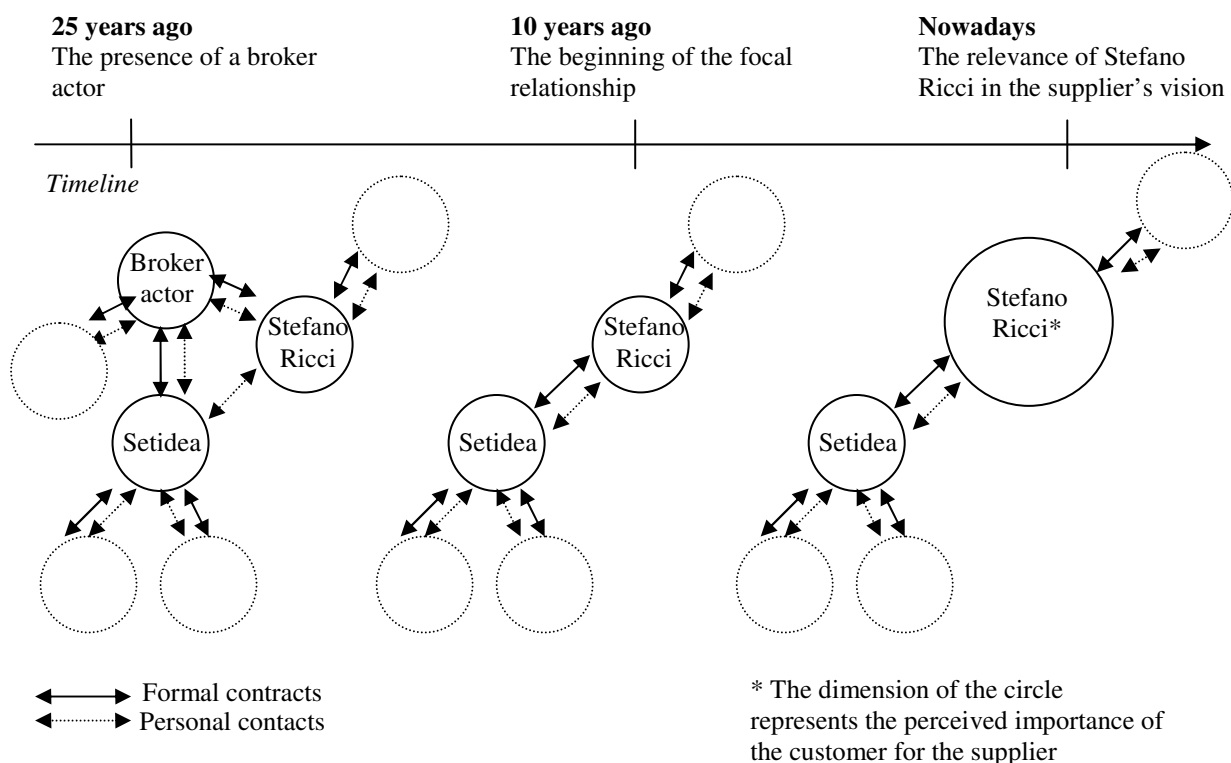
Stefano Ricci is the leading customer for the firm as it represents roughly 50% of the firm's turnover and 30% in terms of production. The firm's turnover is more than 5 million Euros, with steady growth during the last three years. This is unusual growth in a sector which is generally experiencing a crisis during the same period and is considered to be in decline in Western countries. Focusing on the relationship with Stefano Ricci, it is possible to highlight some aspects related to the relevance of time.

First of all, it is interesting to consider how the relationship has evolved over time. Time has shaped the way of interacting between the two actors in the network.

The beginning of the relationship dates back ten years. Previously, the relationship had another actor in the network as intermediate. In fact, for fifteen years Setaidea was a second-tier supplier of Stefano Ricci. There were informal contacts between the founder of Setaidea and the founder of Stefano Ricci, although Stefano Ricci was formally involved in the relationship with another actor. Subsequent to a problem in the production with the other actor, Stefano Ricci decided to close that relationship and to directly contact Setaidea. Consequently, the relationship began and nowadays Stefano Ricci, with total order of 35.000 meters of fabrics per year represents the main customer of the firm. So the ability to solve a problem faced by Stefano Ricci was the motive behind the beginning of the relationship. The relationship has always been directly managed by the top management of the two firms analysed. This is considered to be a focal point in the interaction, as the capacity to better understand each other is meant to be crucial and limited to the interaction between top management. Figure 6 shows the main steps in the relationship life cycles.

Timing can be analysed with respect to both concepts, *time as product* and *time as process* within the focal relationship analysed here.

Figure 6. The relationship life cycle in the supplier's view



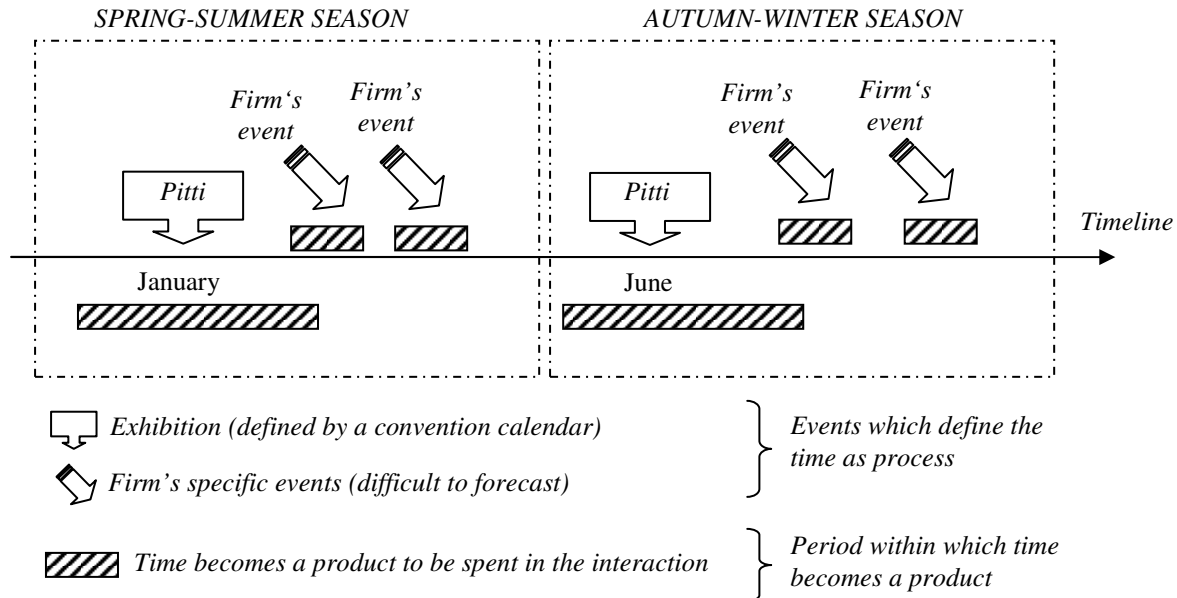
Regarding the concept of *time as product*, the manager of the firm points out that "...punctuality is one of the key elements in our relationship with Stefano Ricci" along with "...our capacity to interact on the technical aspects of the products". In fact, the manager stresses how time has been increasingly crucial and that delays have been compressed during the last ten years. That is a key aspect in the interaction with Stefano Ricci. Even the ability of the firm to constantly interact on

new items within the collection represents a main characteristic of the interaction. The manager points out how “...Stefano Ricci is totally different from the other customers.....and this is related to the kind of interaction we have...” In fact, usually Setidea proposes collections to its customers specifically studied for them. In particular, the firm defines the kind of fabrics to be used, the design in terms of drawings to be printed, and the colour mix of the items in the collection and produces the prototype items to be selected for the production. On the basis of the choices of the customer, then the firm begins the production. That is different in the interaction with Stefano Ricci, who interacts with Setidea on the basis of its own defined collection. Consequently, Setidea interacts by means of its technical competences, as it suggests to Stefano Ricci the best printing solutions to be adopted for the best production of the items in the collections. Considering this aspect, the number of products which can be considered “evergreen” is minor, because the collections, considering the high positioning of Stefano Ricci or the handmade nature, are different year to year and each item is specific and usually not repeated in the short term. Therefore, time becomes a product either if we consider the importance of time as an attribute of the interaction (time attribute in terms of punctuality) or if we consider the capacity to constantly innovate on the technical aspects of the items of the collection (time attribute in terms of following trends instead of offering evergreen products).

Regarding *time as process*, as previously outlined the relationships started roughly twenty years ago, as a result of the termination of a previous relationship. It has to be considered that a crucial aspect is related to the previous knowledge based on personal although informal contacts between the top management of Stefano Ricci and that of Setidea. Starting from this, one has to point out that *time as process* is still relevant for the focal relationship considered. Time has contributed to define the characteristics of the interaction, allowing contacts and evolving the life cycle of the relationship. It is interesting to note that the interaction is strictly related to the time constraints defined by Stefano Ricci. In particular the two main seasons: autumn/winter and spring/summer determine the time context of the interaction. The relationship evolves within these two extremes. In particular, the two seasons indicate each three months of work for Setidea. In other words, from the beginning of the season to the end there are three months where the contacts between the two actors are concentrated. Within the seasons two main events highlight the interaction. These are related to the Pitti Event, a leading exhibition in the menswear fashion business held in Florence (Italy) which occurs twice per year, one in January (for the launch of the spring/summer collection) and one in June (for the launch of the autumn/winter collection)., Stefano Ricci shows its collections at the Pitti Events. Consequently, the weeks that precede and follow the events are generally crucial for Setidea in the interaction with Stefano Ricci. With reference to this topic, the manager stresses that “...in consideration of the Pitti events, we have two weeks of full time work dedicated to Stefano Ricci...”. So it is possible to point out that considering the specific period of the events, time becomes even a product. In fact, the process leads to the need of fast response, and Setidea can produce this “time attribute” that allows Stefano Ricci to be ready for the launch of the collection. This fast response is also related to the absence of a warehouse, because Setidea stores only raw material (fibres) and not finished product. The production is an ad hoc production for the customer. Fortunately, continues the manager interviewed, “...the two Pitti events are crucial even for us, as the other customers exhibit in that exhibition...”. Apart from the Pitti events, the time process in the relationship can be highlighted considering other events, which are firm specific, such as the opening of a new Stefano Ricci boutique or other particular moments as joint branding events. These events are quite difficult to forecast for the supplier. During the rest of the year, time remains central even though time constraints are less relevant as they are connected with the re-assortment of Stefano Ricci collections.

Figure 7 points out the interconnection of the two concepts of time as product and time as process in the relationship considered here. In particular the figure considers the supplier’s vision, where time as process and time as product coexist.

Figure 7. Time as process and time as product: the overlapping of the two concepts in the interaction with Stefano Ricci in the supplier's view



5.3 Lanificio Cocci: time as product and as process in a textile manufacturer³

a) Origin of the firm

Lanificio Cocci Stefano is a firm located in the Prato textile district; founded in 1936. It produces cotton fabrics for men. The current owner belongs to the third generation; the firm employees 15 people, its turnover is about 10 million Euros and its products are destined to different customers that include companies operating in the quick-fashion (Inditex-Zara) and in the planned season (autumn/winter; spring/summer) (Hugo Boss, Clothing Company). Cocci recently started a downstream integration process in retailing; in particular it activated the channel of sales on-line and of factory store; their impact on the turnover is currently marginal. However this new channel has contributed to the development of an internal design activity of clothes (shirts, jackets and trousers) that are carried out by a network of district firms using its own fabrics. Cocci involves local suppliers for the acquisition of raw yarn and dyeing services; the firm also has relationships with foreign producers that supply dyed yarn. We intend to analyze the *time as product* and the *time as process* in the relationship between Cocci and a key-customer, represented by *Clothing Company* and between Cocci and its *main supplier* of yarn that, for privacy, is assigned a fictitious name. Clothing Company is an Italian firm; it employs 181 people and its main brands are Belstaff and Capalbion. It has recently developed its distribution network by opening flagship stores (owned and licensed) in Italy and in Europe.

³ The sentences in inverted commands presented in the tables of the paragraph are statements of the interviewee on the theme of *time as product* and of *time as process*. With reference to them the research group has tried to understand the level of importance.

b) Time Concept in the interaction with Clothing Company (Belstaff)

Time as Product

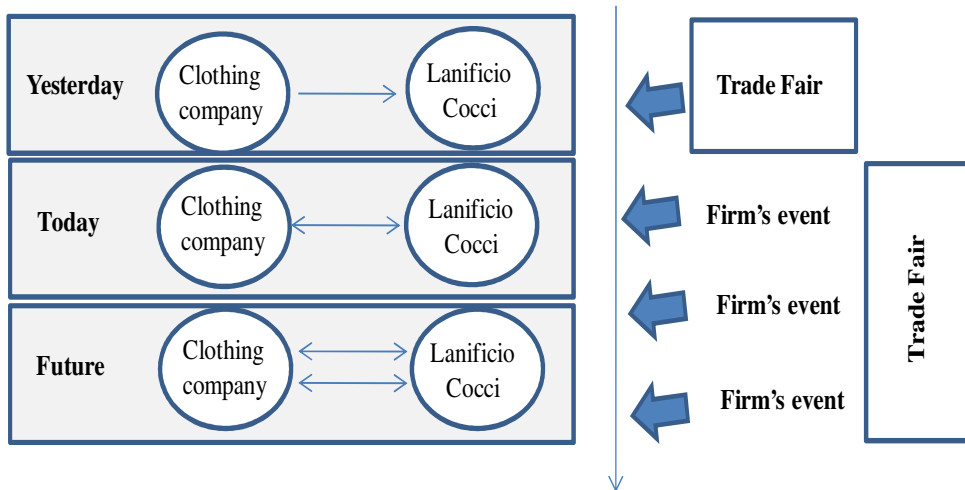
In the relationships with key-customers *time as product* is influenced by the characteristics of Cocci's products. It produces textile semi-finished products using basic materials (raw yarn) that do not change over time, from season to season; their added value consists of the patterns and colours that Cocci frequently renews on the basis of customer needs. The offering does not follow fashion trends; in fact, it is composed of textile products for men's clothes that, following the so-called "fashion long waves", are not subject to seasonal changes. However products can be the result of interaction with customers (customized productions). It follows that *time as product* is not considered particularly relevant in the sense of "*evergreen product*", "*updated products based on fashion trends*" and "*predefined product without customer interaction*". These attributes of *time as product* characterize the relationships between Cocci and Clothing Company; for the latter Cocci produces the linings for the Belstaff jackets that are known for their style and their technical innovation. They are made of Egyptian cotton ("wax cotton"), worked with natural oils that make the textile waterproof without altering the level of perspiration. The semi-finished products destined to Clothing Company are differentiated during fashion seasons, are coherent with the fashion content of jackets and are designed together (table 6). In the concept of *time as product*, *punctuality* is the most important attribute, not only for Belstaff, but also for all customers; in fact many of them review their collection and their offering on the basis of a commercial timing released from the cycle of planned fashion. Even if Lanificio Cocci presents two collections (autumn/winter; spring/summer), it adapts its products to demands coming from a variety of customers according to their offer timing; so the collection is related to fashion seasons, but it is the market that uses it in different ways.

Table 6. Time as product (Customer relationship)	
Cocci Stefano – Clothing Company (Belstaff)	Importance Level
"We offer evergreen product"	Medium
"We offer updated products based on fashion trends"	Low
"The punctuality is an attribute sought by customers"	Very high
"What we offer is predefined without customer interaction"	Low

Time as process

Time as a process defines the characteristics of the interaction, its frequency and intensity. The relationship between Cocci and Clothing Company (Belstaff) was started *a few years ago*, thanks to personal contacts, based on reciprocal confidence and professionalism. It is frequent and generates a collective, functional involvement.

Figure 8. Interaction Process Clothing Company-Lanificio Cocci



Over time interactions have intensified, involving not only the sales department, but different competences of the two firms. In fact the purchasing department in Clothing Company communicates with Cocci's sellers who generate an interactive process between their colleagues of the style office and the designer-production office of the customer firm. However, the interactions are joint and frequent not only with Clothing Company, but also with all the major customers (Figure 8). Cocci thinks it is important to interact with customers to develop innovation and to promote its products. The firm has much work to do in the development of relationships with the market. In order to do this, it is important to reinforce the internal commercial structure, reducing dependency on an external sales force.

c) Time Concept in the interaction with a yarn supplier (Alfa)

Time as Product

In the relationship with the yarn supplier, Cocci asks for basic products: evergreen, reliable, and available rapidly; then it is up to Cocci to mix them in order to create complex and high added value textile products. For Cocci *punctuality* in delivery is a key factor in the choice of suppliers. It influences the quality of services offered to customers and its price level. In order to be flexible and respect deadlines required by customers (6-8 weeks), Cocci has a stock of raw yarn in its warehouse that remains constant over time and that is dyed by Prato district firms. In this way it can control and reduce the time between customer order and delivery. The firm also interacts with foreign supplier of raw yarn, already dyed. In this case the delivery times are longer, approximately 4-5 weeks. The price of the single piece depends on the time that the customer is willing to wait: the longer the waiting time, the lower the price. In Cocci the *time* factor can be exchanged and *quantified*. Its products, in case of longer delivery times, accepted by customers, are sold at less than 2 Euros per meter. If we consider the basic nature of the raw yarn, in the relationship with the supplier, some dimensions of time as product are not relevant; in particular "*the fashion content*" and "*the interaction for the definition of the supply*" (table 7). From the use of raw material, Cocci can realize a variety of textile products. Their life cycle is long, especially in the case of traditional products, and is shorter in the case of commercial products.

Table 7. Time as product (Supplier relationship)	
Cocci Stefano – Yarn Supplier (Alfa)	Importance Level
"We require products mostly "evergreen"	Very high
"We require latest fashion trends"	Very low
"The punctuality is an attribute sought by our firm"	Very high
"What we buy is established before interaction"	Very low

Time as process

The relationships with the yarn supplier are characterized by low interaction, intensity and relational frequency. They have existed for many years, are not subject to change and mainly involve the purchasing departments. The “actors” do not feel the need to work together and the product is predefined by the supplier. Overall the products exchanged by their basic nature generate routine interactions between Cocci and its suppliers.

d) Relation between “time as product” and “time as process” in Lanificio Cocci

The interaction case shows that punctuality is the most important attribute of *time as product* and highlights a fashion timing that is increasingly fluid: the seasons are anticipated, relations with customers are more frequent and intense and the sample is promoted apart from trade fairs. This dynamism does not characterize relations with suppliers that are more stable and a routine trend. *Time as product* (punctuality) is linked to *time as process* in a “clock time” vision. In Cocci we see a tendency towards a reorganization of activities in the linear time continuum of the fashion season. The characteristics of production and the variety of customers influence the importance attributed by Cocci to the other attributes of time as product in the interaction with Clothing Company (Belstaff) and with the yarn supplier. They represent the factors that contribute to generate the time perception in the perspective of “*social time concept*”. The top management in Cocci considers time process as structured in specific events involving suppliers, for the reorganization of the supply (stock of raw yarn) and customers, for promoting sample and designing new specific products. All these events imply a functional collective participation. They constitute the time process and in each of them, time is also a product because its attributes become important and discriminating to active the exchange with market on the basis of price mechanism.

6. Discussion of research hypotheses and final remarks

The case analyses shows interesting evidence on the research hypotheses outlined in the theoretical part of the paper (table 8).

Table 8 Hypotheses set

Hp1	Time as process	←(+)-→	Interaction as adaptation	CONFIRMED
Hp 2	Time as product	←(+)-→	Interaction as exchange	CONFIRMED
Hp 3	Time as product	←(-)-→	Interaction as adaptation	NOT CONFIRMED
Hp 4	Time as process	←(-)-→	Interaction as exchange	NOT CONFIRMED
Hp 5	Time as product	←(-)-→	Time as process	NOT CONFIRMED
Hp 6	Interaction as exchange	←(-)-→	Interaction as adaptation	NOT CONFIRMED

Hp1

The analysis developed shows aspects of time as process which lead to adaptive interactions. In fact, in the Stefano Ricci case, time as process generates adaptation both for suppliers to the time frames defined by Stefano Ricci and for Stefano Ricci in its interactions with customers (mainly licensees). Similarly, in the case of Lanificio Cocci, the process defined by Clothing Company is relevant for the interaction. In fact, Cocci adapts its time constraint to the one defined by the customer. Considering the particular nature of the offering of Lanificio Cocci (yarn), there are no specific reciprocal adaptations with its suppliers. In this case, the relationships are more routine oriented and follow the dimensions of time process defined by the convention of the fashion sector.

Hp2

The case analysis points out that when time is considered a product, interaction seems to be exchange related. In fact, punctuality emerges as a relevant variable within the bundle of the product offered in both the cases, Stefano Ricci and Lanificio Cocci. The level of innovativeness related to the capacity to follow new fashion trends seems not to be important as an attribute to be exchanged. This is related to either the kind of fashion items offered by the firm, which is classical formal wear or the production management model, which is mainly planned.

Hp3

The case analysis highlights that time as product is partly related to only interaction as exchange. In fact, in both the cases, time as a product, cannot be defined *ex ante* by a single actor. But, the time attribute which is exchanged includes either an adaptive interaction. Even if minor, this aspect does not let us confirm the hypothesis that time as a product is not coherent with adaptive interactions.

Hp4

This hypothesis seems to be partly not confirmed. The cases show how time as process can coexist with interactions as exchange. In fact, in both the cases we can find aspects of exchange within the process. During the time constraints defined by the process, time can be an object of exchange. For instance, particular events organized during the season, can lead to a re-definition of the product attributes and time can become a parameter of exchange. However, adaptive interactions prevail when time is considered as process.

Hp5

Following the reasoning previously proposed, this hypothesis seems to be not confirmed. The two concepts of time can coexist within the business network. In fact, time as process can contribute to define the time attribute exchanged by actors in the network. At the same time, time as product can change the process dimensions of time.

Hp6

In our analysis, interaction as exchange can sometimes involve adaptation. In fact, the time attribute offered in the transaction by an actor can be the result of adaptive behaviour to the standard defined by another actor. If it is true that the exchange can take the form of a discrete transaction with counterparts offering and agreeing to the best time, it is false that an actor can always define *a priori* the time attribute that can be offered. In this case, time can be the result of the interaction between two actors in the network.

In conclusion, the results of the systematic combining of literature and case analysis confirm a correspondence between time as process/product and interaction as adaptation/exchange. The research hypotheses not confirmed may represent an area of further research and theoretical development.

Moreover, our analyses point out that time is mainly related to a clock time perspective. In this sense, time as process is connected to the units of division which drive the interactions (in the cases where the units are seasons rather than collections) and time as product becomes relevant in terms of punctuality in the delivery of the products. At the same time the social concept of time is still important. In fact, time is a subjective concept which is influenced by the perceptions of the single actor. Consequently, time as process becomes firm specific and it is defined by critical events subjectively considered relevant by the actor. Considering this, the unit of division of time defined by convention (for instance the season in fashion) can be less useful to understand time as process in a linear vision. At the same time, time as product becomes subjective and cannot be defined

objectively by the single actor offering it, but it depends on the nature of the product and of the production management model.

In the end, time is a concept that depends on the actor's perceptions on the interactions in the network.

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