From Rational to Behavioral:

New Tendencies in Decision Theory and Cognitive Psychology

and their Impact on the Routine Level Analysis of Organizations

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"Nel cervello è raffigurato il mondo: non come una semplice collezione di carte geografiche su cui ci si può muovere, né come un elenco di persone con cui abbiamo a che fare, e neppure come un ripostiglio di concetti e oggetti su cui far conto nella vita di ogni giorno. È raffigurato piuttosto come un teatro, nel quale il mondo viene portato in scena"

"Tutte le azioni possono esser viste dunque come correzioni, non dell'immagine del mondo, bensì del mondo medesimo, quando si discosta in qualche modo dal mondo ideale che abbiamo in mente"

Valentino Braitenberg (2003)

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Introduction

The decision-making process must be classified as one of the most complex activities of the human brain. It happens in the flow of a myriad of signals, driven by a bundle of internal and external interdependences. The classic approach to decision-making in modern science represents a *homo sapiens* able to build *rational models* of the outside reality, and to evaluate the best action to implement resting on the model predictions.

For validate this approach, we need that models of reality do exist, and that they possess a series of attributes as truth, internal logic and coherence, completeness, robustness.

The existence of a forecasting model, able to describe and predict the phenomena of the external world at a well-defined level of precision, was a foundational assumption for the scientific revolution. Men have to discover this model, and to formalize it using the most powerful formal languages: logics and mathematics. For the goals of decision-making, the existence of a model of reality is not sufficient. The model must also be "ready to use", for admitting its viability as a problem solving tool for problem solving.

Empirical deviations from rational behavior have been classically explained as bounded-rationality. Something makes the individuals blind. They retain their rationality, though cannot exercise it. Limitations in the use of rationality have been normally identified in a *not-yet-discovered model of reality* (within a progressive vision of science as description) or in a *not-yet-available computational power* (within a progressive vision of technology).

These visions have been challenged during the last decades. In particular:

1 – The existence of general models of reality may be uncertain;

2 – Thinking of men as hyper-rational decision-makers may generate very partial, incomplete or definitely wrong forecast of human behavior.

The preceding points 1 and 2, when accepted, have reflexes on the idea of organizational behavior. In particular:

3 – Building theories of organizational behavior based on rational models of the involved actors may generate bad theories, and looking for quantitative correlations problems and solutions may be misleading

4 – Instead of adherence to statistical models, the students of organizational life should search for a theory of action and decision-making in terms of the psychical mechanisms which drive the individual and group behavior (sense-making, learning, recurrent behavior).

These 4 points are consequentially developed in this monographic work. In Chapter 1, the crisis of rational models of reality and the rising of a sociological approach to knowledge will be exposed. Chapter 2 focuses on decision theory and presents the main results of the behavioral approach to decision making. At the end of this chapter, an example of experimental setting to test many phenomena of learning in repeated behavior is presented. Chapter 3 discusses the validity of approaches other-than-quantitative to organization science, with a specific emphasis on narrative approach and its analogy with individual sense-making processes. Chapter 4 uses the results and insights derived from the preceding chapters and builds on the recent literature on organizational routines. Repeated processes and routines seem to be the key for understanding the organizational action and the decision-making within a behavioral approach. A theory-building effort is done to expand the description tools in the analysis of routines. At the end of this chapter, a trial example of empirical case-study validation of the theoretically built concept is presented. Chapter 5 reports some conclusive remarks.

The present work is conceived as a monographic essay and aim to put together and make sense of many differentiated stream of research, from decision theory to cognitive psychology, to the last contributions of behavioral economics and managerial studies on routine. The main approach is organizational, although the

recent studies on individual behavior have today reached an organic corpus of theory and must represent a cornerstone of further theoretical contributions in organization science.

The research contribution is manifold. A first contribution is a *substantive review* (Cropanzano, 2009) of the scientific literature, with the aim of summarizing a broad, almost dispersed, area of study, attempting to framework an organic approach among different and specialized streams of research. A second contribution is mainly *theoretical*: the above outlined general framework gives new tools for a meaningful description of the organizational routines, which are proposed as useful theoretical concepts for the routine-focused studies (meso-level analysis). Both the first and second contributions are supported by empirical studies, which represent two possible examples of research approach in this field. In particular, an experimental laboratory study and a qualitative case study are presented as examples of empirical research on processes and routines, respectively at the individual and the organization level.

1. Against rationality: alternative models of reality and the sociologic approach to knowledge

The dogma of predictability of the natural world was silently built in the centuries of the modern scientific era. The wonderful success reported by the scientific and technical modeling of the natural world had its *acme* in the XIX century, with the triumphant mathematical physics, the thermodynamics and the steam engine, and the unification of the electromagnetic theories under Maxwell. This success suggested an extension of the scientific method to the study of men and society, as suddenly happened with the new rising sciences of psychology and sociology.

The first sociologists made attempts to apply the meaningful experiences and certain demonstrations requested by the Galilean method to the social facts, with the aim of understanding if social facts can or not be described in scientific terms. This new approach to the social studies, until then dominated by the philosophical sense-making, constituted indeed a "change of paradigm" (Kuhn, 1962). Applying the scientific method to the social facts does not mean only to critically verify if mechanistic social models exists: it means also to change the vision of social facts and to impose to these facts a mechanistic structure, while spurious or out-of-the-model facts are discarded. A need for simplification emerged.

The viability of a scientific sociology (*sociologie* or *physique sociale* in the words of Auguste Comte) rests on two pillars at least. The first pillar is a presumption of truthiness of the results of scientific method in natural sciences. Scientific truths have a production chain, where mathematical physics elaborate theoretical models of reality, experimental physics validate these models, and all these models converge in a unitary, non-contradictory system of truth. The eventual coexistence of a multiplicity of different, even contradictory models is incompatible with this positive scientific approach. Physics can admit the survival of contradictory models only as trial solution, waiting for a final, holistic, non-contradictory description system. The struggle of physics toward Grand Unified Theory or a Theory of Everything (e.g. Ross, 1984) is a clear example of this approach.

The discussion of this first pillar subtends a further, subtle complication. The model must be described in some language. Mathematics were elected as the formal language of physics and natural science, with the presumption that they are an effective, complete and coherent language, neutral with respect to the described object. What if the same language of mathematics is flawed? What if this language originates internal contradictions? Or if the chosen language operates as a selective filter on reality, implicitly discarding the elements which go beyond its descriptive power?

The debate on the limits and implication of the use of mathematics as language and formal system runs through the all Twentieth Century. Duglas R. Hofstadter (1979) observed that the symbols of a formal system, which are only signs and do not have a specific meaning *per se*, cannot avoid taking a meaning when the human brain identifies an *isomorphism* with the perceived world. The institutionalization of a formal system, in the sense highlighted in the rest of this chapter, strongly influences the *habitus* of the observer, acting as a distorting lens in front of his eyes. The perception of reality is then always *biased*.

Moreover, the formal system of mathematics have a problem of internal structure. They cannot be both coherent and complete (Godel, 1931). If a formal system is sufficiently powerful (complex) to appropriately describe the detailed aspects of the world, then this system generates, within their formal rules, indemonstrable propositions. To fix the problem, a switching toward a more complicated system is required, as when our teachers introduced relative numbers to fix the problems of subtraction in the natural number set. The discussion on this point goes beyond the level of complexity admitted for this monographic study. However, taken together, these observations suggest to adopt some caution when considering the mathematical (read quantitative) tools neutral and infallible.

The second pillar for the extension of the natural science method to sociology is in the “level of reality” of social facts and social objects. As a premise for a scientific description of the social facts is the real existence of these facts. Are social facts and object real, or just a reified invention of our mind? Many of them are somehow

"empirically evident", but at a different level than real objects and natural facts. What criteria can we admit to distinguish a true social object from an Alice-in-wonderland imaginative invention?

Against the introduction of the social objects as arguments of scientific inquiry, a methodological criticism has been rising from different schools. On one there is the methodological individualism, which banishes the use of social objects as element of analysis, admitting only the individual behaviors and considering their statistical aggregations as pure collective conceptualization (Felin & Foss, 2005). On the other side, specific theories of social objects have been developed, normally associating the ontology of social objects with a semiotic, or a level of inscription (Ferraris, 2010).

The two pillars, apparently independent, are though tightly interconnected. The strong doubts raised by the social objects ontology induced the sociologists to the development of an in-depth inquiry about the epistemology of social sciences. Instead of a definitive extension of the scientific method to the social sciences, the result of this epistemological research was an innovative contribution to the epistemology of both social and natural sciences. The whole scientific work is now framed within a sociological perspective, which acts as a completion of the Godel's Theorem, underlining the temporary and social, consensus-based character of scientific theories.

Among the protagonists of the debate on the temporary and social character of knowledge, Khun (1962), Berger & Luckman (1966), Foucault (1969), and Popper (1972) are immediately recognizable. Although permeated by the dominant at that time Marxian materialism, Berger & Luckman (1966) resume the Scheler's discours about the duality between ideal factors (*Idealfaktoren*) and real factors (*Realfaktoren*), marking a deviation from the pure Marxian theory, which signs a deterministic and unidirectional relation between social structure and ideal superstructure. Max Scheler admitted a relation form social context to the ideal world, although he does not admit a deterministic causation. This is an intermediate position between knowledge a pure social construction and knowledge as driven by ontological, objective truth.

In their work, Berger & Luckman (1966) do not want to raise hypotheses about the ontological reality of scientific knowledge, neither to establish a method of discrimination for true and false knowledge, as Karl Popper did. True or false, any form of knowledge is living within the social dynamics, and only in a social context this knowledge acquires a positive ontology. The objectification of knowledge, with respect to the subjects which bring this knowledge within their minds, has a social nature. The actions start becoming social facts after a phenomenon of typification, which emerges by the repetitive inter-action and inter-observation of two or more individuals. At this point, the only convenience that the individuals gain from this typification is that they can forecast the actions of interacting individuals. An idea of "you do" and "we do" is born, and the inter-subjective tension is attenuated. This is the first and lighter form of institutionalization: a crystallization of actions and knowledge about actions. The further step is that of externalization and objectification. Although the individuals are the only vehicles of action and knowledge, they perceive these typified action and knowledge as "*other than itself*", as objects with an independent ontology. After a while (years, decades, centuries) this typified reality and the habits of action take on the *aura* of tradition. It is no more present in the biographic memory of the individuals, because individuals did not assist to the typification and sedimentation process. The degree of objectification becomes strong, until the *reification* of social reality. "*Reification can be described as an extreme step in the process of objectivation, whereby the objectivated word loses its comprehensibility as a human enterprise and becomes fixated as a non-human, non-humanizable, inert facticity. Typically, the real relationship between the man and his world is reversed in consciousness*" (Berger & Luckman, 1966, p.106-107).

With the specialization and the division of labor, the society becomes structured through interconnected institutions. Many actions must be implemented only by a well determined individuals or groups, which assume specific *roles*. A *role* is the objectivation of a part of the self as executor of a typified action. This objectivated segment of the self is the "*social self*". "*The institution, with its assemblage of 'programmed' actions, is like the unwritten libretto of a drama. The realization of the drama depends upon the reiterated*

performances of its prescribed roles by living actors. The actors embody the roles and actualize the drama by representing it on the given stage. Neither drama nor institution exist empirically apart from this recurrent realization" (ibidem, p. 92).

Each role has an associated *stock of knowledge*. The stock of knowledge of a society is structured distinguishes what is generally relevant, and what is relevant only for determined roles. The segmentation of knowledge marks the born of a specialized knowledge, detained by specific group of individuals which the society identify as *experts*. The society knows that many experts exist; however, the stock of knowledge constituting the *expertise* is no more a social asset. *"Role-specific knowledge becomes altogether esoteric as against the common stock of knowledge*". Sub-universes of meaning appear, necessitating of *integrative meanings* able to provide "*an overall context of objective sense for the individual fragmented social experience"* (ibidem, p. 102).

This point is crucial, also for our goals. The sub-universes of knowledge are actually interconnected, but only through integrative meanings, by which the individual make sense of a fragmented reality. The value of knowledge is not only a value *stand alone*, as considered *per se* in terms of truth. It has a value with respect to parallel sub-universes of knowledge. My idea of physical world is mediated by, and assumes a sense within, the sub-universe of knowledge detained by a little group of individuals (the physics' experts) which is inaccessible for me. There is a problem of *legitimation*.

Legitimation of knowledge happens within the society, and presents a series of subsequent steps. An *incipient status of legitimation* is traceable in the construction of a *meaning* and of a *system of linguistic objectification*. In a second phase, the objective meanings become part of more complex systems of meaning. These systems are firstly characterized by a mere narrative coherence, as in *myths and stories*. Only in a third phase the systems assume the aspects of organic and coherent *theories*, and then of *symbolic universes*, which are the ultimate frameworks endowed of a coherence of meanings and balance among sub-universes of knowledge.

At the end of this pattern of thought, knowledge appears in its social character. Legitimation of knowledge does not pass through the only channel of truth, but requests a consistency of meanings. Each sub-universe of knowledge is presided by different and even opposing segments of society; it is managed by individuals and group playing specific roles within the institutional system. The actual configuration of knowledge is socially determined. The social process of creation, legitimation and institutionalization of knowledge overrides and overshadows the problems of ontological truth and epistemological validity. This intuition radically redefines the concept of rationality in human action. While admitting that the individual is (and this is not the case) naturally driven by rationality in decision-making and action, this rationality operates within a specific universe of knowledge. This universe is fragmented, temporary, socially and historically determined and, in some respects, coevolving with the same actions and choices of the individuals.

All the above is relevant for the purposes of this study, for two reasons. First, there is reason to believe that the best way to describe social facts, and the knowledge that underlies them, could not be found in closed formal system as mathematics. Narrative could be the most appropriated language, being the same language in which sense-making happens, and social knowledge is shaped. This point will be developed in chapter 3, treating the narrative approach to social sciences. Second, the same existence of rational (i.e. true) models of reality is challenged, these models being temporarily valid items produced by a social process. The first check is made against the idea of rationality. The second check will be made in the next chapter, showing that individuals depart from rationality, also in presence of a (presumed) rational model of the reality.

2. Against rationality: the contribution of cognitive psychology to the decision theory

2.1 One decision maker, multiple models

The scientific validity of a hyper-rational, logic-deductive decision theory was in doubt since more than a century. The stock market has been a fantastic gymnasium for rational decision makers. In the preface of his book about the intelligent investor, Benjamin Graham (1934) wrote: "*Since anyone – by just buying and holding a representative list – can equal the performance of the market averages, it would seem a comparatively simple matter to 'beat the averages'; but as a matter of fact the proportion of smart people who try this and fall is surprisingly large"*. How can so many people, putting their own money, taking so wrong decisions in a relatively simplified environment as the stock market? Is it just a matter of overflowing emotions, which distort the flow of rationality?

Beyond these sounding doubts, the growing body of experimental evidences against the classical utilitarian and rational approach in economics opened the doors to the integration, within the economic science, of the findings of other branches of research, first of all cognitive psychology. In the rest of the chapter, some of these findings will be exposed, together with their meaning to decision theory. The main contributions are recognizable in the works by Daniel Khaneman and Amos Tversky on Prospect Theory (see Khaneman, 2003), Arthur S. Reber on implicit learning (Reber, 1996), Ido Erev on repeated choices and decisions (various papers). An organic systematization of the biases to rationality under the Prospect Theory approach is by Thaler & Sunstein (2008).

This still living stream of research suggests that in a specific group of problems, that are *complex* and require the construction of an autonomous, experience-based meaning, the individuals make decisions resting on simple associations and recognizable behavioral sequences. We call "complex" a problem for which a closed model does not exist, or cannot be comprehended in the mind of a single individual. Obviously, the complexity

threshold varies with the individual's mental capacity, and the tools at its disposal as extension of his mind: an abacus as mnemonic aid, or a modern personal computer and its data storing and algorithmic capacity. Despite these tools, the threshold of complexity in everyday life does not go far beyond a linear monovariate equation, or a binomial probability model. Complex problems of this kind are the common bread for the teeth of decision-makers.

The "reality of everyday life" (Berger & Luckman, 1966), and our knowledge of it, is always a complex system. It is full of shades, open, irreducible to a simple set of causal or probabilistic models. Within this reality the individuals are called upon to make decisions. Earlier than the economists, organization theorists, starting with the pioneering work of Cyert & March (1963), tried to understand decision-making as it is, instead of as it would be. They described the process as a sequence of interrelated actions that originate from the recognition of the problem (*problemistic search*), to the serial exam of a list of salient solutions, until a solution that they call "*satisfactory*" can be found and accepted. Often the list of solution is incomplete. Often it is not exhaustively investigated. Often the comparison between different solutions is not done, because they are not submitted to a parallel-comparative analysis. This way of taking decision was described as *garbage can model* by Cohen, March and Olsen (1972).

This approach is already "behavioral" *in nuce.* However, although painting a *rationally weak* decision-maker, the rational approach to the choices was not put into question. It retained its validity, for individuals having sufficient mental resources and completeness of information to correctly and completely modeling the problem. In this *weakly rational* approach, a less-than-rational or suboptimal decision is simply a consequence of an inadequacy in the input data-set or in the available algorithm for the solution of the problem.

The behavioral economists have gone a step ahead, moving a more radical criticism to the rational model of decision. Firstly, they empirically relieved that many biases and anomalies in decision making have a systematic nature. A series of less-than-rational behaviors have been collected and classified through experimental investigations. The anomalies were attributed to various biases of perception, first of all of risk perception.

Khaneman & Tversky (1979), Samuelson & Nickerson (1988), and the recent review of Thaler & Sunstein (2008) are examples of this stream of research. The collection of these systematic anomalies in behavioral decision-making has become an organic theory, alternative to the theory of expected utility. In their 1979 paper, Khaneman & Tversky called it Prospect Theory.

The anomalies relieved by the empirical investigation form a set of typified mechanisms, which can be briefly enumerated. First, decision-makers often recur to rules of thumb and heuristics (experience-driven associative rules) based on the psychological phenomena of *anchoring, representativeness and availability* (salience and accessibility) of certain images or values. Second, there is a tendency to *optimism and overconfidence*, with a systematical overvaluation of the individual capabilities and an undervaluation of risks. Third, decision-makers tend to be inertial and are subjected to a *status quo bias*: mainly for the cognitive costs of change. Finally, under the Prospect Theory *gains and losses are differently perceived*: people are more loss averse than gain seeker (Thaler & Sunstein, 2008).

Instead of simple misperceptions, however, the anomalies and biases observed in individual can have a more subtle cause. A mounting hypothesis is that they originate in the depth structure of the human mind, where two distinct systems of reasoning compete (Sloman, 1996). It is the dual system of decision. Building on that argument, the recent work of Ido Erev revealed the existence of an additional group of "systematic anomalies" in the individual decisions, appearing when an individual is confronted not with a wagering prospect of gains and losses, with all the available options clearly outlined, but with a problem not described a priori, in which all information with respect to the problem itself must be learned through experience by the decision maker. They are, necessarily, problems of repeated decisions. Going beyond the conclusions of both classical Expected Utility Theory and Prospect Theory, Erev's studies represent a further step towards a new, more "human" model of decision-maker.

The three different models of decision-maker can be viewed as a further approximation of the real deciding man. First, the classic model of hyper-rational decision-maker, similar to the positivistic *homo œconomicus*, is

driven by pure logic and probability theory. Second, the Prospect Theory man, systematically discard the axioms of probability, even when compared with problems which are formulated and completely described by probability. Finally, after Erev's experiments, the behavior of a real man plunged into a stream of actual experience, which, although simplified, is very close to the experience of "everyday reality". As was for the transition from classical physics to Einsteinian relativity and quantum physics, the introduction of a new theory does not drop the earlier one. Simply, incumbent theories still exist, within a limited scope and narrowed boundaries of validity.

The Erev's experiments still analyze the behavior of a decision maker when confronted with "*simple*" problem, strictly related to a binomial probabilistic payoff. A further step is the study of individual decision in a context characterized as follows:

- the decision problem is "*complex*", and the decision maker cannot build a complete mental model of the problem (decision trees, elevation gains and losses, etc..)

- The pay-off is not reducible to a binomial prospect of gains and losses

- No information are given about the problem. The task of solving the problem by taking the appropriate decisions is repeated, so that the knowledge about the problem arises from a phenomenon of learning from experience.

This fourth experimental setting, which could correspond to a fourth model of decision-maker, is closer and closer to the problems encountered by the individuals in the everyday life. At the end of the paragraph will present a laboratory experiment useful to bring out this fourth model maker.

In the light of insights of Chapter 1, the search for a universally valid decision theory can be misleading. The multiplicity of decision models describes the behavior of individuals in different situations. The assumptions of classical economists, where people choose seeking a maximum of achievable utility (e.g. Friedman & Savage, 1948), remains valid in some specific contexts. Three conditions seem plausible:

- The decision maker knows explicit information about the problem

- The decision-maker is able to formulate a model of the problem, and something as a closed form solution does exist

- The decision maker has sufficient time available to analytically establish a decision (computational time).

How much time the decision-maker need? Enough time to adopt a "detached" vision of the problem and limit the intervention of the intuitive-associative cognitive system (Sloman, 1996).

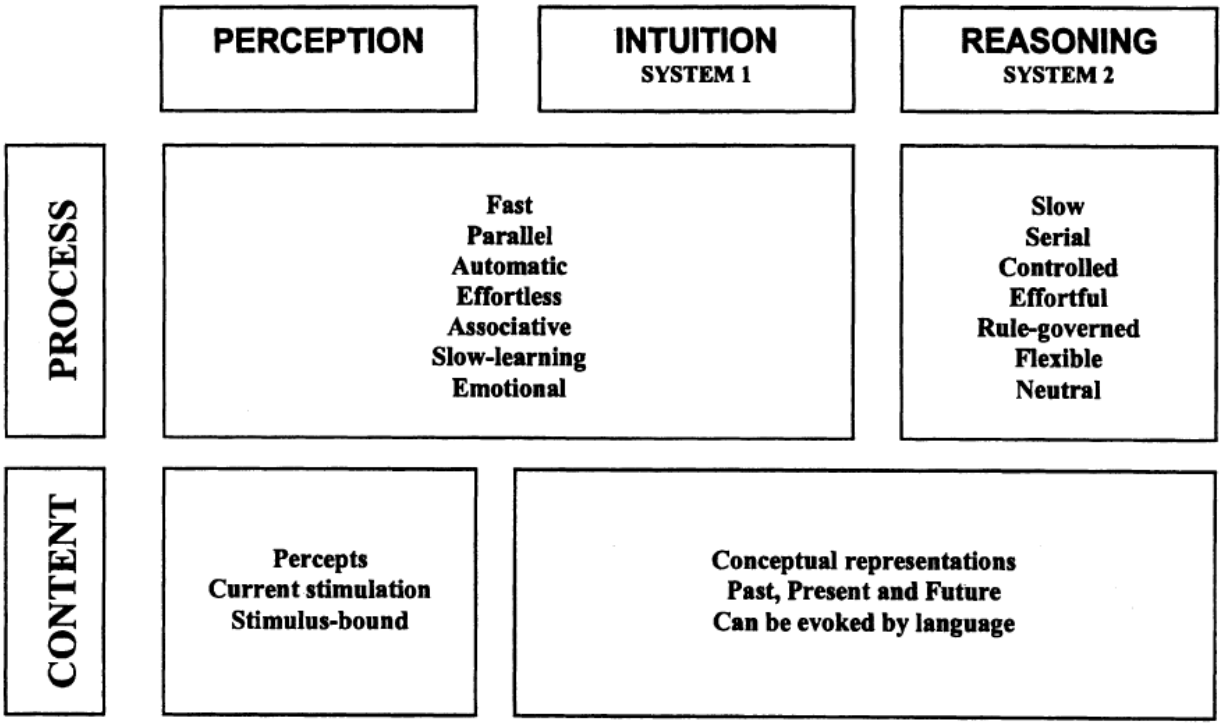
Although admitting the existence of rational decision, it is erroneous to believe that the decisions taken in this way will maximize the utility to the decision maker. They rather maximize the "utility for the model", the model of reality that decision makers choose as the best formalization of the specific problem. The model of the stock markets in normal, healthy conditions is an example. The stock market investor has confidence in the goodness of the model and acts as the hyper-rational decision-maker, maximizing its utility. In abnormal market conditions, either boom or crack times, both the validity of the model (Nassim Nicholas Taleb, 2007) and the decision behavior crash. The same individual can suddenly switch from a style of decision-maker to another one, making any prediction uncertain.

As shown by Khaneman & Tversky (1979) and Khanemn (2003), among the most learned people, the same authors and teachers of probability theory often do not follow their models when they make decisions. Men are always looking for shortcuts of thought, allowing him to reach a solution of the problems with less effort, relying on the immediacy of his intuition. This is what cognitive psychologists have called *Cognitive System 1* or the *associative system of reasoning*. Shortcuts are very attractive, because they save time and effort (cognitive effort) but also because they give us the feeling of mastering the territory (the cognitive map). Taking a cognitive shortcut, or adopting the associative reasoning system, does not mean to distrust any rational model of reality or question the validity of statistical computations. However, under certain conditions our rational

mind, *the Cognitive System 2* or *analytical system of reasoning* is switched off or circumvented, bypassed by the associative reasoning, which reach an intuitive and immediate solution through intuition.

Figure 1

The three interacting cognitive systems (Khaneman, 2003, p. 1451)



The cognitive system 1 can be thought of as "*a sequence of images suggested one another*" (James, 1890) and is shaped on previous experience of the individual, stored in his mind as procedural memory. This system is particularly active when we face repeated actions, decisions or problems with a routine character. Repetitive behaviors typically consist of a sequence of interrelated actions, aimed at a final result. Because often the causal link between action and result is significant only at the end of the sequence, and not during the course of action itself, the subject acts normally in a sort of "autopilot" (*batch mode*), paying attention to several contingent factors different than the final result (Greve, 2003, Egidi, 1994). This means that the agents are not engaged in delivering an action-outcome model, or a decision tree. They mostly enact sub-conscious and

adaptive behaviors. There is an associative learning, driven by the action and their immediate results. When these results are perceived as a step forward (new sub-goal) toward the final goal, they are then taken as a criterion of action and associated with a good action. These partial results or sub-goals can be very distant from the final goal. Saving time (Munichor, Erev & Lotem, 2006) or avoiding unethical behaviors or negative externalities (Feldman, 2000) can be examples of sub-goals. They often have a recognizable identity, as a vivid image, easily storable and retrievable by the associative system, for example obtaining a complete face of one color in the solution of the Rubik cube.

The decomposition of a problem into simpler sub-problems, and of the final goal into easier sub-goals seems to be inspired by the Cartesian reductionist approach and to be a prerogative of the cognitive system 2, the rational one. Problem solving decision making always try to divide the problem into a sequence of elementary problems. Our System 1 however implements this decomposition associatively, assigning the status of partial result to recognizable shapes and figures (system state). Our experience-driven abilities and skills are made of these sub-problems and sub-goals, progressively refined using the implicit or explicit signals we receive as feedback for our action. It can be shown that the heuristic decision based on sub-problems constructed by intuition and the associative reasoning have, in general, the properties of sub-optimal decisions (Egidi,2003)

A closer review of the research work developed by Ido Erev (Erev and Roth, 1995; Erev and Roth, 1998, Barron and Erev, 2003; Hertwig, Barron, Weber and Erev, 2004; Erev and Barron, 2005; Munichor, and Erev Lotem, 2006) allows a better understanding of the characteristics of the individual as decision-maker in face of repeated decisions, when the information base only emerges from the direct experience of the problem. At the heart of Erev's research are the concepts of behavioral choice and learning. After a replication of a series of experiments developed in game theory, although without providing players with the array of pay-off, Roth & Erev showed how the game can, in fact, converge to equilibrium, but in a different ways depending on what the initial conditions of the game are. This is because the players, having to rebuild a model of the game resting only on experience, "have a high probability of playing pure strategies that have been successful in previous

rounds of play" (Roth and Erev, 1995, p. 165). In a series of experiments conducted with Greg Barron (Barron & Erev, 2003), many empirical studies carried out by Benartzi & Thaler (1995) to validate the Prospect Theory are replicated. Omitting any description of the pay-off structure to the players, and allowing information to emerge from the direct experience of the game, the authors find empirical results which are surprisingly contrary to the predictions of Prospect Theory. For example, the tendency to overestimate rare events and to prefer a certain gain to a higher but uncertain pay-off, which are assertions typical of Prospect Theory, are not verified in decisions based on repeated experiences. Within this specific empirical setting, a tendency to opposite behaviors emerges, with an underestimation of rare events, and a monotone preference for higher earnings, although uncertain. Why this happens? What characteristics have an "experience-based" decision, which differentiates them so deeply from the "prospect-based" decision?

There are trial “rational” answers to these questions. For example, for the underestimation of rare events, the same Erev offers an explanation based on the properties of binomial distributions, which in presence of small samples (the limited cases that I examined during my experience of the problem) distort the likelihood of the rare event (the rare event normally does not appear). Thus the different behavior of the decision maker is attributable to a particular characteristic of the sample, and not to the same decision maker. However, explanations of similar strength are not available for the other anomalous effects observed by Erev. The *preference for certainty*, predicted by Prospect Theory but not observed by Erev, cannot be justified by analytical reasoning. Intuitively, the concept of certainty, that takes some associative value once explained in a prospect, has not a definite associative value when it emerges from the experience. It loses its characteristics of assertiveness. The model of the problem that the decision maker builds in his mind during the cycles of experience differs from the structure that regulates the system, or at least is perceived in different ways.

It remains then to explore how the individuals derive knowledge from the experience, and how they build models of reality useful for solving problems. The focus is on learning process, especially in its implicit and procedural nature. Rarely the individuals use the experience to build an explicit and analytic model of reality.

More often, people learn a practice of acting, gaining confidence in some decisions and associating certain effects to these actions. It seems clear at this point that, in the real world, a theory of decision and a theory of learning are two sides of the same corpus of knowledge, two ways of approaching the same phenomenon.

We can summarize the results of recent research on decision theory:

- When decisions are taken on the basis of a descriptive knowledge of the problem (prospect), we see a systematic erroneous assessment of certain aspects (such as rare events), which allows to build a utility scale for coherent different options.

- When decisions are taken based on the direct experience of the problem, the manner in which the learning takes place affects the type of information extracted from the experience, so the decision map (explicit or implicit) that forms in the mind of 'individual is typically idiosyncratic.

An empirical illustration of this second aspect is shown in the following section.

2.2 Asking "how" a decision is taken: an empirical study

In an important contribution appeared in 1994 on Organization Science, Michael Cohen and Paul Bacdayan discussed the results of an interesting laboratory experiment. The experiment was designed to study the emergent nature of organizational routines as tools for problem solving, and their characteristic properties. The experiment is a simple game, played with six cards (2, 3 and 4 red, 2, 3 and 4 blacks), in which a single pair of allied players has the goal of placing the red 2 in a target position (T). Each player moves by changing the card in his hand with another card on the table. The only constrained move is the exchange with the target. Player 1, said *number keeper*, can exchange with the target only if the card in his hand and that in T have the same value. For Player 2, said *color keeper*, the exchange can only occur if the two cards have the same color. The couple has 40 minutes to play 40 hands. Each complete hand gives the players $. Each move is however paid few cents. This therefore encourages a quick game in a minimum number of moves.

The game, seemingly simple, is actually beyond the threshold of complexity problem, in the sense proposed in the preceding paragraph. Players cannot develop, even after repeated plays, a complete analytical model of the problem. The repetition, however, leads associative memory toward a selection of the good moves and/or possible game strategies, played as cooperative routines by the pair. In the whole experimental outcomes, a dynamic of learning is evident. With the progress of play, the game speed increases and the number of errors decrease. In addition, recognizable sequences of play (routine) consolidate, evidently acquiring in the minds of the players the role of paths of solution for the problem. For example, the sequence UU * T (upper-upper-...-target), which experimentally appears 817 times out of 2,560, a number far greater than the occurrence expected in case of random behavior. Evidently this sequence allows players to improve their frame of information (giving insights on the other player's card) and eventually to favor the other player's strategy of closure.

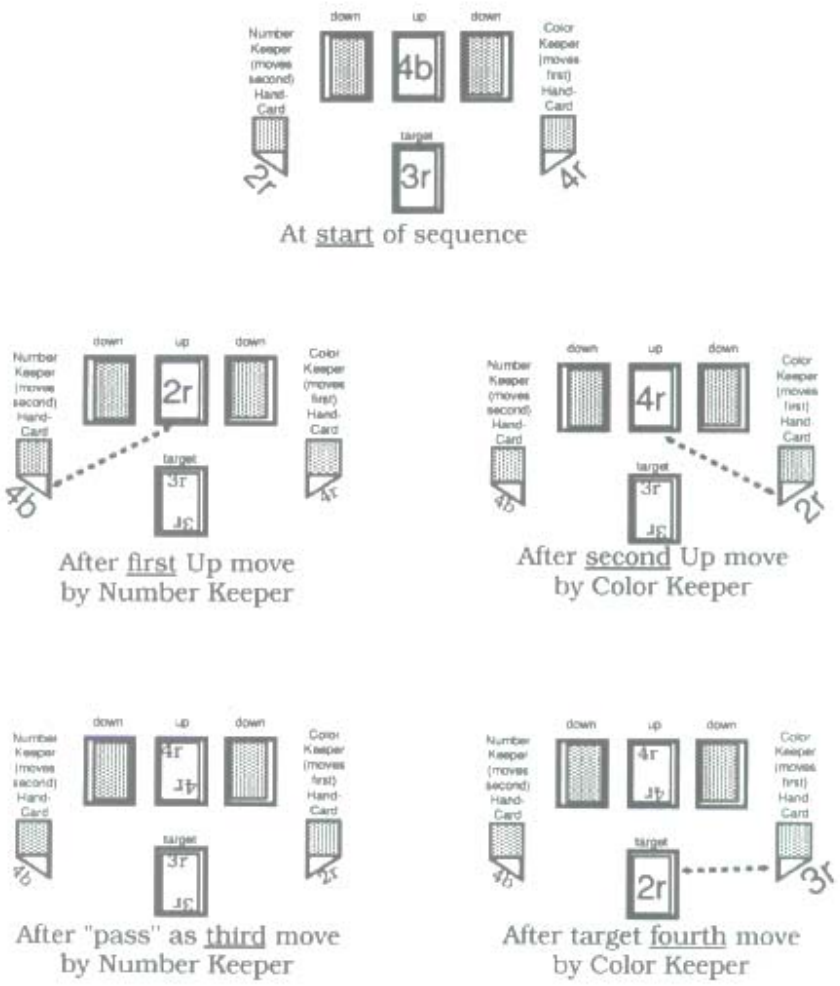
The sequence UU*T, like other game sequences which crystallize as routine solutions, does not reflect an optimizing behavior *in the sense of incentives*. The authors observe a positive correlation between the use of the sequence UU*T and the total number of moves, clear sign of suboptimality. Considering that every move is "paid" by the players, an optimizing behavior should be addressed toward more efficient routines. However, the sequence UU*T is efficient *in the sense of the knowledge*, because it allows players to grasp the problem in a recognizable way of solution.

The identification of pathways of solution is based on implicit learning and procedural memory, instead of an explicit articulation of information and modeling of the problem. No one player behaved iper-rationally, no one attempted to distill the information in an explicit game model. The ongoing approach to decision making and problem solving is radically different than the rational one. Experiments of this kind can help to develop a "*positive theory*" of decisions (Cohen & Bacdayan, 1994, p. 565), built as a true alternative, not just a criticism, to the still dominant model of a hyper-rational, "*self-conscious, static, emotionally neutral problem-solvers*". "We can transcend the simple cataloging of departures from rationality and begin to explain them in terms of

the actual processing capabilities of the individuals and of the system of relations that organizes the actors". Further work should establish "a psychologically-informed theory of routines" (ibidem, p. 565).

Figure 2

Illustration of the UU*T repeated sequence



The research on "behavioral" decisions only partially followed the approach proposed by the authors. The corpus of the so-called *behavioral finance* for example, is very rich for the obvious wealth implications of financial investments. Nevertheless the theoretical corpus of this discipline is still a collection of behavioral deviance from the assumed rational models of decision. Not surprisingly, the books on behavioral finance are full of terms as *under- and overreaction, under- and overperception* (e.g. of risk), which evidently make sense of

a deviance from the *normal* (i.e. rational) expected behavior (see for example Thaler, 2005; Forbes, 2009; Thaler & Sunstein, 2008).

Going further in the spirit and direction indicated by Cohen and Bacdayan (1994), a promising field of research opens. Massimo Egidi (1994) used an experimental setting similar to the *Target The Two* (TTT) game to understand *how* the mechanism of procedural memory and associative knowledge actually develops. Individuals do not learn simply a path towards a solution: they actually mark these paths with a series of milestone, or *sub-goals*, which can signal the correct way toward the final solution. Each action is so a move from a milestone to another, and is interpreted as a meaningful *production rule*. These rules combine to form *heuristic solutions* for the problem.

Neither *Sub-goals* nor *production rules* are identified by mean of rational calculations or quantitative reasoning. Players do not draft, even hypothetically, the solution tree of Von Neumann & Morgenstern (1944), nor they could do it, since the problem is beyond their cognitive power. Sub-goals and heuristics emerge as images and paths among images. These images should be easy to impress upon the memory. The concept of associative memory, and its strong implications in the learning process, is also very old and was extensively exploited by the mnemotechnic methods of the Greek-Roman world. "*Artificial memory constat igitur former locis et imaginibus*" says the pseudo-Cicero in the *ad Herennium* (quoted in Yates, 1966). Rhetoric students made use of mental *loci* to collocate evocative images in a narrative sequence, and these images allow an easy association of actions, concepts and words.

In the TTT game, these images and actions are respectively structured in terms of intermediate configurations of the system and solution strategies. Often the impressed image is one of the sequences of action which bring the system to the solution. A schema of ideal sequences is reported in Figure 3.

Figure 3

Paths in the sub-goals space (Egidi, 1994: p. 10)

1 - 4♣ 4♥ 2♥
2 - 4♣ 2♣ 2♥
3 - 4♣ 3♣ 3♥ 2♥
4 - 4♣ 3♣ 2♣ 2♥
5 - 4♣ 3♣ 3♥ 4♥ 2♥
6 - 4♣ 3♣ 3♥ 4♥ 4♣ 2♣ 2♥
7 - 4♣ .....

The ideal strategies that a player can adopt are indicated in Figure 4. In a two player game, there is a problem of asymmetric information between the players (they don't know the respective cards) and a problem of coordination (play the strategy of the player who has the most favorable card). Revealing their own card to the other player can then be a sub-goal.

Figure 4

Possible strategies (Egidi, 1994: p. 13)

Conjectural Strategy	Card on Target at the beginning	NumberKeeper's sub-strategy	ColorKeeper's sub-strategy	
1	3♥	Reveal 2♥	Seek 2♥	
2	4♥	Reveal 2♥	Seek 2♥	
3	2♣	Seek 2♥	Reveal 2♥	
4	3♣	Seek 3♥	Reveal 3♥	Goto 1
5	3♣	Reveal 2♣	Seek 2♣	Goto 3
6	4♣	Seek 4♥	Reveal 4♥	Goto 2
7	4♣	Reveal 2♣	Seek 2♣	Goto 3

Seek X means: look for card X and put it into the Target area.
Reveal X means: put card X on Up so that your partner can use it.

Given the set of solution paths and possible strategies, Egidi (1994) shows that the game admits a set of *static rules* (based on the configuration of the game) and *dynamic rules* (based also on previous moves of the companion) able to describe an ideal behavior. For each initial configuration, an optimal decision sequence exists. This is the decision sequence attributable to a hyper-rational player. For each hand, the behavior of real players can be compared with the artificial player's behavior, defining a level of efficiency/error. Experimental data give than a measure of distance between real behavior and expected behavior, or rational expectation.

The learning process relieved by Cohen & Bacdyan (1994) is confirmed. After several hands, the real players approach rational expectation, and the occurrence of error decreases. By repeating the initial configuration of the first 5 hands after the 25th hand, the players appear to have learned something: they play the same game faster and with fewer moves. The key question is, however, *what the players have learned, and how*.

Experimental data exclude that players become rational. They do not play as the artificial-rational player. This answer was seemingly excluded the suboptimal sequences of solution (UU*T) reported in Cohen & Bacdayan (1994). The players learn “routines” of solution. What this means?

At the beginning of the tournament, the players invent a set of rules, by associating a trial move to each configuration of the system. They do that in a totally naïve way, without identifying and exploring the whole space of sub-goals. During the game, the players are forced to reassess and change their rules of conduct. The static and dynamic rules are then generated by comparing salient rules of behavior and salient sub-goals. "

“*Cognitive and memory limitations engender a process of search which is highly asymmetric and path dependent. Players move (conjecturally) in the space of sub-problems as they try to connect the local goals to each other in order to achieve their specific goals. (…)Players discover very slowly a set of production rules, which allow to generate routines. They start from generating a set of naive rules of thumb which maps key configurations*” (Egidi, 1994: p. 29) “*On a micro-behaviour level, the cognitive "atoms" are the elementary production rules (if Condition then Action) which by adaptation to the goals and sub-goals give rise to*

sequences of action procedurally rational. These sequences are the organizational routines, which are not memorized by players of the game onto moves" (Egidi, 1994: p. 29)

What emerges, then, are heuristic paths which are not routine in the traditional sense of completely specified procedure. A true routine playing presupposes a quite automatic and immediate reaction to a given configuration. True routines can emerge, however, in particular cases. "*If for a large number of hands the card on the Target is the same, the paths that the player must consider to solve the problem do not change for a period of time. This persistence allows players to routinize, i.e. to react to the configurations by "automatically" deciding the move to make; they follow the sets of static and dynamic rules in very precise and quick way. If the sequence of hands which starts with the same card on the target is suddenly interrupted by a simpler distribution (for example, when 2 Clubs occurs in the Target) the persistence of routinized behaviour prevents the players from reacting in a correct way, and is therefore the cause of numerous errors*" (Egidi, 1994: p. 28)

The above analysis suggests many arguments.

1. Routines can be both a specific context for learning (repeated problem) and the outcome of the learning process. As an outcome, routine behavior appears often in an incipient status, as rules of production and heuristics in the form "*if condition than action"*.

2. There is an important corollary to 1: routinized behavior can emerge also when players do not perceive the routine as a whole. They only recognize single rules (*production rules*) which compose the routine.

3. Although classifiable as *routine* in a broad sense, the emergent behavior can be more or less automatic, more or less image-based, rule-based or process-based. This means that, also for the same problem and in the same experimental context, *routines can be different and present different character and structure.*

Point 3 is crucial. Routines are complex object and have a hydiosincratic nature. It is not sufficient to identify a behavior as routine. Both the learning process and the repertoires of behavior can assume, within a routine, different character. For this reason, routines are key elements of a behavioral approach, but using them in

organization science need a better characterization of what routines are and what mechanisms are subtended. This will be the argument of Chapter 3.

A further adaptation of the experimental settings described above make possible to study how these differences emerge. The predominance of a specific form of learning may be a consequence of how the problem is structured. Higher level of automation, for example, should emerge if the experimental settings allow some kind of repetitive strategy to solve the problem. When a single strategy is experienced as an effective solution, people can learn to adopt it blindly to increase the economy of cognitive effort.

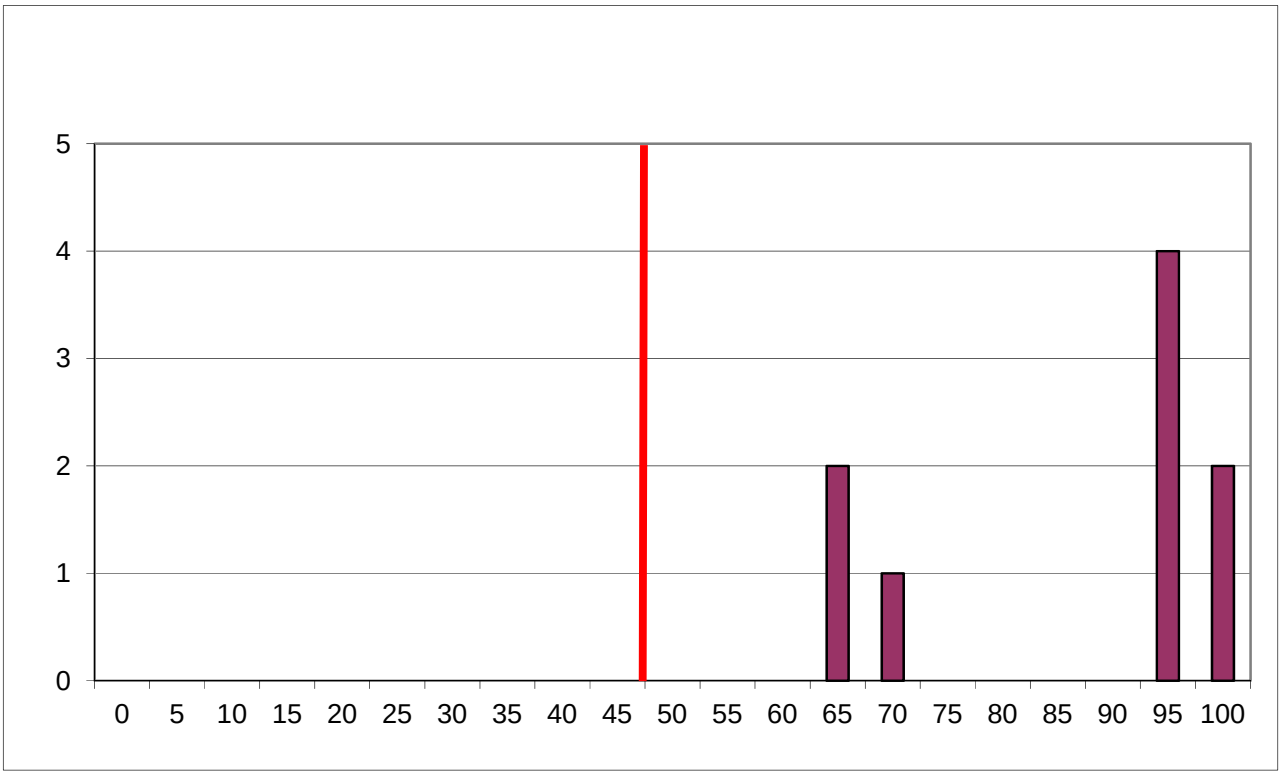
This learning process has two properties. First, it is implicit, because people do not rationalize his knowledge and is not able to recognize a change in the initial conditions of the problem which made the learned strategy inefficient. Second, it can have multiple patterns and be implicitly influenced by the imposed artificial "learning environment". In particular, we can study a phenomenon of *implicit priming.*

The experimental setting is a simplified form of the TTT game. A single player acts both as number keeper and color keeper, playing alternatively by the two sides of the table. The transition to a single player game leaves the complexity of the solution unchanged (the tree of solutions and sub-goals does not change), but eliminates the problems of asymmetric information and communication between the two players. In this way, the single player can focus solely on the termination strategy to solve each hand. The scheme of incentives is the same, although several trials showed an invariance of the learning processes under different incentive schemes. By dropping out the interaction between the two players, the problem becomes a pure decision problem.

The game is designed in two phases. A first phase, or *priming phase*, counts 15 hands. The hands are chosen to have a preferential strategy of solution. The second phase counts 35 and is characterized by random initial conditions. The preferential strategies are chosen as the most recognizable in the space of sub-goals (n. 1 - 442 and n. 2 - 422 in Figure 3). The first results of the experiments show that the design of phase 1 strongly influences the decision behavior adopted by the player in phase 2. In particular, recalling the list of paths and

sub-goals of the system, individual learning tends to implicitly internalize one of the two strategies (442 and 422) as a routine to solve the game. The 35 hands of phase 2 are played preferentially with the strategy learned in phase 1.

Figure 5
Hands played in 442 strategy as % of total hands*



* the histogram describe the phase 2 results (35 random hands) of a group of players after a 442 phase 1. The data have been collected by Massimo Egidi in 2009.

When learning takes place on a more balanced set of matches, the phase 2 hands do not show a preferential solution strategy, and the improvement in the ability of solution are randomly distributed between the two considered strategies (442 and 422). The individual then approach the solution by different paths, and the learned routine is less automatic, and more shifted toward production rules.

The experiment, although in a developmental phase, shows that in a context of repeated actions:

- The dynamics of learning are behavioral and path-dependent.

- The emergent behavior is subjected to a priming phenomenon, and the context can be externally designed to obtain different learning paths.

- The emergent routines cannot be interpreted as spontaneous optimization in the sense of Hutchins (1991), but only as suboptimal responses to the specific characters of both the problem and the initial conditions

- The routinization can show a different balance between batch-mode automation of the process and using of production rules.

The TTT game could be extensively used as experimental setting for behavioral studies. Several versions are possible, each one focusing a specific aspect of learning, emergent behavior and the character of routines. This last experimental version has been reported here to show their potential results and, above all, to indicate a viable example of genuine empirical research on behavioral decision-making and routines.

3. Against parsimony: sense-making perspective and narrative approach in organization science.

The principle of parsimony in scientific thought has been established since the European scientific renaissance in the XII Century. The principle can be used as a discriminant of good and bad theorizing. "*Numquam ponenda east pluralitas sine necessitate*" is the William of Ockham's vulgate of the rule. The criticisms and the overcoming of the Platonic concept of *universalia* begin with the assertion that these concepts are pure mental objects, unnecessary and unobservable in the external reality. The Occam's razor has cut many philosophical superstitions and has illuminated the epistemological debate during the centuries. If thinking is made of logical images of the facts, expressed through signs and related to vivid perceptions of the outside world (projections of facts, and facts themselves), a sign can be said *useless "in the sense of Occam"* when it is devoid of meaning (Wittgenstein, 1918), because lacks any projection in the world. In this view, in absence of any empirical correspondent, ideal objects are deprived of a positive ontology.

A less radical revision was proposed by Karl Popper in his epistemology of falsification. For him a *theory of "simple"* must be preferred to a richer theory for epistemological convenience. Few and simple concepts and arguments are easier to test. The method of confutation works better on parsimonious theories.

The *Discours de la Methode* (Descartes, 1637) the idea of parsimony is specified more in terms of *simplification* than in terms of *simplicity.* The second and third principle of the Cartesian method encourage a reduction of each scientific problem to simpler sub-problems and easier solutions. Descartes suggests "*de diviser chacune des difficultés que j'examinerois, en autant de parcelles qu'il se pourroit, et qu'il seroit requis pour les mieux résoudre*", and "*de conduire par ordre mes pensées, en commençant par les objets les plus simples et les plus aisés à connoître, pour monter peu à peu comme par degrés jusques à la connoissance des plus composés*" (Descartes, 1637, p. 141-142). Reductionism does not necessarily imply simplicity. However, an attitude to the simplification remains.

Pure sciences have grown under such principles. The same mechanics however, in fame of paramount exactness, presented classes of phenomena which refuse to be explained by the “simple” theories, and require tough complication of the descriptive formal apparatus. Well before quantum mechanics and Einstein's relativity, the simple dynamic response of a body can be subjected to strong variability after a minimal change in the boundary conditions. Mechanic scholars talk of instability phenomena when small perturbations, and the effects of factors normally "unnecessary" to develop an elegant closed theory, become crucial and translate into unpredictable, sometimes catastrophic effects. It is the Butterfly Effect, where the beating of butterfly’s wings in Brazil can be amplified at the level of a Texan tornado(Lorenz, 1972); or the complex mechanical resonance that caused the collapse under a moderate constantly blowing wind of the former largest and most elegant suspension bridge, the Tacoma Narrows Bridge, in 1940 (see Billah & Scanlan, 1991).

Physics, like other so-called exact sciences, overcame the problem intending the *theory about reality* in the sense of *model. E*ach theory has a "scope", or a limit of applicability. Simple (e.g. linear) theories, although false in general, survive within certain limits of validity. Theories move away from “truth” and become “useful” to describe some aspect of the real world. The search for truth is declined in a more utilitarian model development. Science is expected to give us useful models of reality, at a well-calibrated level of fidelity.

In the social sciences, managing complexity is crucial. The most part of the observed phenomena in the social world do not admit a laboratory study and cannot be artificially replicated. For this reason, the problem of epistemological truth has been debated for long time. Since the second half of XX Century, a growing consensus has been directed to the Popperian method of falsifiability, after defining the confutation criterion in statistical terms. Supported by the growing power of computational tools, the dominant stream of research in sociology and management has adopted the so-called *quantitative approach*. The concept-construct-measure chain, and the construction of big databases, has become the key step of social sciences.

The need for a measure should impose clarity and simplicity, taking away any temptation of useless complexity. This valuable principle has however conducted the research to some paradox, after the years. The research

results based on simple theories have proved to be easily falsifiable, giving origin to conflicting results. They generally lack of robustness, unless a specific adaptation of the theory to the sample is done. Researchers have been developing increasingly sophisticated theories, rich in subtleties, sub-concepts and sub-variables, and so idiosyncratic that they miss the two requirements of the scientific method: both parsimony and falsifiability.

A provocative reflection on the imperative of parsimony in economic studies was made by Albert Hirschman, in a short paper published in 1984 in The American Economic Review. He considered old great theories, as the theory of demand and economic equilibrium. Market demand is the aggregate of individual preferences, studied through appropriate empirical methods. These preferences are though *"revealed"*, and then fixed at a specific instant of time. If the ambitious economist wants to go beyond the concept of equilibrium, and to analyze phenomena of some relevance as are evolution and change, a new object is needed: the *metapreference*. This object, at a first sight rather mysterious, could seem a good candidate for the family of object "*useless in the sense of Ockham*": reification of a superfluous idea. Yet the concept of *metapreference* reflects a typical feature of human behavior, able at any time to stay and reflect on their actions, and to judge whether or not the implemented actions are consistent with their higher wishes. These wishes are part of an unrevealed, hidden system of preferences: actually the *metapreferences*. In case of discrepancies, and beyond a threshold of dissonance, individuals are able to suddenly change their preferences. *Metapreferences* cannot then reveal themselves, unless in the form of a *change* in decision-making behavior.

The *metapreferences-preferences* dyad appears analogically to the taste-values dyad. A further complication can call *taste* a preference about which is very hard to argue ("I do not like the pistachio": *de gustibus non est disputandum*) and *value* a preference that can be influences by dialectic reasoning and the mechanisms of persuasion. A change in taste may, or not, be preceded by a change in values. They are, on closer examination, We are in presence of two completely different evolutionary phenomena. Economists often have a tendency to reduce people's choices to the revelation of taste-preferences. A shift toward a discriminative attitude, or philanthropy, cannot be classified as *tastes*, neither can be influenced by a mere system of incentives and

disincentives. They are instead the result of an often unseen rework and rethinking that the society as whole as well as single individuals constantly do and that can be influenced by policies that we might call, using an old-fashioned word, "cultural". To understand the preferences of the individual and aggregate them in the market demand, Hirschman concludes, do not miss to consider the *values* (*de valoribus diputandum est*).

Another Hirschman's example, which has great relevance for the topics covered in this work, regards the role of *non-instrumental social action*, both in general and in the specific case of organizations. In the sphere of economics and management, outcomes or performance have some importance. Researches normally focus on the antecedents of certain results, investigating the causal links between individual actions and collective performance (physical product, financial performance, etc). Processes and routines have been largely studied as aimed, instrumental actions, underlying a tension toward a specific result. However, the world is full of even repetitive actions which cannot be considered instrumentally, because people do it without thinking to the result. These activities, which are definable as *non-instrumental,* are not linked to concrete results. People engage in them for reasons other than a mere calculation of utility.

The issue of *non-instrumental* activities is close to that of *metapreferences*. In certain job categories, such as theoretical and applied research, the causal link between action and result is very weak. The commitment in a work which cannot show concrete results and that, in large part, does not have a routine character nor is done for mere habitude, should originate from the *value* framework, which can enclose the love of truth and beauty, philanthropy, or the need for identity and sense of belonging to a group. Many activities of social interest are made of *non-instrumental actions*. Hirschman argues: "just as I noted the existence of nonroutine activities that are predominantly instrumental (in the case of an applied research laboratory), so can routine work have more or less of a *noninstrumental* component (…) the fluctuations in this component must be drawn upon to account for variations in labor productivity and for shifts in industrial leadership. It does make a great deal of difference, so it seems, whether people look at their work as "just a job" or also as part of some collective

celebration" (Hirschman, 1984: p. 92-93). To be useful, a theory of organizational processes should be sufficiently structured also as theory of non-instrumental actions.

Assuming that parsimony does not always play in favor of scientific truth, and even admitting with Amartya Sen (1977) that "*traditional economic theory has too little structure*", what kind of structure is needed? Does increasing the number and sophistication of variables, and the dense network of causal interdependencies means going in the correct direction? Or maybe the problem goes beyond an assessment of the power and completeness of the model, and invests the methodological aspects of doing research in social sciences? This second possibility has been explored, finding the answer to poor models failure not in more sophisticated constructs, but rather in an enrichment of the descriptive power of the scientific research methods. Many scholars enhanced the usefulness of qualitative research methods, and the scientific validity of a *case study approach* (Eisenhardt, 1989; Yin, 1984). Qualitative methods range from the simple interview (better if unstructured or semi-structured) to the shadowing techniques and participant observation, typical of the ethnograpy (Hammersley & Atkinson, 1994). They were firstly opposed to the dominant quantitative methods, based on the statistical analysis of large databases. However the bipartition methodology is precisely what many exponents of the qualitative schools will to overcome. A mixed qualitative-quantitative approach is possible and desirable (for a comprehensive discussion of qualitative, quantitative and mixed methods see Creswell, 2003).

The qualitative school in social sciences emphasized a need for rich description also in the output of scientific research. Tabs, numbers, and abstract relations are often able to give only a partial frame of narrow phenomena. An articulated discourse is instead able to account of complex causal chains, in an open-ended structure made of assertions and suggestions, full of secondary elements which may become primary after a while, when a little change in the environment impose a different point of view. It has been a rediscovery of the power of words, in the approach that many scholars have called *narrative* (Czarniawska, 1998; Pentland, 1999), and that with some daring could be said *humanistic*. Barbara Czarniawska, in her preface to an

interesting pamphlet of 1998 on narrative approach to organization studied, clearly says: "*This book is based on the assumption that there is no method, strictly speaking, in social sciences. All there is are other works as sources of inspiration, an array of various techniques, and a systematic reflection on the work that is being done*" (Czarniawska, 1998: p. VI). These inspiring works can contain several lists, tables, classifications, and functional relations. Nevertheless what makes the difference, and finalize the research has always been a narrative text, belonging to that particular "*genre*" of narrative (Czarniawska, 1998, p. 10-13) that the organization theory is.

Discussing a social fact, albeit with pretensions of scientificity, means make up a story, in which the individual elements are concatenated. What the story tells are not only the causal links, but also the intentional tension and the motivations of action. It is impossible to understand human behavior ignoring the intentions that have moved it, as it is impossible to understand human intentions if you ignore the contexts in which these intentions acquire a full meaning (Schutz, 1973). The use of stories, analogies and metaphors is not the embarrassing heritage of a pre-modern society and culture. Scientific and creative texts are not separated by a chasm. "There is no mysterious ontological difference between the two ways of writing. The difference is, first, in the *propositional attitude* of the writer "(Eco, 1992).

Arranging facts into stories and storytelling is the default mode in which the human minds gives sense and understands the reality (Brown & Duguid, 1991; Orr, 1995). In this sense, in an interesting academic debate, it has been affirmed that the management literature needs "better stories", instead of "better constructs" (Eisenhardt, 1989, 1992; Dyer, 1991). Brian Pentland, in a paper published in 1999 on the Academy of Management Review, states that the tension between good stories and good methodological constructs should not be declined in competitive terms. In a good theory, sharp theoretical construct always has a good story underlining it, observed and told by the researcher. A narrative text in fact, apart from its rhetorical and persuasive power, contains several elements that can be analyzed as essential constituents of organizational theories. The narrative sequence, the point of view of the narrator, the protagonists or focal actors, the

physical and moral context, as well as a number of other secondary attributes are all elements that we find in the analysis of literary texts, and which can be reread in the framework of a scientific methodology.

Figure 6
Relationship of narrative properties to organization theory (Pentland, 1999)

Narrative Property	Indicator for
Sequence	Patterns of events
Focal actor(s)	Role, social network, and demographics
Voice	Point of view, social relationships, and power
Moral context	Cultural values and assumptions
Other indicators	Other aspects of context

A good story, besides being a valuable collection of data or a living description of reality, is something more. It, in its ability to assign meanings to things and actions, and in his self-standing character when it becomes written word, is also constitutive of the social world. A story is able to report the context (opposed to an object *hors-text,* outside the context, in the sense of Derrida, 1967). The stories not only reflect the actions, but also their conditions. Moreover, they act as antecedents of the action, because are constitute the meaning framework in which action take place (Pentland, 1999). In this sense the action, the interdependence of individual actions in the processes, and the relationship between action and outcome are naturally described through stories, and are stories themselves, being so perceived in the specific moment of their unfolding. The research in social sciences cannot be separated from a narrative elaboration. "The reality is history, and only historically we know this reality, and sciences can measure and classify it, as necessary, but they do not know it properly, nor is their office to know it in an intimate sense" (Croce, 1938, p. 314) .

4. Against parsimony: organizational routines as meso-levels of analysis.

4.1 Routines at the nexus of organizational behavior and capabilities

Recurring patterns of action generally referred to as routines, have become a pervasive concept of social and organization science. In the strategic and managerial literature, the concept of routine has been associated with fundamental concepts as *resources* (Wernerfelt, 1984), *absorptive capacity* (Mowery and Oxley 1995), *organizational learning* (Argyris & Schon, 1978), and other complex phenomena as the process of *knowledge creation* (Nonaka, 1994; Grant 1996; Nickerson & Zenger 2004), *innovation* (Tushman & Anderson 1996, Gavetti & Tripsas 2000, Eisenhardt and Martin 2000) and *organizational change* (Weick & Quinn, 1999). Routines, as structured sequences of action, can be found in any organizational process, and are a constitutive mechanism in the shaping of individual skills and collective competences.

Before any theorist's definition, a common sense meaning of routines is ready-to-use both for scholars and practitioners, associated with intuitive attributes of action as repetition, codification, mindlessness, and efficiency. This intuitive understanding leads to some misunderstanding, making easy to discover routines everywhere, overinflating their identity and fading their definition (Cohen et al., 1996). For this reason, a concept as old as organization science (Stene, 1940) is often ill-defined or taken for granted. Many definitions of routines have been proposed (Becker, 2004), although sometimes no one is explicitly adopted and adapted to the specific study.

Even under their intuitive meaning, many different types of routine can be found in the practice of organizations. A production process, the implementation of a security procedure, a recruiting process in human resource management, and the myriad of micro and macro decisions associated with the processes of allocation of resources and investment choices are all examples of routines. Considering, however, two very similar routines (e.g. the non-conformity management procedures in a production plant) in two different organizations, it is still possible to distinguish a good routine from a bad one, based on the outcomes of the

process (e.g. the fault has been repaired in acceptable time and costs?). The outcome might well depend on the skills of the involved individuals called, or on other contextual factors. Otherwise, it might just depend on how the specific process has been shaped, what kind of actions are requested, how information is shared, etc.. In other words, the goodness of the final performance could be due to an intrinsic feature of the routine.

Extending this reasoning to an entire organization, the overall performance, such as the ability to make profits, can depend to varying degrees on the characteristics of the internal processes, the *routine* which govern the various functions. Routine heterogeneity could eventually be considered an antecedent of organizational heterogeneity. Firm specific routines can then be considered as idiosyncratic resources, which drive superior performances (Wernerfelt, 1984; Barney, 1991).

Understanding what makes the routines heterogeneous and difficult to imitate has been of major interest in the literature. Factors of heterogeneity have been normally identified in the *order (or level*) and the *degree of tacitness*. Many processes, for example in product innovation management, are composed of a series of sub-processes, such as market study, product design, the testing process and elimination of defects, and delivering. Each of these sub-processes is a routine, while the more general process of innovation management, where structured, can be seen as a macro-routine, a routine of routines, a collection of many lower-level processes. In this way, a hierarchy among routines can be established, looking either at their complexity and their nested levels. Routines of routines, or collections of routines, are complex and more difficult to understand. Winter (2003) identifies in high-level routines the difficult to imitate *dynamic capabilities,* which drive the ability of the firm to change and reorganize its resources. Higher-order capabilities are deployed in a dynamic environment, while the “zero-level capabilities” are those which refer to stationary processes and static environments. At McDonald's, for example, make low expensive good sandwiches is the basic skills, while opening new stores and entering new markets is a higher order skill, a dynamic capability, managed through high-level processes.

To account for their heterogeneity, considerable importance has been attributed to a second character of routines: its level of codification or, at the opposite, its level of tacitness. Routines can be found in both types

of knowledge: tacit and explicit (Cohen et al., 1996). "Tacit" is the kind of knowledge that cannot be transmitted through a verbal code, being essentially a know-how, a capacity to perceive, coordinate, refine, and process many different input that come from the context and responding to them with a series of actions. The ability to ride a bicycle, consisting essentially in the ability to coordinate a certain number of muscular movements with the inputs that come from the sight and the organs of balance, or the ability in the hands of a *couturier*, who is able to transform a piece of fabric in a charming dress playing on pressure points and bends, are both examples of tacit knowledge. As you can see, many operational skills are tacit, and tacit knowledge is difficult to imitate (Teece, 2007).

According to the arguments so far developed, high-level and/or weakly coded routines are inherently difficult to imitate, thus tending to preserve, or enhance, the differential performance between different organizations. In these terms, the heterogeneity in organizational performance could be explained on the basis of the characteristics of the routine they adopt.

However, recent contributions in the managerial literature tend to refuse these arguments. In a recent study appeared on the *Strategic Management Journal* (Aime et al. 2010), Federico Aime and other researchers take into consideration the competitive advantage of a football team, based on the adoption of a specific attack-scheme which, for its complexity and the multiplicity of the involved individual skills, has been identified as a high-level routine. Mechanisms of diffusion, mainly due to people mobility among the teams, make possible the replication of the routine and fade the initial competitive advantage. These result challenges “the traditional argument that socially complex routines create a sustainable competitive advantage because they are not easily imitated and do not rely on any single individual”. Personnel mobility hits the isolation mechanisms of the higher-order routines.

Another interesting result was obtained by Knott (2003). Studying the differential of performances among franchising and non-franchising firms, she demonstrated that the adoption of codified operating procedures can be a source of competitive advantage. The worst performers do not suffer of a “lack of knowledge” about

superior routines; neither routines are socially complex or ambiguous. They potentially know "how to do better", but they do not learn the best practice. The suboptimal production technology is not a consequence of bounded rationality, causal ambiguity or other knowledge-related phenomena. "Tacitness is not necessary for routines to hold value". Despite their explicitness, these superior routines are not implemented by the non-franchisees. Something hinders the replication of routines, and the dyad *tacit-explicit* is insufficient to explain what happens.

Giving a compelling definition for the outlined attributes of routines is uneasy. The concept of "level" proposed by Winter (2003) is heuristic and conform "to common sense and existing practice". A seemingly difficult task is to clearly define how much tacit a routine is. This is not only a problem of clarity of constructs: contradictory and counter-intuitive empirical results exist. Dealing with the heterogeneity of routines, the literature maybe overvalued the explanatory power of constructs as level and tacitness. They describe in fact surface properties of routines, without taking into account their intrinsic nature and structure. Another set of descriptors could be adopted, based on the advancements in the understandings of the nature of routines. This will be developed in the next paragraphs.

Concepts of coordination and cognitive efficiency are central in the behavioral theory of organizations (March & Simon, 1963). "Organization theories describe the delicate conversion of conflict into cooperation, and the coordination of effort that facilitate the joint survival of an organization and its members". Frequency and uniformity of recurrent patterns of action were recognized as fundamental tools for solving conflicts, promoting coordination, and reducing the cognitive complexity of the environment, by a shrinking in the set of criteria which define a satisfactory decision. Building on this perspective, and adopting an evolutionary approach, Nelson & Winter (1982) proposed a successful definition of routines as "the DNA of organizations": organizational replicators which drive the survival and change of the firms.

The Nelson and Winter's conceptualization of routines has been incorporated into the stream of research on firm resources and capabilities (Wernerfelt 1984; Dierickx & Cool 1989; Barney, 1991; Eisenhardt and Martin

2000, Teece et al. 1996; Winter, 2003; Teece, 2007), although remaining terminologically underspecified (Dosi et al. 2000).

A substantial reconceptualization of routine was started during the 1980s, principally after the work of Giddens (1984). Resting preeminently on the findings of the philosophy of language and cognitive psychology, routines have been depicted as something very different than a “sequence of tasks”. As pattern of interdependent actions and feedback, routine behaviors link the individual and the social structures. Routines are crucial to highlight the controversial problem of micro-foundation of organizational behavior and social facts (Felin & Foss, 2005)

In the same stream of research, Cohen and Bacdayan (1994) linked organizational routines (“multi-actor, interlocking, reciprocally triggered sequences of actions”) to the procedural memory of individuals, opposed to the declarative memory. Memory is not a homogeneous capacity (Baddeley, 1990). The first type of memory (procedural, implicit, episodic) stores into the brain of the individuals items of skilled action; the second type of memory (declarative, explicit, semantic) stores facts, propositions, and events (Squire, 1987). Typical examples of the procedural knowledge of the individuals are the language skills, the ability of riding a bicycle, and arts and crafts techniques. These skills emerge from a repeated series of observations, hearing, and trial-and-error attempts. Building on the Cohen and Bacdayan (1994) experiment, Egidi (1994), as extendedly reported in Chapter 2, redefines the routines as emergent "not completely specified procedures", "production rules" of the form <If "Condtion" then "Action">, where the recursive influence condition-action is explored in term of sub-goals and interaction rules. Routines are more and more figured out as provided with an internal structure which drives the dynamics of change and adaptation (Feldman, 2000).

This internal structure reflects the double nature of human memory. Feldman & Pentland (2003) argued this structure to be a dyadic structure, evidencing two complementary but different aspects: *ostensive* and *performative*. On one side, the performative aspects of routines are the action here and now, as performed by specific people in a specific time. On the other side, the ostensive aspects are the routines as understood by

agents, their narrative (Czarniawska, 1998; Pentland & Feldman, 2007) as meaningful accomplishments. A narrative is not a codified procedure or a written rule. Instead, the ostensive aspects are the complex bundle of motivation, expectation and stock of knowledge which constitute the framework for interdependent actions of the individuals. They are stories about action (Brown & Duguid, 1991). Individual action, although preserving its singularity, assumes a specific sense within the routine. At the same time, each performed action represents a commitment of the individual to the routine, and to the corporate or institution that reifies it. These routines are also a base for the group identity and know-how. They drive the *communities of practice*, made of experienced technical specialists with legendary skill: much of their own presumption of competence and skills draws from a body of expert routine (bundel of expert routines, Stinchcombe, 1958).

Ostensive and performative aspects may also diverge. The sign on the wall of a store that announces the customer to be always right is often laughingly unheard by the store manager, as “norms in use” often diverge considerably from civil law. Examples of this divergence are widely reported in the studies of Orr (1996) and Brown & Duguid (1991). In the perception of convergence between narrated action and enacted action originates the sense of comfort, security, automaticity that is typical of routines. Conversely, if the two aspects differ, the arising cognitive dissonance generates active mechanisms of review and changes, which invest both the action and the meaning of the routine.

As a partial result of the previous review, the analysis of the internal, dyadic structure of the routines suddenly enrich their description, surpassing the intuitive definition, and opening the way to a closer analysis of the real cognitive mechanisms which underlie the routine implementation. Continuing in this way, the next paragraphs will expand those properties that distinguish one routine from another, influencing their change and implementation patterns.

4.2 Heterogeneity of routines and routine-based heterogeneity: towards a meso-level description.

The organizations can be read as a bundle of interrelated processes. Each process is a set of coordinated actions toward a specific result. A product, a document, a quality level are all intermediate outcomes, which give a contribution to the global performance of the organization. Each routine is also a "narrative" or a sequential pattern of actions, which coherently connect cause and effect toward a unitary purpose (Abbott 1992; Di Maggio, 1995; Pentland, 1999; Abell, 2004). Each intermediate outcome is potentially a meaningful focal point for the narrative.

Although routines can have multiple outcomes, a value judgment for the process implementation is often formulated as a dichotomous variable, transforming a continuous measure of one or more outcomes into a discrete measure of success or failure for the process as a whole (Greve, 2003). This is a cognitive simplification typical of both routine approach and organizational decisions.

Edmondson et al. (2001) studied the implementation of an innovative surgery technique in healthcare. In this case, the ability to perform a surgical intervention with the innovative technique was strictly viewed as implementation success, independently from the specific outcome (e.g. the health level of the patient, or the time physicians need to perform each surgical intervention). This is a raw, simplified definition of the implementation success. However many processes are evaluated in a similar way.

Complex processes are often evaluated in term of *bureaucratic compliance* (Ouchi, 1979) or procedural correctness. This is typical in safety procedures, where a measure for risk reduction is ambiguous and subjective. Alberto Vannucci (2011) shows that in an empirical study. A bureaucratic, measureless approach then prevails. M&A processes admit multiple measures of process performances, although an assessment of the acquisition operation must be done at the end of the integration process (Zollo ad Meyer, 2008; Zollo, 2009; Haspeslag & Jemison, 1991). Nevertheless, the involved actors need intermediate measures of performances, and operate the sub-goals decomposition typical of the associative learning and studied in Chapter 2. The fast and positive conclusion of the *due diligence*, for example, can indicate a partial for an

acquisition process, without assuring the final success of the whole process. Iterate acquisitions, implemented for example by the managerial staff of a big holding, start a process of learning and knowledge generation, although this knowledge remains highly fragmented among sub-systems and individuals.

Examples of continuous measures of implementation success also exist. The time needed for the implementation of an operational routine, or the numbers of defects in the output for a quality routine are typical examples. For investment decision routines, implementation success can be measured as the speed of such decisions, or the level of assumed risk. When continuous measures exist, and immediate feedback are given, the actors can fast react and correct their eventually unsatisfactory behavior.

Associating to each routine a concept of performance, be it more or less explicit, is still necessary for the a learning/adaptation path to develop. Performances, or the success in the implementation of a routine (*implementation success*), seems to be the natural dependent variable nature here, as in the most part of managerial literature. However, the performances in organization science take on an ambiguous role, being the on the one hand the ultimate goal, the result of a process, which are evaluated on the basis of past actions, and on the other hand an input of action, a special aggregate information, the antecedent of change decisions. This is especially true in the analysis of routines and organizational processes, where the object of study is not a descriptive characteristic of the organization, but the action itself.

In the following section we will attempt to more fully describe and classify those particular social objects that are organizational routines, having clear that any is the complex result of a cyclic process of expectation-implementation-outcome-learning.

4.3 Looking for the internal attributes of a routine

The implementation of a routine is not a simple sequence of actions. Patterns of actions are typically recurrent, and must be interpreted as cyclical processes. They have been described by different authors as cycles of subsequent, well defined steps: interpretation/sense-making, coordination/negotiation,

transformation/stabilization, elimination/unlearning in Hansen & Martin (2010). Enrollment, preparation, trial and reflection in Edmondson et al. (2001).

Implementation always underlies a learning-unlearning process (Argyris and Schon, 1978), and a knowledge-creation process (Nonaka, 1994), which take substance in the cyclic nature of the process. Adopting the dual structure ostensive-performative (Feldman & Pentland, 2003) and a routine level of analysis, the process of implementation is characterized by the recursive relation between the two aspects, "with the performances creating and recreating the ostensive aspect and the ostensive aspect constraining and enabling the performances" (Feldman & Pentland, 2003: 105).

The efforts of translating a narrative into action, and the concomitant efforts of interpreting the performance outcome into a meaningful framework, drive the implementation process. These are two distinct, although interrelated mechanisms. The direct one, ostensive to performative, translates expectations into action. The inverse one, performative to ostensive, gathers the feedback from action and governs the sense-making process.

The two mechanisms involve multiple steps of interdependent actions, observations, reactions and adaptation at different level: individual, group, organization. At each level, several descriptors for these mechanisms can be introduced, influencing and characterizing it, making it more or less efficient, more or less flexible. At the individual level, for example, both the mechanisms of enactment and sense-making will be influenced by the characters of the involved actors, their personality and previous experience, their ability to interact with other individuals involved in the process. Seemingly, at the organization level, the organizational culture and the social values can affect these mechanisms. Emdondson et al. (2003) find the antecedents of a successful implementation of the routines in the organization climate, particularly in the level of psychological safety, understood as the openness of the company to accept criticisms, and eventually mistakes, from employees. Focusing the analysis at the routine level, what are the aspects which affect the mechanisms of enactment and sense-making and, consequently, the efficiency and adaptability of the process? Multiple aspects and their

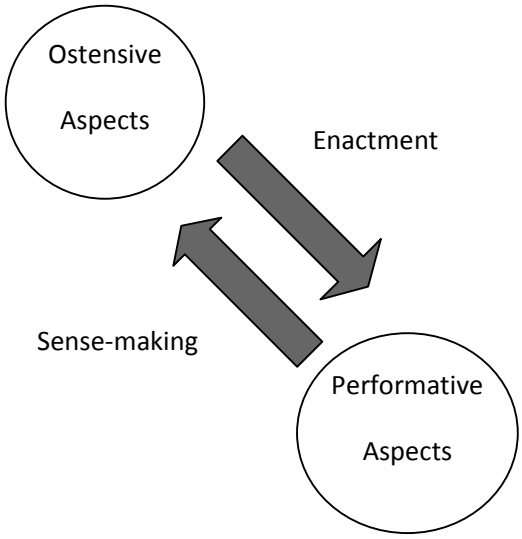
descriptors can be considered. It is worth however focusing on the two main internal mechanisms of routines, enactment and sense-making, and try to describe them.

The direct mechanism, ostensive to performative, is dominated by a property of variety. A player can choose the most appropriate action from a more or less rich repertoire of available actions (Pentland & Reuter, 2003). As in the articulation of language, a sentence is formulated after a deliberate choice among a multiplicity of vocabulary and syntactic options, within the boundaries of a socially accepted grammar.

For the inverse mechanism, performative to ostensive, the availability and quality of performance feedback strongly affect the time and the efficiency of the learning process, and the accountability to the organization of the individual actions. When decisions are "characterized by fuzzy or even undefined performance metrics" (Zollo, 2009: 895) the efficiency of the retrospective sense-making process (Weick, 1979) can be compromised. Alternative methods for the evaluation of the outcome validity can prevail, enhancing conformism and the adherence to institutionalized formal rules (Meyer and Rowan, 1977).

At a closer examination, for each specific routine is possible to say how two mechanisms are structured. Describing them is also capturing what makes the routines so different from each other, their heterogeneity. Therefore, in the following paragraphs, an in-depth analysis of the mechanisms of enactment and sense-making will be done, offering, as a theoretical contribution, some constructs that may take into account and describe the specificities of these mechanisms.

Figure 6
The internal structure of routines, and the mechanisms of enactment and sense-making



4.4 Enactment and Repertoires of Actions: Variety

The variety of the repertoire of actions deals directly with the issue of complexity. Perrow (1967) identified the number of exceptions and the level of analyzability as the two principal descriptors of complexity for a technological problem. A routine approach, defined as a rigidly standardized behavior, seemed to be more appropriate for low complexity tasks. Two dimensions were chosen as proxies of complexity: analyzability was referred to an explicit, low uncertain knowledge, while the number of exception was referred to the variability of the process, or the multiplicity of the paths an actor can adopt to translate the ideal model into real action.

Given the routine in their reconceptualization, the presence of a large number of exceptions does not necessarily break the cognitive approach of organizational routines: simply, it changes their nature, by inserting in the process a higher number of moments which enable cycles of trial-and-error, or, in the terminology by Miner et al. (2008), *variation, selection and retention* of the repertoire of actions. In presence of variety in the

repertoire of behaviors, therefore, routines have special internal dynamics, rich in micro-processes of learning. Also for this reason, the variety may be considered a salient descriptor in the analysis of routines.

Variety as *variability* can describe a specific task. Studies on task and job variety, firstly introduced by Taylor (1911) are classics of organization science (e.g. Fleishman and Quaintance, 1984). However, Pentland (2003) has argued that task variety is not an ever valid proxy to account for job complexity. A task might show variation without complexity. Otherwise, a process implying a limited repertoire of actions can give the actor room for a choice among multiple alternative sequences of actions. In this last case, complexity may be high although the repertoire of actions is limited.

The property of variety can be referred both at the richness of the vocabulary of actions (Pentland & Reuter, 2003) and at the options of syntactical articulation of these potential actions. Pentland (2003) showed how a measure of sequential resemblance, or sequential variety, is a good descriptor of the variability of a processes. Evaluations of sequential variety are not new in the literature (Abbott and Hrycak, 1990; Abbott, 1991). An exemplar application to the problem of career-path description was made by Abbott and Hrycak (1990).

Other possible interpretations of the concept of variety, although less susceptible of measurement, concerning *improvisation* and *discretion*. In particular, a study on the effects of improvisation on the dynamics of long-term learning is in Miner et al. (2001). D*iscretion* has been mainly introduced in the analysis of managerial choices. Williamson (1963), Hambrick (1987) and Finkelstein (1990) are well-known studies on managerial discretion. There are many ways to describe *variety*. Researchers must justify the choice most appropriate for the specific context of study.

4.5 Sense-making and Learning: Feedback Ambiguity

Complexity can emerge not only in the form of variety, or multiplicity. It also appears in the form of indeterminacy, ambiguity in the definition of the causal links. The concept of *causal ambiguity* was introduced by Lippman and Rumelt, 1982 as a “basic ambiguity concerning the nature of the causal connections between

actions and results". Applied to the phenomenon of asset stock accumulation, causal ambiguity was regarded as a major barrier to the imitability of resources by the competitors and a source of sustainable competitive advantage for the firm (Dierickx & Cool, 1989).

The concept of ambiguity has been widely used in research. The transferability of best practices within the organization improves when the capability-related knowledge is unambiguous (Szulanski, 1996). Performance ambiguity is also a category in the *Transaction Costs Theory*. High performance ambiguity, intended as the ambiguity of the measurement of individual performance, "obscures the boundary between tasks or individuals" and is one of the critical determinant of the choice market governance in the market-hierarchy tradeoff (Ouchi, 1980).

"Performance ambiguity occurs when it is hard for a player to evaluate the outcomes or products received from another party" (Heide & Miner, 1992, p. 270). When the outcome is imputable to different agents in the economic world, the problem is not only of objectively evaluating a performance level (effectiveness), but also of understanding the causal nexus between the agent's efforts and the outcomes (efficiency, sense-making).

The routine implementation process is naturally affected by the ability of the actors involved to evaluate the causal links between their actions and the outcomes. Not only the final outcome, but also a series of partial, intermediate outcomes are evaluated as feedback of an efficient action. When the level of performance ambiguity is low, the process implementation is dominated by a mechanism of rational comparison between performances and expectations. The revision of the expectations is sometimes well approximated by a Bayesian model (Greve, 2003). However, this is not the rule. The Erev's studies, presented in Chapter 2, show cases of non-Bayesian individual learning.

When the final and intermediate outcomes are unavailable, ambiguous, meaningless or delayed in time, the learning loop is fragmented or broken. For high level of performance ambiguity, the mechanisms of control, evaluation and sense-making seems to be of different nature, resting on a symbolic and ceremonial base

(Meyer and Rowan, 1977) or on a tension to isomorphism (Di Maggio & Powell, 1983). The feedback is legitimated by a community-based acceptance. It loses objectivity. The perception of equity may be purely superstitious (Ouchi, 1980).

Thinking at a routine level, the control of performances is both individual and collective. Each member of the organization builds up, in fact, expectations about the outcomes of her own behavior, but also expectations about the other players' actions and their consequences. The availability of an objectively valid measure for the intermediate and final outcomes of the routine, their timeliness and correlation with the individual and collective actions are all elements which allows a classification of the performance ambiguity of a routine in a continuous scale. Otherwise, the construct of performance ambiguity can assume the simplest form of a dichotomic variable (low vs high performance ambiguity).

The ambiguity is high when the quality of the flows of information within the routine is poor. In presence of quantitatively analyzable data, the quality of information flow is high when there are tools that allow an aggregate reading of the data, and when, given different feedback sources, the signals are consistent. Disaggregated, chaotic or discordant quantitative data are ambiguous and difficult to interpret. If the action does not generate, spontaneously, a set of performance related data, valuable feedback can be obtained after the introduction in the process of tools and moments of externalization and socialization of the fragmented knowledge gained during the action. Not surprisingly, the best practices of management always provide truces from action, and promote collective reasoning about the practice (Workshops, debriefings, etc.) . Such moments can become organic element of the organizational routines, influencing the level of ambiguity of the feedback mechanisms.

Figure 7

The internal structure of routines and the descriptors of the internal mechanisms

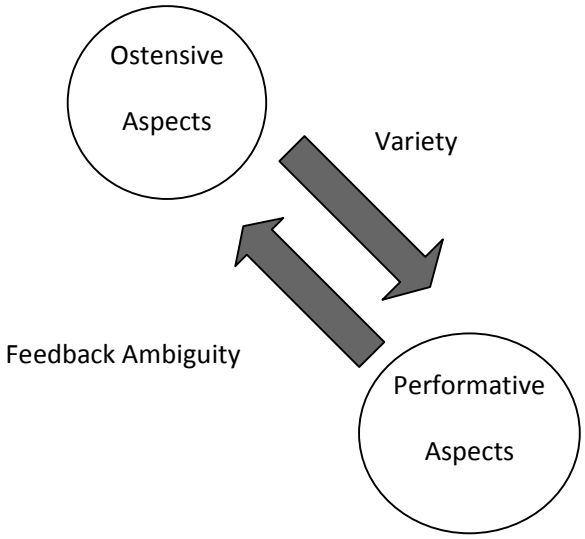
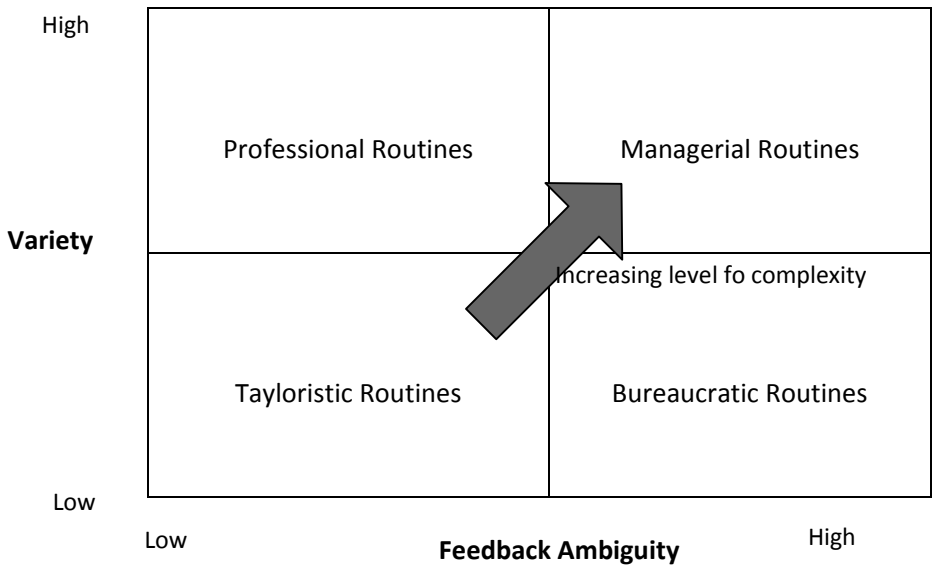


Figure 8

Classification of routines on a 2-dimension scale



4.6 Heterogeneity of routines: a taxonomy

The concepts of variety and feedback ambiguity, introduced in the preceding paragraphs, can be two interesting descriptors for routines, allowing a better characterization of their heterogeneity. Resting on the two new descriptors, and given different levels of them, routines are classifiable on a 2-dimension scale. A typological classification has a theoretical value *per se* (Doty & Glick, 1994) and gives a key of interpretation of an otherwise broad and complex phenomenon.

When both performance ambiguity and variety are low, we are in presence of rigid and standardized routines with simple and immediate outputs. These routines are similar to the traditional view of routines, as repetitive patterns of optimized tasks. They fit with the concept of *best-performing task* was formulated by Taylor (1911).

High variety and low ambiguity processes are typical of the professionalized workers. The models of reality applied by an engineer in the design process make available for her an a priori evaluation of the final performances, for which a scientifically valid measure exists, and tools and algorithm able to assess it. The modeling method is applicable to a wide number of problems, belonging to different domains (concrete structures, steel and masonry buildings, bridges, dams, tunnels). The potentially unlimited repertoire of solutions make room to high variety and discretionary decisions.

Rigid routines in the absence of objective feedback information characterize the bureaucratic processes. A meticulous definition of the sequence of actions hides or replaces the focus on any intermediate outcome. The feedbacks are ambiguous because they are normally distant both in time and space (the chain of interconnected actions is often very long). The control mechanisms are inspired to conformism and institutionalized rules tend to prevail. Proceduralization becomes a goal *per se*, and many feedback are indirect and express a judgment of conformity and an appreciation for the symbolic value of the implemented action. The separation between outcome in terms of performance and result in terms of procedural correctness makes the system of feedback ambiguous.

Finally, there are processes characterized by a broad repertoire of action (high variety) and, at the same time, a strong feedback ambiguity. The traditional organization science did not classify this kind of processes as routines. Though they are, when an idea of pattern prevails and the mechanisms which govern the action, learning, sense-making and knowledge creation are the same. High variety and high feedback ambiguity processes can be classified as managerial routines. Resources allocation and firm acquisitions, although performed through a series of standard and well recognizable steps, are subjected to high variation both in the sequence and the nature of the tasks. Intermediate feedbacks are highly ambiguous. The evaluation of the final outcome is also uncertain and subjective. Individuals and groups in charge of managerial routines must manage a wide discretion of action and subjectivity in the feedback evaluation. They also should be conscious of the entire cycle of enactment and sense-making, to dominate the problem of knowledge creation.

4.7 Routine characters within a context: a contingent approach.

The introduction of the descriptive characters for routines, and the following taxonomy, may become a theoretical tool to mediate the various causal relations, which in turn can be studied between elements of the higher (the organization) or lower (the individual) analytical level, and a performance parameter. Reasoning in terms of best practices, and admitting that routines could a priori be judged as good or bad, is misleading. The same is for the evolutionary processes of routines. Introducing changes in a routine, and asking, for example, a transition from bureaucratic to managerial processes by increasing the variety and discretion in the repertoire of available actions, cannot be supposed to have an a priori positive impact on performance.

The most appropriate way to proceed, to better use the knowledge developed about routines, is to develop a contingent approach, using the characterization and proposed classification for routines to evaluate how much they fit, for example, the context, culture and the strategic objectives of the organization. Social research and management has often used the concept of fit (or appropriateness: Van de Ven, 1985; Drazin & Van de Ven, 1985) to show how some organizational practices will reveal best practices only in terms of a specific technological context and strategy. Typical examples of contingency theory were developed by Hofer (1975) in

business strategies, Feldman (1976) for the dynamics of individual socialization within organizations, Van de Ven & Delbecq (1974) in an investigation on the appropriateness of certain organizational structures to the complexity and variability of the requested tasks. More generally, Donaldson (2001) has applied the contingent approach to the general theory of organizations.

The viability of a contingent approach to the study of the routines is supported by the fact that most of the organizational theories has to do, albeit indirectly, with the implementation of routines, and specific characters of these routines may affect other apparently independent phenomena, acting as mediators in certain relations of cause and effect. In a search for a causal relation between group performances and the characteristics of the component individuals, or the composition of the team (Suzanne Bell, 2007), being in presence of structured tasks such as routine, it is possible to hypothesize that these causal links are mediated by characteristics of the routine itself, in terms for example of appropriateness of the composition of the team to the specific routines that must be implemented. A team strongly focalized around a leadership may, for example, develop lower performance if the processes it operates do not allow an acceptable level of variety, discretion and improvisation, while a multidisciplinary team could better face processes with ambiguous feedback mechanisms.

In the next section we will give example of the viability of these basic idea, considering the development of a case-study research within a business organization. Qualitative case-study seemed the most appropriate way to validate the proposed concepts, and to understand whether or not these concepts are actually reflected in the organizational practice.

5. Testing the routine-level descriptors in the field: a case study.

The *field study* has been developed in collaboration with Prof. Joachim Timlon. The *field observations* were collected at the IKEA Store Anagnina (Rome, Italy) in various months. IKEA was an ideal context where doing observations about processes and routine. The organizational culture is highly formalized, and high levels of standardization have been indicated as key factors for the international diffusion of the brand. IKEA has been able to replicate its success story almost everywhere, leveraging above all on standardization and a series of rigid organizational behaviors.

I went in the store with the goal of verify the empirical viability of theoretical concept as *variety* and *ambiguity*, applied at the description of the organizational processes. The focus was then mainly at the process level. In particular, the general manager directed my focus to the Kitchen Department processes. This department suffered in the last years of under-the-average performances. The idea was to analyze the subtended processes and routines, and to examine the possible causes of failure.

I gathered data in various stages, from May to December 2011. The first stage involved some day of observation at the Kitchen Department in the IKEA Store Anagnina, then many formal but unstructured interviews with a series of *key informants* (the store manager, the sale manager, the operation manager and the Kitchen Department manager). I audiotaped one of these. Each interview was based on the previous findings and many questions emerged during the interview. In these interviews I asked people what they think to be their job, how they perform it and what are the main skills required. I also asked for examples of interconnections with other functional and managerial levels, to understand the direction and power of the information flux. These interviews opened a window on the culture and the structure of the organization, on how different units and individuals are coordinated within the store and within the international IKEA world.

The focus was on processes and routines. Each routine was broadly recognized by the members of the organization. My first approach was looking at routines as unitary, although interdependent, elements of

analysis. However, the true nature of the organization is that of a bundle of routines, processes and behaviors which have many points of interconnections. In particular, feedback mechanisms and actions are normally shared between multiple routines. This did not challenge the research method or the research concepts, which remained valid within a broader angle of observation.

The Kitchen Department selling process was not the only observed routine. Many feedback elements and many inputs for action came from other functions and other processes of the organization. To better understand the whole organizational behavior and culture, I shadowed for a day a highly experienced employee, now in charge of the IKEA Family project, who had more than 10 year work in the Bathroom Department. I also had lunch with members of the organization and many conversations during the quiet moment of the day.

I participated in a discussion about the sale performance feedback, and in the elaboration of a questionnaire for the customer. The direct observation was accompanied to an archival analysis of sales data and other artifacts as manuals and books totally inaccessible by the broad public and jealously conserved as pillars of the IKEA's way of doing business. During all this time I kept field notes.

It was not easy to say where data gathering stops and data analysis begins. The collected data allow drawing *descriptive* conclusions about the concepts and phenomena under study. *Description* means "making complicated things understandable by reducing them to their component parts" (Bernard, 1988). The further necessary step, as Rein and Schon (1977) suggest, is switching from storytelling to a "map" of more formalized elements.

The outputs of the case study were multiple. First, in the spirit of narrative approach, there are stories. The main story is a general narrative about the IKEA culture as it emerged both from books and manuals and from the Elio's words during the day of shadowing observation. This story represents the IKEA's culture and each process is permeated by it. It is the general frame of reference in which each process assumes ostensive validity.

Second, process data have been elaborated in specific display formats, as tables and flow-chart. For each action within the selling process in the Kitchen Department, the researcher can easily identify the two immanent characters: performative, or the action as it appears to an external observer, and ostensive, or the action within the system of intentions and motivations of the individual and the group.

Table 1
Performative-ostensive aspects, sense-making and enactment mechanisms within the kitchen process

Action – Performative Aspects	Sense-making – feedback mechanism	Narrative – Ostensive Aspects	Enactment - Variety
The Greeter addresses the customer to: 1. IF <no plan> THEN <Planning> 2. IF <he has a plan> THEN <ordering> 3. IF <he wants buy less than 5 pieces> THEN <payment>	F1 - Planner: "why do you send here the customer also when he has not taken yet any design measure at home. It is a bother. You should ask him!" F2 - Planner: "the planners are full. Please, you should ask the customer of walking around and coming back in half an hour" F3 – the planning area is full F4 – the waiting time is more than 15 minutes	The Greater should understand the customer. He plays a key role. Each customer has specific needs. The Greater should firstly verify that the customer knows the IKEA process (active role of the customer, home-work as taking measure at home).	The Greeter addresses the customer to: 1. IF <expert customer> THEN <codified action (planning-payment or ordering)> 2. IF <unexpert customer> THEN <ask (interview)>
Before sending the customer to the Planning, the Greeter must consign to the customer a form to fill with the specifics of their wished kitchen (color, model, with goods, etc…)	F1 - Planner: "the customers come here without any module. You must ask the customer to fill it " F2 - Customer: "I don't understand this module, what I have to do with it? F3 – there are many customers waiting for being received by the Greeter	"Many customers find difficulties in filling the form. They don't want to fill it. I cannot explain them all the necessary steps. There are too many customers to receive. In the IKEA world the customers should be able to do theirself"	The Greeter: 1. IF <there are no customers in queue> THEN <he explains how to fill the module> 2. IF < there is a queue> THEN <he consigns the module> AND <ask to the customer if all is clear> In case of doubt, the Greeter must search a support for the customer among the colleagues.

The analysis draws from an in-depth observation of the Kitchen Process, within the network of the other interrelated processes. Although recognizable, the routines are fragmented among people, time and space, and found their unitary character only as *narrative networks* (Pentland & Feldman, 2007), or as a set of stories that have been, or could be, generated by combining and recombining singular fragments of action. The observation is than always observation within a context.

Selling kitchens is a critical sub-segment of selling activity at IKEA. Our example focuses on what happens within the store, with an attention to the specific relations between customers and employee. The introduction of disturbances and noise, typical of the day-by-day activity, provides unique opportunities to test the mechanisms of action and sense-making within an apparently standard process. The analysis starts with a detailed account of the kitchen selling process, as observed and recorded by the researcher during observation and as described by managers, employee and the IKEA manuals.

The formal process (PROCESS 1) begins with the first encounter with the client at the Greeter's desk. The Greeter should understand the customer's needs and address the customer to the more appropriate activity: small purchases, large purchases, and planning. Small purchases are reserved to occasional client, whose need is not a complete kitchen, but few (less than five) items. These customers can suddenly pay and go out. Large purchases are instead reserved to customers with a ready and complete kitchen plan. Normally this plan has been developed during a previous visit of the customer at the store. Before paying and check-out, the plan should pass a last technical check. Planning is the most critical phase in the kitchen selling process. It is the core relational phase of the process.

The employees in the planning area receive the customers and help them to translate ideas in a coherent design, using the strong support of the IKEA Kitchen Planning software. There is in the kitchen department a specific place dedicated to the planning phase. It is conceived as a quiet place where the customers can work at a desktop pc and develop their plans. The intervention of the selling specialists should be only occasional,

because the customers should be able to do themselves. For this reason, each employee is supposed to follow at least two clients at a time.

Customer should reach the planning area only after filling a list, which impose a first check of the customer orientation, in terms of needed products, aesthetical tastes and budget. If the list is completely filled, the whole planning process can happen in the planning area. In presence of missing or underspecified choices, the customer has to come back to the showroom area and complete the list after a selection among the different products. Many customers want to be assisted during their choices. As a consequence, the employees are asked to leave the planning area and escort the customer in the showroom. This often generates problems of coverage of the planning area.

To do a correct plan, the customer must have with her a complete set of measures of the room that will house the kitchen. IKEA has a low cost measurement service, although encouraging customers to do themselves. This is a critical point in the process, because many customers are not able, or do not understand, that they need these measures. The first task of the greeter should be to remember the customer what they need. The necessary measures are reported in the planning list. Nevertheless, precision and completeness often lack, slowing down the entire purchase process.

After ending the planning phase, the customer can go home and verify all her choices. She'll come back to the store to confirm her plan and ordering the kitchen. The payment is done at the kitchen department cash. However, the process does not end with the payment. Many goods, which in the IKEA philosophy are called *cash & carry goods*, cannot be ordered, and the customer has to pick up these goods directly in the store warehouse. The customers are often unhappy about not receiving all the needed products conveniently at the exit of the store. Anyway, the customers have to wait for the final delivery of the products at the Customer Relation Department, near the exit of the store. Many products are not available in the warehouse. They will be sent directly to the customer home from the general stock house in Piacenza. This generates a shift in the delivering methods and time, and a certain level of confusion in the customers.

These sequential steps must integrate a parallel process (PROCESS 2), which has a narrative coherence and describes the customer-seller relation. This process is illustrated in specific manuals, which constitute the IKEA's explicit corpus of knowledge. First, the customer must be welcomed and analyzed. Is he a new customer? Does it know the IKEA products? Is he able to play the active role in the selling process, as requested by the IKEA culture? Second, the customer's needs must be identified. Does he need a new kitchen? Or he wants to substitute some items of the old one? Is he able to bring the object at home by himself? Third, the customer's needs should be declined by the seller in terms of the IKEA's product lines. This requires to the seller a specific know-how, about the products and their technical aspects, and a broad relational capability, to socialize the information and extract the implicit customer's needs. At this step, the seller can strongly influence the customer choices. Fourth, approaching the end of the purchase, the seller must be able to manage the random objections and criticisms which normally arise from the customer, and interpret her signals and her need to be reassured in a often expensive purchase. Fifth, the seller must be able to finalize the purchase, adopting a series of conclusive behaviors. This process is normally fragmented, both in time (the customer come back at the store several times to finalize the purchase) and people (the greeter, the cashier, the planners).

The two layered process have a very different nature. Both are routines, because are made of repeated actions, have a narrative coherence, and allow a process-specific learning made of mechanisms of sense-making and enactment, which cyclically interact. However, the first process seems to possess a very rigid structure, a well-defined repertoire of actions, and clear mechanisms of feedback (has the planning module been filled? Is the design correct and complete?). The second process is only made of suggestions and fuzzy classifications, the requested behavior is extremely flexible and adaptable to the different kinds of customer, and the feedback mechanisms are evanescent (have been the customer needs well understood? Is the customer ready to finalize? Is the customer objection a true criticism, or only a tactic to take time or to be reassured?).

The within-case analysis of collected data (Eisenhardt, 1989) can be systematized in a series of tables or displays (Miles & Huberman, 1994), with the aim of sharpening a construct definition for the introduced concepts, and assessing their validity.

Table 2

Example of display table to assign levels of variety and ambiguity

Process 1 (formalized)

Action	Feedback Ambiguity	Variety
The Greeter addresses the customers to a specific function	Immediate performance: YES Delayed performance: NO Feedback from colleagues: YES LEVEL - LOW	Task variety: LOW Sequential variety: LOW Discretion and improvisation: LOW LEVEL – LOW
Assisting the customer during the planning process	Immediate performance: YES Delayed performance: YES Feedback from colleagues: NO LEVEL - MEDIUM	Task variety: LOW Sequential variety: MEDIUM Discretion and improvisation: MEDIUM LEVEL – MEDIUM

Table 3

Example of display table to assign levels of variety and ambiguity

Process 2 (unformalized)

Action	Feedback Ambiguity	Variety
Welcoming and analyzing the customer	Immediate performance*: YES Delayed performance: YES Feedback from colleagues: YES LEVEL – LOW	Task variety: MEDIUM Sequential variety: HIGH Discretion and improvisation: MEDIUM LEVEL - MEDIUM
Identifying the customer's needs	Immediate performance*: YES Delayed performance: YES Feedback from colleagues: NO LEVEL – MEDIUM	Task variety: HIGH Sequential variety: HIGH Discretion and improvisation: HIGH LEVEL - HIGH
Declining the customer's needs in terms of the IKEA's products	Immediate performance*: YES Delayed performance: YES Feedback from colleagues: NO LEVEL - MEDIUM	Task variety: HIGH Sequential variety: HIGH Discretion and improvisation: MEDIUM LEVEL - HIGH
Managing the objections	Immediate performance*: YES Delayed performance: YES Feedback from colleagues: NO LEVEL - MEDIUM	Task variety: MEDIUM Sequential variety: MEDIUM Discretion and improvisation: HIGH LEVEL – MEDIUM
Finalizing the selling	Immediate performance*: YES Delayed performance: YES Feedback from colleagues: NO LEVEL - MEDIUM	Task variety: LOW Sequential variety: HIGH Discretion and improvisation: HIGH LEVEL – MEDIUM

* the immediate performance must be interpreted, in this case, as the feedback from the customers

In the spirit of the proposed classification of routines, the first process has the characters of a Tayloristic routine. The second process, characterized by a moderate feedback ambiguity and high variety in the repertoire of actions, can be classified as a managerial routine. The fact that these two routines are mostly superposed and played by the same actors generates many problems in the organization, which emerged during the study. A Tayloristic routine has a superior fit with the spirit of *mechanical selling*, which is the core competence of IKEA (see Table 5). For this reason, the actions are normally interpreted by the actors in the sense of PROCESS 1 (selling operations – organization centered) instead of the PROCESS 2 (customer relation management – customer centered).

Although worth of a more in-depth analysis, the principal purpose of this study was testing the viability of the proposed concepts *(variety and feedback ambiguity)* in real world. At the end of this phase of the research, I can argue that at least two routine-level descriptors are valid concepts in the organization science, and can be operationalized in an empirical study. The proposed taxonomy for routines also allows a contingent approach, in term for example of fit between chosen routines and personnel skills and traits, or organization culture. What emerges is that asking people to adopt an entrepreneurial or managerial approach toward the customer (the typical commercial seller approach), and asking at the same time to implement processes which don't have a managerial nature for a lack of variety in the repertoire of actions, generates inconsistencies and high cognitive dissonance. The sense-making process of the PROCESS 2 routine is flawed, and learning does not happen in the sense of PROCESS 2.

A further step of research, beyond the available time constraints, could be to go ahead in the empirical verify of the contingent approach. The study and operationalization of the concept of *fit* will be then the core task. IKEA, as a multinational firm, can be an ideal place to conduct a sort of multiple comparative case studies, for its unique mélange of uniformity and diversity among the different stores and national cultures.

Table 4

The IKEA case: kitchen competition in Italy

Selling kitchens is a key element for the reputation of the IKEA brand, in Italy and worldwide. The perceived quality is high, placing IKEA to a level comparable with the leading Italian manufacturer (Salvarani, Lube, Ernesto Meda). The selling price is under the average of the segment. This corresponds with the IKEA business idea: "to offer a wide range of furnishings and functional design at prices so low as to make them accessible to as many people as possible."

The high brand reputation, the ability to offer a 25 year warranty on their product, the perception of quality and design are all strengths for IKEA. However, new challenges have emerged in recent years, and IKEA requires an effort to adapt to the competitive environment. In particular, a strong competition in the low price segment is rising, led by retailers such as MondoConvenienza and Mercatone Uno, which can offer complete kitchen solutions at € 930. On the other hand, the manufacturers of high-end kitchens, as Scavolini, are working on a repositioning in the middle and lower segments, to meet the changing needs of consumers, increasingly price-conscious.

IKEA tries to answer these challenges, becoming aggressive in the competitive segment "*first price*", without sacrificing the high perceived quality. This calls for major revisions in both the product concept, and in the process, both indirectly, in coordination and in the business model.

Assembly and transport are default offering for MondoConvenienza, allowing the firm to have high efficiency and low costs in these phases. Assembly and transport cannot be default at IKEA, because in the IKEA's philosophy the customer "can do by herself", and these two phases are outsourced, with consequent higher costs and higher final price.

MondoConvenienza offers the complete kitchen solution formulas at a very competitive price. The idea of complete and blocked kitchen formula crashes with the IKEA's philosophy, driven by modularity. The standard kitchen selling process does not admit to skip the planning phase.

Table 5

The IKEA case: core competences and mechanical sales*

**(Italian language has been maintained in this Table as the original language of the observed manuals and collected interviews)*

IKEA ha basato il proprio vantaggio competitivo sul concetto, che è anche la "core competence", di vendita meccanica (*mechanical sales*).

L'azienda ha strutturato una specifica cultura della vendita del mobile, riuscendo a coinvolgere come nessun altro il cliente nel processo di acquisto e a stimolarne e chiarirne i bisogni mediante una serie coordinata di messaggi o flussi informativi, scritti e visuali, che hanno luogo tutti all'interno dello store.

Si potrebbe pensare che il successo di IKEA sia dovuto in larga parte alla capacità di offrire mobili a prezzo basso. Così è, anche nelle parole di Ingvar Kamprad, fondatore dell'azienda, nella sezione del suo manualetto (Kamprad, 1976) dedicata all'assortimento: *"Noi dobbiamo offrire un vasto assortimento di articoli d'arredamento belli e funzionali, a prezzi così vantaggiosi da permettere al maggior numero possibile di persone di comprarli".* Tuttavia, più che il prezzo basso in sé, ciò che conta è la capacità di *"mantenere un'immagine di prezzo estremamente basso… il nostro assortimento non deve mai ingrandirsi al punto da mettere in pericolo l'immagine di prezzo basso"*. Prezzo basso dunque deve essere coniugato con assortimento: la gamma avrà vari livelli di qualità e di prezzo, ma la discriminazione di prezzo deve essere chiara ed evidente al cliente, che percepirà per ogni scelta un adeguato "prezzo basso". "Prezzo basso con giudizio" perché l'usa e getta non è IKEA. La comunicazione della qualità è quindi parte integrante della comunicazione di prezzo basso. A tale messaggio già ricco, si aggiunge la strategia di variazione nella continuità, definendo un "assortimento base" o "tipico IKEA" (in Scandinavia) o "tipicamente Svedese" (al di fuori della Scandinavia), a cui sarà affidato il compito di veicolare l'idea di inimitabilità dello spirito IKEA. "*Il nostro assortimento di base dovrà avere un profilo proprio. Dovrà rispecchiare le nostre idee, essere semplice e lineare come lo siamo noi. Resistente e pratico. Dovrà esprimere un modo di vivere più semplice, naturale e libero; forma, colore e gioia ed avere un tocco di giovane per chi si sente giovane a qualsiasi età"*. Messaggio complesso, per un assortimento che in

trent'anni non è invecchiato pur rimanendo simile a sé stesso. Riflettendoci, l'esser giovani e il basso prezzo sono due messaggi inscindibili.

Come riesce IKEA a comunicare questa complessità di messaggio? Tutto nel negozio è predisposto per parlare con il cliente. La visita ad IKEA è anzi un percorso esperienziale, fatto di immagini e ispirazioni, notizie e nozioni su materiali e funzioni, risposte ai problemi quotidiani e idee e suggerimenti per risolvere problemi di cui forse non si immaginava neanche l'esistenza. E poi, fondamentali, i prezzi.

Una visita allo store in compagnia di Ferruccio, già responsabile di reparto e ora del progetto IKEA Family, ci ha permesso di capire che cosa sia, nel concreto, il metodo di vendita meccanica (*mechanical sales*).

L'esperienza del cliente, come pure la nostra, comincia nel parcheggio e all'ingresso dello store. Già in questo spazio IKEA parla, attraverso una serie di pannelli visuali, cercando di trasmettere, o meglio di condividere con il cliente la filosofia che la anima. Primo pannello: il cliente deve fare la sua parte, prendendo misure, appuntando su un taccuino i mobili che poi preleverà nel magazzino self service. Secondo pannello: il trasporto e il montaggio possono essere fai da te; c'è tutto ciò che serve, pacchi piatti e istruzioni. Terzo pannello: c'è un rapporto fiduciario tra cliente ed azienda, disposta per sei mesi ad accettare il reso da parte del cliente. Garanzia, qualità. E il prezzo? Il messaggio è implicito: se fai da te, il prezzo sarà più basso. Ma inutile parlare di prezzo in astratto, senza avere prodotti a cui assegnarlo e termini di paragone.

L'esperienza prosegue e si intensifica non appena salita la scala di accesso. Ci accoglie una pedana ("the entrance podium") con una composizione d'ambiente. È il tema della stagione. Natale. È lì per ispirare, per ricordare che IKEA è viva e cambia. Ma anche per dimostrare il cardine dell'identità IKEA: l'assortimento. IKEA è un concetto completo d'ambiente domestico: dallo scaffale al tavolo, dalla cucina al bagno, dalla tovaglia alle lampade al chiodo.

Ogni oggetto esposto ha il suo cartellino, con prezzo, descrizione, collocazione spaziale. Un oggetto senza cartellino è un errore perché contraddice il principio base dell'autonomia del cliente nel processo di acquisto. Tutte le informazioni sul prodotto devono essere reperibili ed evidenti, consentendo ad un cliente di media intelligenza di avere risposte ad ogni quesito circa il prodotto.

Altri pannelli ci informano sugli eventi (vitalità dell'azienda) e sulle promozioni (immagine di prezzo basso e di occasione). Al momento della nostra visita, IKEA Anagnina lanciava prezzi imbattibili su pranzi e cene del venerdì, per incentivare la visita al negozio nel giorno a minor affluenza.

L'accesso al negozio è scandito da alcuni punti chiave: la palina con gli strumenti (metro, matita e taccuino), la cesta con le buste gialle, altre ceste con prodotti a basso prezzo e di largo consumo. La borsa gialla è fondamentale. Un cliente senza sacca per gli acquisti è meno propenso alla spesa. Inoltre, essa deve essere comoda e capiente. Regola IKEA: una cesta con le buste gialle deve essere visibile in ogni punto dello store, in modo che l'impulso all'acquisto non venga mai frustrato dalla mancanza di un mezzo per il trasporto dei prodotti. I prodotti a basso costo e di largo consumo sono i cosiddetti "open the wallet": un cliente che ha già maturato una decisione d'acquisto, seppur piccola, è più propenso ad un secondo acquisto. Ecco perché tali prodotti sono posti all'accesso del negozio.

Comincia poi la serie di ricostruzioni d'ambiente, a cui deve essere dedicato almeno il 20% dello showroom. "Ognuno dei nostri principali gruppi di clienti deve essere attratto da almeno uno degli ambienti: c'è un ambiente per il teenager, uno per le giovani coppie, uno per le famiglie". I teenager saranno colpiti dalla vivacità dei colori e dalle possibilità di personalizzare l'ambiente con piccoli accessori. Per le giovani coppie si è creata una casa funzionale ed essenziale in uno spazio limitato. Spazi più ampi, luci e ambienti coordinati per le famiglie consolidate. Il messaggio però deve essere chiaro: "bellezza e gusto non hanno nulla a che fare con il danaro, la vanità o il lusso" (Ellen Key, 1906). Le competenze di interior design si mescolano necessariamente con quelle di marketing. Non si deve rispondere ad un gusto proprio, o ad un gusto raffinato ed elitario, ma creare ambienti in linea con le aspettative e i sogni della "Maggioranza". "*Stare dalla parte della Maggioranza significa rappresentare gli interessi della gente comune, indipendentemente dai nostri interessi a breve termine… Sviluppare un assortimento e presentarlo in modo creativo e accattivante in tutti i nostri negozi richiede una grande conoscenza delle condizioni e dei desideri della Maggioranza. Solo l'esperienza diretta ci può dare questa conoscenza. I trasporti pubblici possono essere un buon esempio di come si può stare in mezzo alla gente" (Kamprad, 1976).*

Figure 9

Example of *field notes*

**(Italian language has been maintained in this Table as the original language of the collected notes)*

Note – 27 maggio 2011

1. Il responsabile di reparto sta montando a casa propria una cucina IKEA. A chi darà feedback sulle non conformità? O sui problemi di montaggio?

2. Una signora, giunta in negozio con un proprio trasportatore per acquistare un pezzo dato come "disponibile" sul sito internet, non trova la disponibilità del pezzo. Chiede un coupon di sconto per il trasporto (riduzione dei margini). Il pezzo era effettivamente disponibile in magazzino, ma il sistema di gestione informatizzata del magazzino lo ha impegnato su ordini in attesa di ritiro, senza trasmettere l'informazione al sito internet. Si può notare che:

a. La decisione sul "buono sconto" è presa direttamente ed in autonomia dal venditore (Simone)

b. In che modo è stato segnalato il problema alla direzione logistica?

3. Il venditore è soggetto ad un elevato livello di rumore (flusso continuo di richieste da parte dei clienti, anche non di diretto interesse del reparto cucine, soprattutto circa reparti che i clienti non hanno ancora incontrato, come il "reparto guardaroba", o l'uscita)

4. Un problema evidente della vendita è che alcuni pezzi sono da ritirare al momento dell'acquisto (pronta consegna, self service). Altri da ordinare. IKEA non ammette giacenza di pezzi in pronta consegna. Ciò genera la necessità di un doppio trasporto, nonché problemi di stoccaggio per il cliente.

5. Cliente: "Io sono contrario a questi posti: non ci azzecchi mai" (cercando il banco del greeter dove mettersi in fila). Il punto di comunicazione tra personale e cliente non è immediatamente riconoscibile.

6. L'apertura al mattino è stato un momento critico. Il cliente organizzato (che viene per risolvere un problema specifico, o che viene per concludere un ordine notevole) si presenta spesso all'apertura.

7. In pianificazione (fill up) ogni venditore deve seguire 2 clienti, stando alle spalle di due postazioni pc affiancate. Tale modo di operare non è tuttavia immediato, perché:

a. Se si comincia dedicando il 100% ad un solo cliente, difficilmente il cliente accetterà in seguito di "condividere" il venditore con un nuovo cliente.

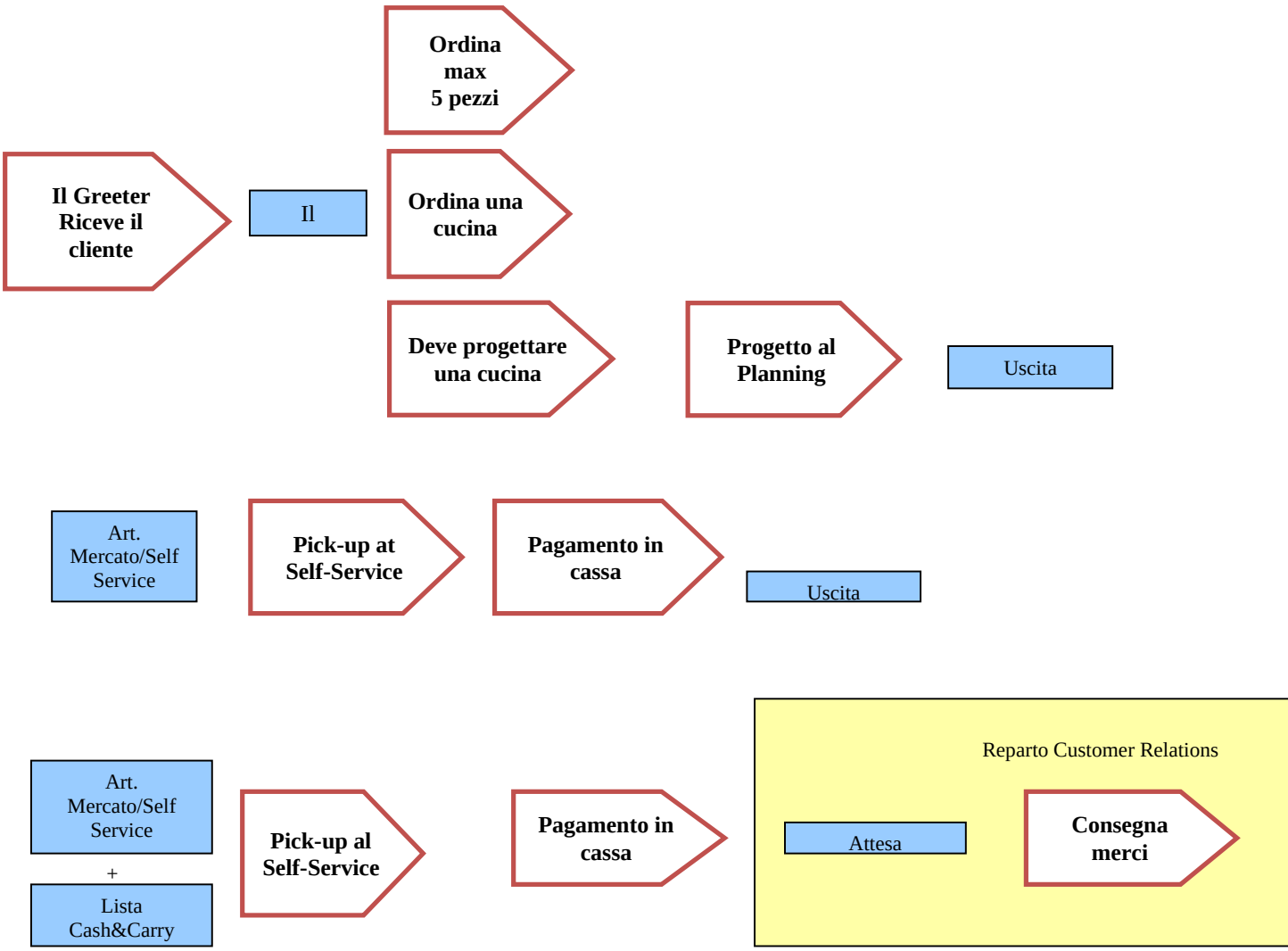
8. "L'offerta (montaggio + trasporto o sconto 20%) ha attratto moltissimo i clienti. Oggi abbiamo già 6 ordini. Se arriviamo a fare 30 ordini è moltissimo" (Simone)

9. "La "guida al progetto cucina" è un modo per accorgersi se il cliente guarda al prezzo o è disposto a spendere. Sul basso prezzo i margini sono bassi. Al cliente che mi indica l'anta a basso prezzo non proporrò il forno a vapore". (Simone) Però i venditori non hanno una linea chiara su quale prodotto "spingere" con i clienti. Sanno che i prodotti a maggior margine sono esposti nei punti chiave (punti caldi) del negozio.

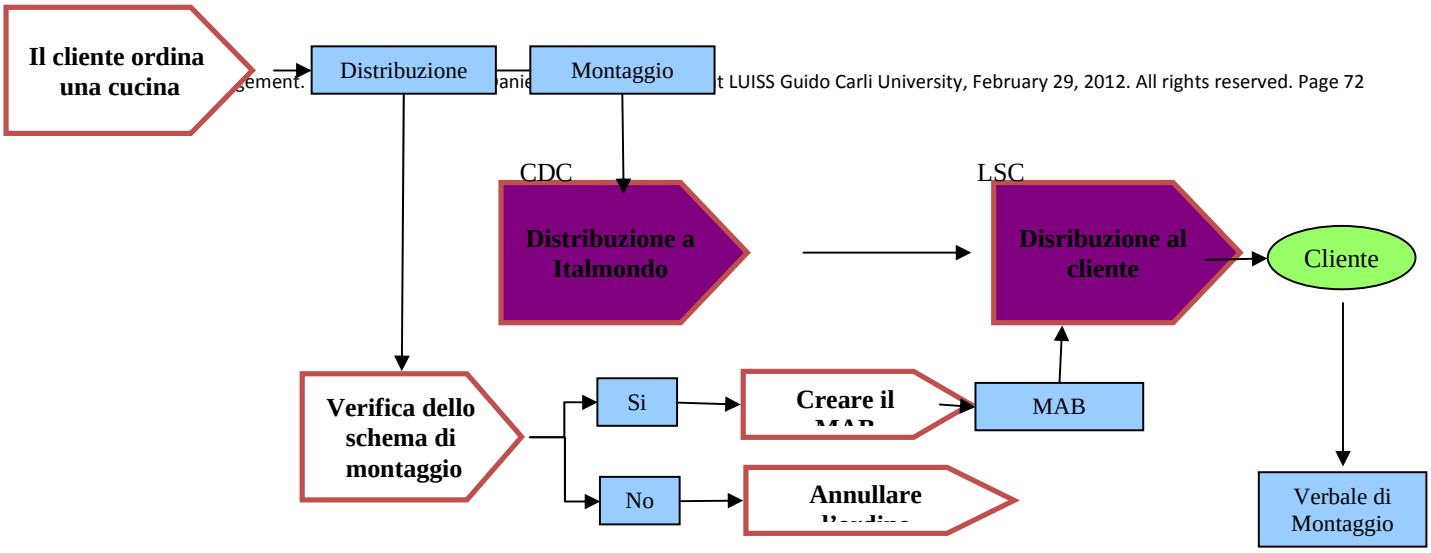
Figure 10

The kitchen selling process: flux diagrams

**(Italian language has been maintained in this Table as the original language of the field sketches)*



gement. anie t LUISS Guido Carli University, February 29, 2012. All rights reserved. Page 72



6. Design, strategy and the indirect action: conclusive remarks

In a recent book, Chia & Holt (2009) discuss the validity of the strategic design in organizations. They put into criticism the overconfident tension of managers and state men towards accurate planning, orchestration, and every form *external imposed order* of the organizational life. The idea is that management, and what in general has something to do with people, organizations and the society, is an action-based activity, the Aristotelian *phronesis.* It is not a *technē*, because it lacks the power of crafting a self-standing product: it lacks a *poiēsis*. Management is pure action, and this action is largely non-instrumental: the first outcome of the action is the self-cultivation and self-actualization, and it is *indivisible* from its agent and its social context.

The adherence to a *controlling epistemology* (Chia & Holt, 2009: p. 79), and the overconfidence in an external imposed order is recognizable as main contributory cause to many social and organizational failures, not least the credit crisis which started in 2008. The authors propose to adopt an alternative epistemology for social phenomena, where the society and the organizations are considered as complex *ecologies*. The way we can represent these ecologies is, and remains, a "concept" (in Henri Bergson's words) that we can derive from our perceptual input and that does not resume the whole aspects of the system. For this reason, strategies of action could not be conceived within a demiurgic attitude. We need to conceive strategy as *wayfinding*, and appreciate its emergent aspects (Mintzberg, 1978, 2009). Given a map of the reality, "*in wayfinding, the question 'Where am I?' is not answered in terms of location in space but, rather, in terms of the sense of familiarity and comfort that we feel in knowing where we are"* (Chia & Holt, 2009: p. 164).

These suggestions are conform to the research interests exposed in preceding chapters. The theory of action that emerges from this work, and from the recent studies in organization science and cognitive psychology, although adherent to the scientific method, does not have as main goal the predictability of individual and organizational behaviors, but their understanding.

However, the message that managers cannot plan anything, or that a design of the external and social world is superfluous, is misleading. The empirical experiment exposed in Chapter 2 clearly shows that an external action can and does strongly modify the learning paths and the people's final behaviors. Designing within complex ecosystems, however, does not assure certain outcomes, because many aspects of the reality are outside of our knowledge and our control. Managerial wisdom suggests adopting an *indirect action* approach: a trial-and-error attitude towards our action in the world, which, as in routine learning, takes into account the multiple and often ambiguous feedbacks that originate from action, and is able to reshape, in a continuous change and sense-making process, an open-ended map of the world.

"True efficacy is always discrete; conversely, the ostentatious is illusory. Sage and strategist alike reject spectacular and superficial acts in favor of an influence that operates profoundly and over time" (Jullien, 1992)

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