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RESISTANCE TO CHANGE.

EXPLORING THE CONVERGENCE OF INSTITUTIONS, ORGANIZATIONS AND THE MIND TOWARD A COMMON PHENOMENON.

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Abstract

In “The Image. Knowledge in Life and Society”, Kenneth E. Boulding (1956) extended the concept of *resistance to change* as credited to Kurt Lewin (1946), and referred it both to individual subjects – in particular to their mental images - and to collective subjects, such as organizations and institutions.

In this paper we suggest reinterpreting Boulding’s approach from three points of view that emerged in the literature.

Firstly, resistance to change helps economic agents manage their scarce cognitive resources. On the one hand stability of mental representations allows individuals to save mental energy by avoiding the cognitive costs of re-thinking (Egidi 2002, Marengo 2003). On the other, the tendency of different mental process to become automatic once they have been learnt - and thus not easily accessible to consciousness- guarantees the release of psychical energy that can be diverted to other novel tasks (Barg and Chartrand 1999; Kahneman 2003).

Secondly, as suggested by de Board (1978) and Bovey & Hede (2001), preference for the *status quo* acts as a defence mechanism through which subjects reduce anxiety and reinforce self-control. Regarding this, an appealing proposal that emerged in the field of organizational studies suggests a substitution of the concept of resistance for an integrated view on the psychological responses that may arise during phases of transition. Within such a broader approach, the possibility of conflicting attitudes to change has been analysed in terms of ambivalence (Piderit 2000; Cheng and Petrovic-Lazarevic 2005).

Thirdly, resistance to change is a determinant of successful “institutional reproduction” (Mahoney 2000). Within the framework of institutional analysis, it may also be interpreted as a form of political investment whose aims are twofold, increase the persistence of political arrangements and make commitments more credible (Pierson 2000).

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Such developments interestingly reflect how the meaning of resistance to change has evolved and diversified since its introduction. By comparing these findings with each other, we will show how resistance does not simply represent a form of closure toward changes but, on the contrary, it also serves specific psychological and economic functions. Then, we will suggest a unifying perspective by reinterpreting resistance as a heuristic that helps economic agents manage uncertainty.

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1. INTRODUCTION

Resistance to change is not a new concept in economic literature (Coch and French 1948, Boulding 1956). However, in the last few decades it has acquired specific connotations and meanings that deserve attention.

The first aim of the paper is to analyze how the concept has evolved since its introduction by Lewin (1946) and how it has diversified. Having acknowledged that resistance characterizes institutions, organizations and the mind, we suggest that the convergence toward such phenomenon is not surprising. Indeed, it may be explained by taking the bounds that affect the cognitive and emotional counterparts of economic behavior into account. We finally reinterpret resistance to change as a heuristic that helps manage the natural tendency of human beings to fear, uncertainty and its expected effects.

The paper is organized as follows. In section 2 we reconstruct the historical origin of the concept. In section 3 K. Boulding's contribution on the topic is presented. In section 4, 5, 6 we discuss the contemporary applications of the concept to problem-solving activity, organizational studies and institutional analysis respectively. In section 7 the interpretation of resistance in terms of heuristic is proposed. Concluding remarks follow.

2. RESISTANCE TO CHANGE. ORIGINS OF THE CONCEPT

The concept of resistance to change was introduced by Kurt Lewin (1947; 1951) as a correlate of homeostasis – that is, the tendency exhibited by social systems to restore their state of equilibrium after a disturbance.

In Field Theory, Lewin (1951) aims at explaining group behavior by analysing the environment, or "field", that is created by the interactions among individuals in the group. The field is regulated by forces of

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different direction and intensity which tend to maintain the status quo. The equilibrium is determined by the coexistence and the balancing of the forces that favour and obstruct change.

In everyday life, individuals participate in a series of psychological fields or "life spaces", such as their family and work environment, that can be represented in topological terms. Consequently, the interdependence among the field members should be considered in order to understand individual and group behavior. According to Lewin a group is made up of people that, whatever their initial disposition, depend on each other from two points of view. They are tied together by an "interdependence of fate" and by an "interdependence of task". According to the first aspect, a group comes into being when its members realize that their individual fate depends on the fate of the group as a whole. That was, says Lewin (1946), the case of the Jews in 1939[1]. The most significant feature of group dynamic is, however, the interdependence of task, that is the interdependence among the members' goals. Due to the latter, people in the same group depend on each other for achievement.

Interdependence transforms the group into a 'dynamic whole'. It follows, that the process of change acquires a collective dimension: any change in one member of the field, in fact, has an impact upon the others. The dynamic of change begins with the disruption of the status quo and involves three steps: the "unfreezing" of the initial state; a period of disorder in which different equilibria are tried; and finally, the "refreezing" of the new equilibrium that needs consolidation in order to acquire stability. Lewin claims that, "the practical task of social management, as well as the scientific task of understanding the dynamics of group life, requires insight into the desire for and the resistance to, specific change (Lewin 1947, p. 14)

As clarified by Dent and Goldberg (1999), in Lewin's original conceptualization, resistance is considered as a system phenomenon and not merely a psychological one. Indeed, it emerges within a complex field of forces –that is a system of roles, attitudes, behavior and norms - and may arise anywhere in the field. A similar position is expressed by Burnes (2004) who argues that "Lewin saw successful change as a

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group activity, because unless group norms and routines are also transformed, changes to individual behavior will not be sustained" (p. 986).

A different perspective was developed by Coch and French (1948). In their seminal work "Overcoming resistance to change" they discuss the empirical research conducted in the Harwood Manufacturing Company. The article starts with two focal questions: "(1) Why do people resist changes so strongly? And (2) what can be done to overcome this resistance?". The authors thus interpret resistance as a "motivational problem" which is fuelled by the personal frustration induced by changes that occurred in the organization of the factory.

In order to test their hypothesis, Coch and French (1948) perform a series of interesting experiments on workers that were transferred from one job to another. The feeling of resentment against the management which may be caused by such a decision, together with the necessity of relearning new tasks that could trigger fear of failure in the worker, result in an internal state of frustration. Such feeling is reinforced when it is shared within a group, thus becoming collective.

Due to frustration, a lack of motivation is experienced that lowers personal aspirations and leads a minority of workers to quit the job. By interpreting the results of their experiments, Coch and French underline how groups that have been able to take part in the planning of the changes, show less resistance than others. Their suggestion is then that of increasing the participation of the workers in the managerial decisions through meetings which aim at explaining the reasons for future changes and at promoting a shared process of design.

At the beginning of the 50's, resistance to change started to be increasingly questioned by research[2]. From then on, organizational studies have represented the field in which the phenomenon has been addressed more systematically. However, in this paper we will also show that alternative and quite diversified applications of the concept have been developed. We will begin with a contribution which dates back to 1956. In "The Image. Knowledge in Life and Society" (1956), a book that is still little known by economists, K. Boulding referred to resistance in order to interpret market behavior of agents and to

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define the prevailing features of their mental representations. We will discuss Boulding's contribution in the following paragraph.

3. BEHAVIOR, CHANGE AND RESISTANCE IN BOULDING

In "The Image. Knowledge in Life and Society" (1956) Boulding[3] analyses the role played my mental images in different and apparently unrelated fields of knowledge, including biology, economics, political philosophy, organization theory, history and sociology.

Mental images are interpreted as an interface between human perception and knowledge which filters information and directs the construction of beliefs[4]. A fundamental hypothesis concerns the existence of a persistent influence of images on behavior. In particular, individuals have images of who they are, of how the world operates and how they relate to it. Such images determine their conduct of life.

The main function of the image is that of mediating between the subject and the external environment. Messages that reach a person affect the images he or she has, reinforcing them, adding new data, conflicting with their content or changing them entirely.

More specifically, information is filtered and interpreted through the interaction of two images. The first, "an image of fact", mirrors the world as it is represented in the mind of the subject; the second, an "image of values" expresses the value system according to which personal judgements about the world are elaborated. Messages that are disregarded or perceived as negative have a high probability of being ignored.

On the contrary, when new information is integrated into the pre-existing knowledge of the subject, it stimulates a process of learning, i. e. a modification of the image in accordance with the incoming data and with their interpretation. Through such a mechanism of learning and reorganization of knowledge structures, the subject may vary his/her views of the world over time. Most importantly, when images undergo a process of transformation behavior is also modified.

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At the imaginative level, learning is the main drive to change. In order to succeed, however, change has to overcome resistance. In Boulding's words, the process of image revision is gradual and requires different phases: "…our image is itself resistant to change. When it receives messages which conflict with it, its first impulse it to reject them as in some sense untrue. (…) As we continue to receive messages which contradict our image, however, we begin to have doubts, and then one day we receive a message which overthrows our previous image and we revise it completely" (Boulding 1956, p. 9).

The impact of a message on the image thus depends on resistance which is stronger if the message contradicts the image. Another important element is the source from which information is obtained and its value for the individual. Messages which come from a source that the subject regards as authoritative have good chances of weakening resistance. Messages that are recurrent are generally more effective. Finally, resistance also depends on internal qualities of the image, such as its logical consistency and the existence of aesthetic relationships among its parts. The more consistent and elegant the image is, the more it resists revision.

At the individual level, "resistance may take the form of simply ignoring the message, or it may take the form of emotive response: anger, hostility, indignation" (Boulding 1956, p. 12). Moreover, Boulding also considers the impact of resistance in the market. In particular, he argues that a negative response to change at the cognitive level influences market behavior by preventing the subject from undertaking actions. The stickiness of prices, for example, may be caused by the lack of a clear and widely understandable image of what goes on in the market[5]. Such lack may drive agents to inertia because the scarcity of information makes the ground on which beliefs and predictions are elaborated too unstable for generating a behavioral conduct.

Furthermore, in contexts which are characterized by uncertainty resistance may represent a strategy that help the subject fill information that he/she lacks. In fact, when information about the future is missing, avoiding changes may stabilize behavior and make it more predictable, thus incrementing the chance of developing correct expectations.

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In Boulding's analysis change appears to be an endogenous process that is constrained by environmental factors. It is endogenous as it starts by means of an alteration and subsequent reorganization of the images through which individuals interpret and evaluate reality. Being shaped by the relationship of the agent with his/her environment, its unfolding is, however, bounded by the institutional structure, the historical setting and the norms of behavior that organize social relationships.

While such factors affect changes from without, the endogenous dimension of change encounters its limits in the emergence of resistance which is not the same for every subject, and, even for the same individual may have different degrees of intensity. According to Boulding resistance is related to creativity. On the one hand, the more creative the subject is, the less he resists change. On the other, individuals have different propensities to creativity due to their natural disposition and to their personal livings. Cultural traits that have been absorbed through experience and genetic inheritance are interwoven in determining the extent to which each individual may promote or resist the emergence of novelties.

From a synthetic perspective, Boulding's work focalizes on three main ideas (Patalano 2007a).

- Human behavior depends on mental representations that he defines as images;
- Images are resistant to change;
- Resistance and creativity are negatively correlated.

Since Boulding's contribution, the concept of resistance has undergone further development and specialization. In particular it has found application in three main branches –organizational studies, institutional analysis and problem solving- thus acquiring meanings which are broadly influenced by the context of analysis. Our exploration of these contemporary developments will start with a reflection on the cognitive underpinnings of problem solving.

4. CHANGE AND RESISTANCE IN MENTAL REPRESENTATIONS

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For most economists, mental representations are not a familiar topic. Indeed, in mainstream economics the “cognitive functions” of the representative agent are confined to the rational elaboration of a complete, priceless and symmetrical set of information.

However, as the recent developments in cognitive economics have helped clarify (Egidi & Rizzello 2004), distinguished scholars in the history of economic thought have suggested that the mind has a more complex functioning and that such functioning crucially affects the behavior of agents (Hayek 1952, Boulding 1956, Simon 1947, 1957). According to Hayek (1937; 1952), the process through which information is represented and then elaborated is a relevant step in the construction of knowledge. In particular, the latter is the product of the subjective elaboration of information received from the environment. While information may be identified with an objective set of data, knowledge is the outcome of the cognitive process through which such data are interpreted (Butos & McQuade 2002; Rizzello 1999).

As already mentioned by Hayek (1952), the initial architecture of the mind is genetic. Structures that have been inherited at one’s birth evolve over time under the influence of personal living. A major role in such evolution is played by learning that may be seen as the capacity to adapt to new events which are experienced (Rizzello 2003). To explain how cognitive structures are redefined with new experiences the mechanisms through which mental representations change have to be clarified.

In the Representational Redescription Model (RR) of Karmiloff-Smith (1992) and then developed further by Clark and Karmiloff-Smith (1993), mental representations are continuously modified over time. Cognitive change is specifically interpreted as the ability of the mind to reorder and reorganize knowledge into different kinds of representation. By such a process, individual knowledge is manipulated and exploited in flexible ways, thus guaranteeing the acquisition of new levels of awareness. The possibility of new combinations among ideas is also fostered by the development of plural representations and by the switching from one to the other.

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According to Clark and Karmiloff-Smith (1993), human knowledge has three main complementary sources:

"(1) It is specified in innate predispositions (at birth and/or via maturation).

(2) It is acquired through interaction with the physical and the socio-cultural/linguistic environment.

(3) It involves an internal process of representational change whereby the mind enriches itself from within by re-representing the knowledge that it has already represented.

The third source of knowledge is at the heart of the RR model which posits several levels at which knowledge is represented and re-represented in different formats" (Clark and Karmiloff-Smith, 1993 p. 495).

Moreover, such model does not simply describe the acquisition of knowledge in early childhood, nor does it involves a series of stages at the end of which re-description stops operating. "The RR model, by contrast, posits that a non-age-related process of representational re-description occurs *repeatedly* across development" (ibidem, p. 495), leading to increasing accessibility and flexibility of knowledge structures.

Two main aspects of the model are particularly notable. Firstly, the passage from one level of representation to the other has a qualitative effect as it amplifies the degree of conscious access to knowledge which has been acquired and has been stored in the memory. The higher such degree, the higher the integration of knowledge across different domains. Furthermore, inter-representational flexibility allows for the development of novel ideas through the combination of previously unlinked ones. The process of multiple re-description also guarantees that the same knowledge becomes increasingly accessible so as to allow performance of new tasks.

Secondly, the representational re-description process is essentially spontaneous and does not necessarily depend on the experience of a failure, for example, in achieving a certain goal (although it may be stimulated by such a situation also). On the contrary, the conjecture at the base of this model is

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that human learning is internally driven by the stimulus to go "beyond success" (Clark 1997), thus improving skills and control even in absence of external disconfirmation.

Despite the tendency of re-describing, cognitive literature has explored situations in which mental representations do not preserve flexibility and openness to change. The occurrence of such phenomenon in problem-solving activity is of particular interest for economics[6] (Egidi 2002; Egidi and Marengo 2004).

As clarified by Newell & Simon (1972), problem-solving clearly involves mental representations. Indeed, the search for solutions does not take place in an external and "objective" environment but in the representation of the problem that the agent builds up in his/her mind (the "problem space"). More recent contributions have underlined that the complexity of a problem – i. e. the interdependencies among its components which allow, or not, for break down - are not given, but depend on the way the problem is represented (Marengo, Frenken and Valente 1999; Marengo 2003).

By changing a representation, the problem solver's task also changes. That is why cognitive "redescription" can be interpreted as a strategy aimed at making new paths to solutions accessible. Indeed, re-thinking the problem may generally be a more powerful strategy than searching for solutions within a given representation (Marengo, Dosi, Bassanini and Valente 1999). As predicted by the RR model, developing a novel way to interpret the problem helps reorganize the knowledge which may be used to solve it.

Nevertheless, experimental evidence on problem-solving has shown that mental representations tend to remain stable even if they do not lead to optimal solutions (Luchins and Luchins 1950; Cohen and Bacdayan 1994; Egidi e Narduzzo 1997). Although agents may benefit from developing a new interpretation of the task, they tend to avoid such opportunity and remain stuck to their initial approach.

Resistance to change may occur within the mental representation of a single task or during the transfer of strategies from one task to another. In the first case, individuals remain bound to their current representation of the problem in order to avoid the mental effort involved in re-framing (Egidi 2002). In

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the latter situation, they tend to recycle strategies that have been learnt in the past thus applying them to new problems. Such tendency also persists when those strategies have proved to be inefficient (Luchins and Luchins 1950). Experimental evidence has supported the idea that individuals rely on routinized behavior by exploiting "old" procedures, even if they are suboptimal. Once again, "the routinization of behavior may be considered as the outcome of a process of mental effort-saving" (Egidi 2003, p. 39).

In both cases resistance can be interpreted as a consequence of the tendency of mental processes to become automatic once they have been learnt (Barg and Chartrand 1999, Egidi 2003, Kahneman 2003)[7]. The immediate consequence of automaticity is the release of psychical energy that can be diverted to other tasks. According to Barg and Chartrand (1999), "just as automatic mechanical devices free us from having to attend to and intervene in order for the desired effect to occur, automatic mental processes free one's limited conscious attentional capacity (e. g. Kahneman 1973; Miller, 1956; Posner & Snyder, 1975) from tasks in which they are no longer needed".

Based on such literature, resistance to change in mental representations seems to be the output of a management process that focuses on bounded cognitive resources in order to rationalize their use. Through the routinization of behavior, mental energy is saved and can be invested in new tasks.

The emotional counterpart of resistance will be explored in the next paragraph.

5. RECENT DEVELOPMENTS IN ORGANIZATIONAL STUDIES

Mental representations are embedded with emotional and psychological states among which the motivational phenomena identified by Coch and French (1948) occupy a prominent position. Indeed, contemporary research on organizations has developed a multifaceted perspective on resistance. We will follow Cheng & Petrovic-Lazarevic (2005) as a guide for synthesis and discussion.

As suggested by Conner (1998), when people face a change they pass through a series of psychological states that include initial shock, the denial of the new situation, anger and depression, the attempt to free

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themselves from the feelings of being victimized, and acceptance at last. During such dynamic there is no guarantee that individuals will succeed in overcoming all those phases on their own.

Bovey and Hede (2001) consider resistance a natural part of the change process. Their starting point is that "individuals unconsciously use well-developed and habitual defence mechanisms to protect themselves from change and from the feelings of anxiety change causes" (Bovey and Hede 2001, p. 534). Most common defense mechanisms[8] include irony, denial, breakdown in cognitive functions such as memory and the perception of self, loss of touch with ones own feelings, projection[9] and acting out[10]. While the emphasis on amusing and ironic aspects, as much as the ability to anticipate the consequences of the new situation in order to develop adaptive responses, help people face change, the other mechanisms are fundamentally "maladaptive" and interfere with positive responses.

The authors test the influence of a personal disposition to the unconscious use of maladaptive defense on the attitude to change (Bovey and Hede 2001). The findings of their experiments confirm that such defenses, and projection most of all, are positively correlated with behavioral intentions to resist change. Moreover, the intensity of resistance is increased by high levels of anxiety. Consequently, they suggest not limiting the process of change to technological aspects but also to help individuals "identify and interpret their own perceptions of change, thus creating greater personal awareness and understanding of self. This personal growth and development is likely to alter an individual's perceptions of organisational change, thereby reducing the level of resistance" (Bovey and Hede 2001, p. 546).

So far, resistance has been interpreted as a psychological reaction to inner conflicts which arise in the passage from a known and established situation to a new one. The constructivist approach underlies the social dimension of such passage[11]. In the constructivist framework, resistance is a relative concept whose emergence depends on the social understanding of facts (Cheng and Petrovic-Lazarevic 2005). For example, in an organization people who share the experience of a failure may develop the common idea that *if things have gone wrong once they will continue that way*. Due to resignation, individuals will expect not to be able to manage transitions. In such a context, negative experiences that are shared at

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the group level induce the construction of negative expectations about the future. Resistance emerges, thus, as a symptom and as a consequence of shared pessimism. According to Ford et al. (2002), through reciprocal conversation, the members of the organization strengthen such interpretation by infecting and re-infecting each other.

Piderit (2000) suggests revisiting the concept of resistance in terms of attitude. Her proposal is based on the tripartite view of attitudes developed by Ajzen (1984)[12] and supports the possibility of ambivalence in response to a change proposal. Ambivalence may be understood within a multidimensional approach which holds the cognitive, emotional and volitive dimensions of behavior together. The individual attitude to change results from the interaction of those components. If conflict emerges among the components, or also within the same dimension, ambivalence is generated. In such a framework the intention to support change and to resist may occur positively on one dimension and negatively on another, or even co-occur simultaneously. As Piderit (2000) explains, "the simplest case of ambivalence to imagine is the case in which an individual's cognitive response to a proposed change is in conflict with his or her emotional response to the proposal. Furthermore, ambivalence within a dimension is also possible, and, in fact, ambivalence within the emotional dimension already has been reported in research" (p. 7).

While quite diversified, organizational studies converge on the following points:

- Change in the organization involves personal change in its members;

- Resistance to change may be not intentional;

- It can be controlled and eventually reduced by increasing the participation of the workers to the design and the planning of changes;

- Not only is resistance a "natural" response to change but it could be beneficial if adequately managed.

As underlined by Cheng and Petrovic-Lazarevic (2005), resistance may be interpreted as a symptom of personal involvement in the process of change and should be considered an important resource if compared to "apathy" or "acquiescence". Instead, any change that does not meet obstacles should be viewed as a signal of scarce participation and as a sign of conformity of thought.

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Quite different conclusions derive from the application of the concept of resistance to institutional and political analysis. The next paragraph will explore such a field of research.

6. RESISTANCE TO CHANGE IN POLITICS AND INSTITUTIONS

The concept of resistance to change is analysed by Pierson (2000) within a broader contribution on path dependence in politics. Pierson argues that the political realm has constitutive characteristics which favour inertia and attachment to the status quo. He suggests that increasing returns in the political context are fostered by four interconnected aspects:

- collective action: the effects of a political action often depend upon the actions of others. The more political actors coordinate reciprocally, the more their decisions are effective. Furthermore, a politician may choose to perform an action only if he/she expects that others will support it.
- high density of institutions: politics are the result of a compromise among parties and their relative authority. A change in politics should require a modification in the distribution of power among the involved forces. If the timing of elections act as a limit, politics tent to be durable.
- political power may follow a self-reinforcing dynamic. Parties in power design arrangements that strengthen their authority. Furthermore, they may deliberately favour the social groups from which they expect to receive support in future elections.
- opacity of politics: political actors pursue a wide range of goals and it is not easy to disentangle, observe or measure the effect of a single political performance. This complicates the evaluation process of political action.

Another important source of inertia operates at the cognitive level. Considering Denzau and North (1994), Pierson argues that social actors use “mental maps” to filter information. On the basis of such maps, relevant data are selected and interpreted, thus acquiring a meaning for the individual. As information that confirms the current interpretation tends to be incorporated, while disconfirming

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information is excluded, the employment of mental maps induces increasing return[13]. Furthermore, once an interpretation has prevailed, corrective mechanisms are not easy to implement due to the difficulty of evaluating political performance and comparing options.

As a result, structural factors that characterize the political realm seem to strengthen its tendency to avoid continuous changes. Interestingly, however, Pierson does not limit his analysis of resistance to that of inertia. He also claims that resistance has a functional meaning, which is to say that it is instrumental to the survival of political life. Two main arguments support such a conclusion (Pierson 2000).

Firstly, many implications of political decision only become visible in the long run and long-term effects are commonly heavily discounted. In such a context, formal institutions are often explicitly designed to be change-resistant. In fact, due to "political uncertainty" (Moe 1990), the parties in power tend to establish norms that are difficult to reverse in order to reduce the risk of loosing their achievements if a change in the electoral results occurs. From such a perspective, resistance is a strategy aimed at guaranteeing the persistence of political decisions both for long after they have been taken and also in a different political setting.

Secondly, "in many cases, political actors also are compelled to bind themselves. The key insight of the "credible commitments" literature is that actors can often do better, in the short run as well as the long run, if they remove certain options from their future menu. (…) To constrain themselves and others, designers create large obstacles to institutional change" (Pierson 2000, p. 262). The ground for resistance is thus intentionally built up, in order to reinforce the credibility of commitments.

By following Pierson (2000), Mahoney (2000) interprets institutional evolution as a dynamic process that is punctuated by moments of critical junctures followed by long periods of inertia. During critical junctures, conditions are favourable to change and a plurality of alternative institutional designs is possible. Once a solution has been established, a new phase of inertia begins and persists until reproduction is guaranteed. Inertial factors which reinforce the status quo have origin:

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§ In the difficulty of carrying on a cost-benefit analysis among different political/institutional options;

§ In the costs of switching from one system to the others;

§ In the distribution of power;

§ In the cognitive frameworks of individuals who view the existing institution as respondent to their needs and values.

The fourth explanation addresses the role played by legitimacy. After an institution is created, social actors tend to view it as legitimate and thus voluntarily choose to support it. Institutional reproduction is preserved because the actors believe it is appropriate and morally just. Such evaluation is based on a compatibility between individual values and the institution itself. Whenever a conflict emerged, the reproduction would not be guaranteed any more. Moreover, the growing acceptance among subjects of the institution as appropriate encourages others to express a similar evaluation. As Mahoney argues, "legitimation explanations locate institutional transformation with inconsistencies in the multiplicity of cognitive frameworks that are predominant in society, providing a basis for actors to adopt new subjective evaluations and moral code concerning appropriateness" (2000, p. 525). From such a perspective, then, change requires a transformation in the actors' subjective beliefs and values (see also note 13).

The positions expressed by Pierson (2000) and Mahoney (2000) seem to point out at two different interpretations of resistance.

Once established, institutional evolution is characterized by inertial factors that tend to preserve successful reproduction. Through the survival of the existing institutional structure over time, the environment in which social actors live and plan their life remains unchanged outside the periods of critical juncture. Resistance is functional to social stability, and, stability, in turn, satisfies a basic psychological need for certainty that is shared at the social level. Furthermore, resistance also has an important economic meaning.

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According to North (1994, p. 360) “institutions are the humanly devised constraints that structure human interaction”. They determine the transaction costs and, in conjunct action with organizations, shape “the incentive structure of societies” (ibidem). By making such structure resistant to sudden and unpredictable change, institutions help the planning and fulfilment of economic initiative. Moreover, they also define the ground for predictions about future economic scenarios[14].

From another point of view, Pierson (2000) also suggests interpreting resistance to change as a form of investment from which two main gains are expected, more durable political reforms and more credibility of political commitments. According to such a perspective, political behavior appears to be aimed at preserving stability and at increasing trust relationships among social actors.

7. RESISTANCE TO CHANGE AS A HEURISTIC

As it emerged in the previous sections of this paper, the concept of resistance has been applied to institutions, organizations and cognitive structures in order to identify a modality of response to the occurrence of a change. Apart from the context of analysis, resistance seems to be related to the desire –not necesserly conscious- of avoiding change, of limiting it, or, eventually, of ensuring against its effects (as in the case of political investment). Furthermore, its emergence does not depend on the nature of the change process. The latter may originate in the external environment, such as for managerial decisions that exclude worker’s participation and for modifications in the electoral preferences, or in the mind of the subject, like changes that occur in mental representations. Both cases converge on the same phenomenon: change is likely to be resisted, at least in the initial phases of its happening.

In this paragraph we will propose an explanation for the pervasiveness of resistance and for its unavoidable occurrence. In particular, we will suggest reinterpreting resistance to change as a heuristic.

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The concept of heuristic was introduced by Herbert Simon in his discussion of human cognitive processes (1957). As is well known, most of Simon's contributions were concerned with the constitutive limitations of rationality and reasoning. Due to the limits in the amount of information that can be processed by individuals and due to their bounded capacity of attention and memory, subjects build up simplified mental representations of the world in which they act. Being incomplete, such representations are imperfect and partial. Heuristics derive from these simplified models. In particular, Simon suggested that agents use rules of thumb and intuitive strategies to take decisions and to solve problems rather than optimizing procedures. Thus, he saw heuristics as mental shortcuts that individuals develop to cope with bounded cognitive resources.

Considering Simon's concept, we suggest interpreting resistance to change as a psychological –and eventually behavioral- attitude that is aimed at overcoming cognitive and emotional limits. When reactions toward changes are considered, such limits are related to three main aspects.

1. An emotional difficulty to dominate the ambivalent feelings triggered by the situation of change. Those feelings include anxiety and fear and may have critical effects on one's self esteem. Resistance aims at skipping or negating such unpleasant emotional states;

2. A tendency of avoiding or procrastinating the cognitive costs of re-elaborating one's mental representations. In particular, the most intense resistance is experienced toward the pressure to modify one's self image which includes personal values and beliefs. Conflicts are avoided in order to preserve the integrity and the stability of the Self;

3. A limited capacity of dominating environmental uncertainty, were it generated in the workplace or in the political/institutional setting. In the case of unavoidable precariousness, the desire for an insurance against the risk of unpredictable results may be felt and shared collectively. Political commitments, as much as the development of binding and durable institutional reforms, may be interpreted as concrete realizations of this shared need[15].

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From such a perspective, resistance to change is a compromise between two aspects of economic reality. The structural uncertainty of the environment, on the one side, and the imperfection of human nature, on the other. Such imperfection does not only regard rationality, attention and memory, as already claimed by Simon (1947; 1957), but also the emotional sphere of individuals. In the event of a change, for example, the emergence of ambivalent feelings and defense mechanisms reflects the difficulty in dominating anxiety and fear that are triggered by the unknown. The search for an enclosure to uncertainty appears to affect behavior significantly. During problem-solving, the desire to avoid the cost of re-framing and the conflict with one's self-image is felt. In organizations, changes that have been planned without ample participation are feared. In political settings the need for stability and credible commitments is shared both by politicians and electors.

Were the changes faced without any kind of friction, they would risk generating an unbearable level of uncertainty. Resistance, on the contrary, helps agents cope with the costs of precariousness. It does so by slowing down the speed of the change process and by increasing the participation of social actors to its happening. According to this interpretation, its ultimate effect may not necessarily be that of preventing changes but of making them more gradual and, thus, more accessible.

8. CONCLUDING REMARKS

In this paper we have tried:

- To shed light on the evolution of the concept of resistance to change since its introduction by Lewin (1946). Despite being almost ignored by the literature, Boulding's eclectic contribution prophetically grasped the ubiquitous presence of resistance in economic and social behavior. We have examined the diversified meanings that the concept has acquired in the last decades with reference to

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the dynamic of mental representations in problem-solving, to organizational studies, and to political analysis.

- To suggest that change processes induce similar reactions, apart from the specific context in which they unfold.

- To underline that the need for stability and the fear for uncertainty affect behavior in all those contexts.

- To interpret resistance to change as a heuristic, which is to say a mental shortcut that helps individuals cope with uncertainty. Such interpretation is grounded on the hypothesis that economic agents have to confront their limits in order to make choices. Such limits affect cognitive as well as emotional processes. In particular, not only their rationality but also their capacity of bearing precariousness appears to be bounded.

- To acknowledge that resistance, when interpreted as a heuristic, may increase the graduality of the change process. From such a perspective, its effects may turn out to be more favourable than expected. Graduality can render the dynamic of change and its emotional meanings less difficult to bear and, ultimately, more manageable.

As such conclusions suggest, the multifaceted complexity of human nature -both its imperfections and its resources- crucially affect the way changes unfold and consolidate.

NOTES

[1] "It is not similarity or dissimilarity of individuals that constitutes a group, but rather interdependence of fate. Any normal group, and certainly any developed and organized one contains and should contain individuals of very different character…. It is easy enough to see that the common fate of all Jews makes them a group in reality" (Lewin 1946, p.165).

[2] Among others contributions, the following are worth remembering: "Resistance to Change –Its Analysis and Prevention" by A. F. Zander (1950); "How to Deal with Resistance to Change" by P. R. Lawrence (1954). According to Dent and Goldberg (1999), "by 1962, *resistance to change* had taken on the meaning that is widely understood by our students and

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organizational clients today and continues to be promulgated in textbooks. That meaning is a psychological concept in which resistance is sited within the individual, and the manager's task is to overcome it".

[3] Kenneth Boulding (1910 – 1993) was born in Liverpool, England. Among his main works, The Economics of Peace (1945), The Organizational Revolution: A Study in the Ethics of Economic Organization (1953), The Image. Knowledge in Life and Society (1956), Conflict and Defense: a General Theory (1962), Economics of Pollution (1971), Evolutionary Economics (1981), Ecodynamics: A New Theory of Societal Evolution (1981), Towards a New Economics: Critical Essays on Ecology, Distribution, and Other Themes (1992)[3]. For a complete bibliography see Boulding's home page at CSF, Colorado: http://csf.colorado.edu/boulding.

[4] Nevertheless its centrality in the whole book, the "image" is never explicitly defined by Boulding (1956). From the perspective of cognitive science, the main question that is raised by the concept concerns the distinction (if any) of mental images from other forms of mental representations. For further analysis and discussion see Patalano (2007a).

[5] "The buyer or seller in an imperfect market drives on a mountain highway where he cannot see more than a few feet around each curve; he drives it, moreover, in dense fog. There is little wonder, therefore, that he tends not to drive it all but to stay where he is. The well-known stability or stickiness of prices in imperfect markets may have much more to do with the uncertain nature of the image involved than with any ideal of maximizing behavior" (Boulding 1956, p. 85-86).

[6] Another field of analysis in social psychology has linked resistance to change to the need for cognitive closure, that is the "individuals' desire for a firm answer to a question and an aversion toward ambiguity"(Kruglanski and Webster 1996, p. 264). As a consequence of such desire, subjects may "freeze" on their past knowledge, process less information or remain stuck to old judgements. For an analysis of behavioral implications at the individual and social level see Kruglanski and Webster (1996), Jost, Glaser, Kruglanski and Sulloway (2003), Kruglanski, Pierro, Mannetti and De Grada (2006).

[7] For a brilliant analysis of automaticity see Barg and Chartrand (1999).

[8] An antecedent of the analysis of resistance to change in terms of defensive routines can be found in Argyris and Schon (1978) and in de Board (1978).

[9] "An individual deals with internal/external stressors by falsely attributing to another their own unacceptable feelings, impulses, or thoughts" (Bovey and Hede 2001, p. 537).

[10] "An individual deals with internal/external stressors by actions rather than reflections or feelings and includes transference which is the recreation in present relationships of experiences from earlier childhood relationships" (Bovey and Hede 2001, p. 537).

[11]As stated by Cheng and Petrovic-Lazerevic (2005, p.4), "the post-modernist constructivist view of resistance to change is that realities are socially constructed and there is practically no exact, objective, and homogeneous reality as to what the

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same change means to different members of an organizations. For the constructivist, the reality we know is interpreted, constructed or enacted through social interactions (Berger & Luckmann 1966; Watzlawick 1984; Weick, 1979)".

[12] According to Ajzen (1984) an attitude has three main dimensions. The cognitive one identifies the individual beliefs about the attitude object; the emotional dimension refers to the feelings triggered by the object; and the intentional one refers to a plan to take some action toward the object.

[13] Such a position is very similar to that put forward by North (1994) and Mantzavinos et al. (2004) on the role played by mental models in the establishment and survival of institutions. As claimed by North (1994), "the relationship between mental models and institutions is an intimate one. Mental models are the internal representations that individual cognitive systems create to interpret the environment; institutions are the external (to the mind) mechanisms individuals create to structure and order the environment" (1994, p. 363). For these authors, shared mental models are the cognitive basis on which institutions are created and legitimised in order to solve social problems (see Patalano 2007b for a critical discussion).

[14] Both Simon and Hayed had already underlined the important role played by institutions in the process of coordination among social actors. According to Hayek informal institutions, such as norms or rules of behaviour, help co-ordinate expectations. In particular, behavioural patterns that emerge and consolidate, thus becoming consuetudinary, facilitate interaction by making the actions of any agent predictable to the others (Hayek 1978). Similarly, Simon (1958) argues that institutional patterns simplify the process of forecasting by providing a source of reliable expectations upon which decision-making may be based.

[15] Psychological research on political conservatism support such an interpretation. Wilson (1973) has considered the desire to reduce uncertainty as a motive for the support of conservative ideology. Uncertainty avoidance (Sorrentino & Roney 1986; Wilson 1973) and the need for cognitive closure (Kruglanski & Webster 1996, see note 6) influence the tendency to preserve what is socially established. Furthermore, the attempt to manage fear and anxiety toward the unknown is positively correlated with a core aspect of conservatism, that is resistance to change (Jost, Glaser, Kruglanski and Solloway 2003).

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