



Relmeccs, junio-noviembre 2019, vol. 9, no. 1, e049, ISSN 1853-7863
 Universidad Nacional de La Plata. Facultad de Humanidades y Ciencias de la Educación.
 Centro Interdisciplinario de Metodología de las Ciencias Sociales.
 Red Latinoamericana de Metodología de las Ciencias Sociales

Creativity as a Methodological dimension of Social Research between Quantity and Quality

La creatividad como dimensión metodológica de la investigación social entre cantidad y calidad

Francesco Sacchetti

*Università degli Studi di Urbino Carlo Bo Research fellow,
 Department of Communication Sciences and Humanities (DISCUI), Italia
 francesco.sacchetti@uniurb.it*

ABSTRACT:

In this work I address creativity in the process of social sciences research, comparing quantitative and qualitative approaches. In discussing creativity I go back to Chomsky and his distinction between rule-governed and rule-changing creativity. In my analysis I suggest that the quantitative approach is characterized by rule-governed creativity, the qualitative one by rule-changing creativity: these are two models of creativity that the Chomskian vision links to a set of rules. Thus in the first case the creation of the tools by which the researcher collects information is submitted to a set of rules related to substantial and procedural competences. In the second case the creative phase does not have a place in the creation of a tool, but rather in a performance. The idea of performance as a constitutive part in qualitative research is analysed on a substantial basis, revealing the implications of distinct creative processes under different methodological choices. Whilst a quantitative approach requires using procedural and substantial competences, I suggest that in a qualitative enquiry the researcher's fieldwork is considered as a 'performance' because of its adaptive character. The researcher is constantly confronted with unforeseen situations, surrounded by an unknown environment. Also, this use of the notion of 'performance' comprehends both elements of the process as well as of the outcome of fieldwork, as it recalls peculiar characteristics of qualitative work: action and interaction, personal involvement and, above all, orientation to a purpose (in this context, the teleological purpose of knowledge production).

KEYWORDS: Social research methodology, Creativity, Quantitative approach, Qualitative approach.

RESUMEN:

En este trabajo abordo la creatividad en el proceso de investigación de las ciencias sociales, comparando los enfoques cuantitativos y cualitativos. Al hablar de creatividad, vuelvo a Chomsky y a su distinción entre *rule-governed* y *rule-changing creativity*. En mi análisis, sugiero que el enfoque cuantitativo se caracteriza por *rule-governed creativity*, la cualitativa por *rule-changing creativity*: estos son dos modelos de creatividad que la visión chomskiana vincula con un conjunto de reglas. Así, en el primer caso, la creación de las herramientas mediante las cuales el investigador recopila información se somete a un conjunto de reglas relacionadas con competencias sustanciales y de procedimiento. En el segundo caso, la fase creativa no sucede en la creación de una herramienta, sino en un rendimiento. La idea de desempeño como parte constitutiva en la investigación cualitativa se analiza de manera sustancial, revelando las implicaciones de distintos procesos creativos bajo diferentes elecciones metodológicas. Si bien un enfoque cuantitativo requiere el uso de competencias sustanciales y de procedimiento, sugiero que en una investigación cualitativa el trabajo de campo del investigador se considera un "rendimiento" debido a su carácter adaptativo. El investigador se enfrenta constantemente a situaciones imprevistas, rodeado de un entorno desconocido. Además, este uso de la noción de "desempeño" abarca tanto los elementos del proceso, como el resultado del trabajo de campo, al recordar características peculiares del trabajo cualitativo: acción e interacción, participación personal y, sobre todo, orientación hacia un propósito (en este contexto, el propósito teleológico de la producción de conocimiento).

PALABRAS CLAVE: Metodología de las ciencias sociales, Creatividad, Enfoque cuantitativo, Enfoque cualitativo.

1. INTRODUCTION

In social sciences it is possible to distinguish two research approaches that are widely debated. The first one conceives the world along a number of variables and aims at analysing the association between them;

Recepción: 27 de julio de 2017 - Aprobación: 28 de noviembre de 2017 - Publicación: 21 junio 2019

Cita sugerida: Sacchetti, F. (2019). Creativity as a Methodological dimension of Social Research between Quantity and Quality. *Revista Latinoamericana de Metodología de las Ciencias Sociales*, 9(1), e049. <https://doi.org/10.24215/18537863e049>



the second one is devoted to the holistic comprehension of specific social realities. This obviously lays the foundations for debate between quantitative and qualitative approach¹. One of the limits usually attributed to the qualitative approach is the lack of an operational definition, a structured and controllable search scheme. The attempt then becomes to reformulate the opposition between quantitative and qualitative approach by talking about two forms of creativity. One is a real creativity, the other takes the form of dexterity. A distinctive feature of qualitative research is to harmonize their research practices with the context in which they apply (Cardano, 2014) and this exercise of constant harmonization is the way in which this creativity is exercised. The indeterminateness of some tools becomes a resource: in this frame, recalling the sensitizing concepts is very effective. The sensitizing concept is rich precisely because of its openness, Blumer speaks about “undefined concepts” having in mind the operational definition, is not a not yet mature concept, but is a concept that wants to be open to meet the unexpected. Actually, sensitizing concepts are not the starting point for qualitative research alone, but for research in general. Just the building of a cognitive pathway that has within it the opportunity to show the researcher “an otherwise” (Cardano, 2014), qualifies it as a research path out of the closure.

In the brief space of this article I will only touch some of the concepts related to the above-mentioned debate. The specific purpose here is to link the research process in the social sciences with the dimension of creativity. Rather than addressing creativity as an ordering property of chaos - as it happens in a number of contributions on cosmogony (Arlow, 1982; Bonnefoy, 1992) - or as an exclusive property of genius often associated to dissolute living and eccentricity, I look at creativity as a property belonging to every single human being (Chomsky, 1964; Amabile, 2001).

2. WHAT ABOUT CREATIVITY

The notion of creativity is linked to a human being's property that is often not well defined. In this paper I will use two meanings of creativity: one comes from the Latin word *creare*, which subtends to the idea of creation from nothing, as suggested by the Jewish-Christian tradition, where the divine accomplishes creation in a linear way (it had a beginning and an end). The other one comes from the Greek word *kraínó*, meaning to produce or to complete, from which derives another word, *krantór*, which means dominator, and *kretón*, the one who makes, the one who creates. In the etymology of the word “creation” we find the Greek term *Κράντωρ* (Krantór), the name of a Dolope given in hostage to Peleo and became his favorite squire; it is a nomen agentis derived from the verb *κράϊνω*, “accomplish”, “realize”; it means “the one who realizes” and that, therefore, it also becomes “master”, “sovereign”, “dominator”. In the Greek etymology the action of creation is strictly connected to the domination of something that allows to create; nevertheless Greeks had a circular conception of motion structures and time (Gobo and Tota, 1994), that suggests the idea of transformation instead of a creation from nothing.

The etymologies of the word help us to understand why Chomsky (1964) speaks about creativity instead of productivity when referring to the human being's ability to formulate and to understand new sentences in accord with a grammar. He distinguishes between *rule-changing creativity* and *rule-governed creativity* (p. 22). The distinction pertains to linguistic production regarding grammar rules: an individual could be creative by means of changing the language in some ways (first type), or because although she or he does not modify the language, she or he rather understands it and produces new sentences (second type). In the first case the property concerns a creation that brakes with what has been up to that particular moment. It is an act that bypasses established rules and constitutes something original, which did not exist before in that ambit (which reminds us of the Latin meaning). I will link this form of creativity to the qualitative approach. In contrast, I will refer to *rule-governed creativity* (linking it back to the Greek meaning) in relation with the quantitative approach; it is an application of rules that come from both substantive and procedural knowledge.

In the next sections I suggest in what respect the Chomskian dyad can help to identify the creative aspect of research as a constituent and normal part of the knowledge production process. Contextually, I will propose creativity as being a property of both quantitative and qualitative research approaches: the substantial differences, I argue, regard when, in what phase of knowledge production creativity is particularly necessary and how it is expressed. I then apply my considerations to the different treatments of creativity in research, looking at the plurality of structures that research design may assume, reflecting the researcher's decision to adopt a quantitative or qualitative approach.

3. THE ECHOES OF *KRANTÒR* IN THE QUANTITATIVE APPROACH

Bickman (1976) defines structuring as a continuum along which it is possible to set up the observational tools. On the left-hand extreme of this continuum there are those tools⁴ by which, in the design phase, one defines clearly and not ambiguously what to observe. This allows a comfortable comparison among different observations. Moving to the right-hand side of the continuum, the degree of freedom with which the researcher observes increases. So the researcher will be free to collect every event she or he considers interesting in order to gain information.

I would also underline that to define a data collection scheme with different degrees of rigidity depends on the establishment of more or less constraining rules that the researcher shall follow. For example, in a completely structured data collection scheme the researcher would indicate what to observe, how to observe it and how to record it. This is generally the case in which the researcher adopts a quantitative approach, which would be effective once one disposes of a satisfying knowledge of the research object. In this case, from a research-design point of view, when the object studied and the theory are defined, the researcher would formulate the hypothesis (that will be checked during data analysis⁵) as well as the model specification. She or he proceeds then to set up a sampling plan - which ideally should be random in order to make inferential procedures on research results possible - on the basis of those properties which have to be representative. After these steps, she or he operationally defines all the properties of the object studied. This consists in giving a set of rules that allow her or him to transform the attributes of an object into the modalities of a variable. Data collection and matrix data entering would follow, entering into data analysis, hypothesis control and concluding with results communication.

According to the quantitative approach, the researcher can operationally define properties in order to build up a set of variables and, subsequently, organise data in a matrix. This process is consistent with the specification of the model, which includes both its properties, as well as the hypothesised relationships between them.

This can be identified as the first creative phase of the quantitative approach: relying on the strength of the knowledge acquired about the problem, the researcher defines which properties are relevant for his aims. She or he then creates a model which takes into account both a vision of reality and formal aspects of definition, depending on the purpose of his research. This ability to move deftly between reality and the necessary reduction of complexity inside a model needs particular cognitive effort: it requires the application of theoretical knowledge about relationships between properties in a model that presupposes a cognition, or at least a hypothesis, about the direction of relationships.

Once the model has been specified, the researcher enters in the second creative phase; in this case properties are defined in a more operative way. According to Marradi (2007: 107) an operational definition is "the set of rules and conventions that allow to transform a property into a variable inside a matrix"⁶. He also suggests that those conventions regard not only every single property, but also every new research. Especially in social sciences, where shared and inter-subjective definitions are not so common, the researcher has a wide margin

to express his creativity despite the fact of working with an approach (the quantitative one) that is historically considered objective and characterized by a low level of influence of the knowing subject.

For example, the use of different types of scale (e.g. a Likert scale rather than a feeling thermometer) to collect states on a property, rather than a more or less sensitive plan of codification⁷, are all due to the choice mediated by the researcher's creativity, when she or he applies his competences to a new object of enquiry. This vision of the process does not brake the orderliness claim of the quantitative approach, but nor does it underestimate the creative role of the researcher during the process of model specification and operational definition. The latter impacts on the whole research and reflects the researcher's creative effort as an expression of what I would name, following Chomsky (1964), *rule-governed creativity*.

Building on Chomsky (1964), I propose an interpretation of research according to which the creative act supposes both substantial and procedural competences, which allows us to operatively define properties and to transform them into variables. This type of creativity is strongly related to the common practice of problem solving based on the logic of learned rules. Here the warning of *Krantòr* (the dominator) echoes strongly: in this case the dominion concerns what is known, that means the capacity to describe and question it in a appropriate way depending on a satisfying degree of previous knowledge (*etic* perspective). The creative phase concretely leads, on the one hand, to the construction of the collection tool, which takes place before the gathering of information. On the other hand, it offers the advantage of proposing a testable hypothesis, as previously defined variables are analysed. The representation of reality – and its correspondence to the collected information – is the major issue here, because the creative effort must work within the established rules. Conformity to existing rules allows us to deconstruct results and build upon them once the original research tool has run out of its collection function.

4. DEFINITIVE OR SENSITIVE TOOLS

It is not always possible to think of a particular phenomenon and objects *a priori*: for example, the relevant “codified knowledge” (Polanyi, 1958) could be unavailable, available only partially, or obsolete (Cowan, David and Foray, 2000). In these cases model specification is impossible or inoperative, following of the quantitative approach *criteria*. According to Nigris (2003) such an outcome could even be the conscious choice of not structuring when one recognises “the excess of what is knowable over what is known, mainly by avoiding the supposition of holding right at the beginning the whole set of concepts concerning the description of the observed world”⁸ (p. 42). Starting from these assumptions, the use of a highly structured tool is not always a viable research strategy. By eventually overestimating the available knowledge, the researcher runs the risk of behaving – to recall an old Jewish saying – “like the nocturnal drunkard who searches for his lost keys under a street light because that is where they are easier to see” (Piore and Sabel, 1984: 222). The light of the “quantitative streetlamp” is bright but also strictly focused on that specific part of reality on which the researcher directed it. All the things that fall outside the light run the risk of being ignored, making the research useless.

Differently, in an unstructured data collection scheme the researcher tries to be led by people's narration, and therefore leaves them free to picture the world at their level of comprehension. In this context the researcher has to find the way that she or he considers the most appropriate. Because of the complexity of reality and the narrowness of individuals' knowledge (Hayek, 1945), in some cases it is not possible to acquire previous knowledge about the object of research. This is, for instance, the case of local phenomena, whose knowledge has never been codified in any form. Nevertheless a low structuring tool is advisable when the object reflects issues that are difficult to observe, such as personal relationships or, more critically, people's point of view (*emic* perspective). The whole strand of qualitative studies comes from considerations of that kind and finds its application building on the assumption that an individual is able to argue about his everyday life. The researcher's task is then to arrange a low structured research tool, one that would leave to the speaker

the possibility to express her or himself with his own words and at his level of comprehension (Montesperelli, 1998).

The aim is to recognise in the subject a better awareness of his own environment, as compared to the researcher's. For example, a community that decides to live in a radically different way from the rest of society is hard to investigate *a priori*, not least because of the poor contextual knowledge that the researcher has of that world. For these reasons considering, for example, the technique of in-depth interview, it will be desirable that the subjects lead the trajectory and the unfolding of interviews. The researcher steps in only when the interview is protracted in some uninteresting ways that are recognised as being useless for the research aims. This allows, especially in preliminary steps, to use, or to fix, "sensitizing concepts" around which to focus the attention during later interviews, other than introducing the researcher to a new way of thinking, which is different from his own and from his mental categories. The expression "sensitizing concepts" was coined by Blumer (1969), by which he means those concepts that prepare the researcher to perception, to follow some ways instead of some others, that focus his attention on specific issues or situations during the development of the research:

I think that thoughtful study shows conclusively that the concepts of our discipline are fundamentally sensitizing instruments. Hence, I call them "sensitizing concepts" and put them in contrast with definitive concepts such as I have been referring to in the foregoing discussion. A definitive concept refers precisely to what is common to a class of objects, by the aid of a clear definition in terms of attributes or fixed bench marks. This definition, or the bench marks, serves as a means of clearly identifying the individual instance of the class and the make-up of that instance that is covered by the concept. A sensitizing concept lacks such specification of attributes or bench marks and consequently it does not enable the user to move directly to the instance and its relevant content. Instead, it gives the user a general sense of reference and guidance in approaching empirical instances. Whereas definitive concepts provide prescriptions of what to see, sensitizing concepts merely suggest directions along which to look. (...) They lack precise reference and have no bench marks which allow a clean-cut identification of a specific instance and of its content. Instead, they rest on a general sense of what is relevant. There can scarcely be any dispute over this characterization" (pp. 49-150).

Starting from sensitizing instruments, the level of structuring of the scheme can change during the research development but, as Cozzi and Nigris (2003) notice, it can only get higher. At the beginning of the research, if the study object is not well known, the observer lets events lead his involvement. Differently, at the end of the explorative work when she or he knows more about the object of his study, if necessary, she or he might decide to adopt a more structured data collection scheme. Having gone through these stages, *the researcher can examine the world through learnt categories, or can build a model based on learnt knowledge*, therefore being in a position to undertake simulations⁹.

5. CREARE: THE COGNITIVE RESTRUCTURATION IN THE QUALITATIVE APPROACH

In a quantitative approach, the researcher moves inside a complex set of rules with which she or he is confronted when using his creativity. Differently, the qualitative approach is not based on a set of procedures or necessary and sequential steps that the researcher has to follow to set up and use his own gathering tools. Moving from the assumption that knowledge is not adequate to describe a certain portion of reality, what qualitative research really tackles is the cognitive effort to understand mental categories of other subjects and how they see their world.

The key driver of qualitative approaches remains on an implicit level: whatever the reason for its not being possible to have sufficient knowledge, the researcher has to tackle the issues of inaccessibility of information and of lack of comprehension when designing research. The qualitative approach allows us to break those impasses. By entering into the field, the researcher interacts, experiences directly how people live, what their practices and habits of thought are, as well as what mental categories they use to give sense to reality. This

allows her or him to define problems on the strength of a new and pertinent knowledge that does not belong to people who live in an external context.

Differently, whilst a quantitative approach requires using procedural and substantial competences, I suggest that in a qualitative enquiry the researcher's fieldwork is considered as a 'performance' because of its adaptive character. The researcher is constantly confronted with unforeseen situations, surrounded by an unknown environment. Also, this use of the notion of 'performance' comprehends both elements of the process as well as of the outcome of fieldwork, as it recalls peculiar characteristics of qualitative work: action and interaction, personal involvement and, above all, orientation to a purpose (in this context, the teleological purpose of knowledge production). According to Turner (1982):

Performance (...) is derived from the Middle English *parfournen*, later *parfourmen*, which is itself from the old French *parfournir* – *par* ('thoroughly') plus *fournir* ('to furnish') – hence *performance* does not necessarily have the structuralist implication of manifesting *form*, but rather the processual sense of 'bringing to completion' or 'accomplishing'. To *perform* is thus to complete a more or less involved process rather than to do a single deed or act. To perform ethnography, then, is to bring the data home to us in their fullness, in the plenitude of their action-meaning (p. 91).

In this sense, it is also possible to define performance as a creative process by which the researcher experiences the mental categories of the studied people. This characteristic is absolutely central: in this case the creative aspect does not develop by applying a set of rules, but unfolds through a sort of *crossing-over* in which interaction is always a relationship that starts something new (knowledge in this case). According to Turner (1982: 79) the idea of performance takes the form of a process and not of "rules or rubrics". Rules here are mainly functional to the framing of the process, because "a river needs banks or it will be a dangerous flood, but banks without a river epitomize aridity."

In this context, a researcher's creativity is expressed in a different way, through a process that involves the deepest aspects of personal and social life. She or he follows the Latin meaning of the term creativity, as the creation of something that did not exist before (new mental categories). This is possible through the process of cognitive restructuring that does not follow steps to control hypothesis, but that proceeds in an experiential level. Restructuring is a creative act that gestaltists called 'insight' (German: *Einsicht*, literally 'see inside', but also 'glimpse' in the sense of a solution). Insight means to see inside a problem, to grasp the functional relationships between the elements, between the relationships in a situation, to finally solve it with a cognitive act of "restructuring". Cognition is located there, in the relationship between mind and the world (Anolli and Legrenzi, 2006) and it is based on achieving understanding into a situation and which sometimes comes about suddenly, in an Aha! or Eureka! experience (Weisberg, 2015).

The frame by which the researcher interprets actions and behaviours changes. She or he begins accessing interpretations of reality that she or he could not think of earlier. In this case, she or he refers to what Chomsky (1964) defines as *rule-changing creativity*. The *performance process* is the one which leads the researcher to call into question his way of interpreting a particular portion of reality, and to change his interpretation when achieving the comprehension of the mental categories of subjects with whom she or he gets in touch. Through a cognitive restructuring we act the rule-changing creativity: it is the conceptual frame that changes, which modifies itself, and allows us to reposition situations, thoughts, and interpretations of the social reality.

From another point of view, in social sciences performance processes may entail different levels of interaction, involvement and engagement. This implies building trust with the people the researcher interacts with, to understand what they expect from her or him, as well as what role people recognise her or him playing. To face those issues means to manage unexpected situations, and this is never an issue of application of rules, but is a relationship, a crossing-over.

The image and behaviour of the knowing subject certainly reflect the categorization she or he uses to learn about the world. Such categories will be perceived and will influence the subjects studied, regardless of whether the study entails a relationship with an interviewee, an interaction with a participant in a focus

group, or a sharing of life with a group of people during ethnographic research. For example, commenting on ethnography, Cardano (2003: 126) emphasises that:

Fieldwork starts with a particular rite of *status* inversion: the observer becomes the observed object by the ‘natives’ who, from the few evidences offered during initial encounters, legitimately try to understand whether, and to what extent, they can trust him¹⁰.

Furthermore, ethnographic experience has a dialogical structure. Diving and participation in a form of life is something with which we submit our interpretative categories and the product of our interpretive work to the confrontation with others. Such (emic/ethic) confrontation should not be reduced to member validation or host validation strategies so an interpretation of a cultural context is appropriate if it gets the recognition of our participants/guests but we consider their reaction, which is typical of social sciences. It is precisely because there is this ontological proximity between the one who observes and who is observed that our speeches become something retrograde about the objects themselves and thus creates an element of complexity.

6. A PRIORI CATEGORIES OF UNCONSCIOUS LEVEL

It would be misleading to think that the research activity will be void of problems at an heuristic level just by using a low level of structuring. Even in the extreme case in which the researcher could observe whatever aspect of reality, she or he cannot avoid - in the act of orienting his sight - scanning reality through his mental categories – perhaps unconsciously – and filtering information collection. She or he cannot rid her or himself of what she or he is and has been, thus bringing with her or him a reference framework to interpret and recognize reality at an unconscious level. According to Alfred Schutz (1932) (Muzzetto, 1997) this means moving in a pre-logic level of consciousness, in which one brings back objects to known ‘typification’. This process is placed into a deep level of conscious that works on automatism. This leaves space for the possibility of turning to categories that the researcher already has, but which are not adequate to understand a new context. Still, in the early stages of research this seems to be unavoidable, for example when “we identify a specific [empirical] referent as the member of a class [...] that we have already constituted (e.g. a table / a bicycle / a human face / a woman’s voice / a rock song / a nervous disorder)”¹¹ (Marradi, 2001: 13). The unconscious process by which one assigns a referent to a class is called by Aristotle (Posterior’s Analytics: II.19) “intuitive induction”. Cognitive psychologists call it categorization, whereas Schutz (1932; 1959), remarking on an ordering function of perceptive chaos that allows social interaction, uses the term ‘typification’ (1932; 1959; cf. also Husserl, 1939).

Nevertheless, it is only with late post-positivism that observation of reality has come to be no longer considered a cognitive activity that leads to a pure and incontrovertible awareness. The observation process is influenced by the researcher’s cultural context, by perception and knowledge about psychological mechanisms that lead actions and, in the end, by the modalities of the observation. Thus, observation is an activity that collects information through the knowing subject. She or he will interpret the reality through his categories that can be cultural, learned by means of socialisation, or learned by belonging to researcher’s scientific community. The first two can vary across individuals and inside the individual as well. Although a scientific community has its own cultural and socialisation dimensions, there are aspects of the specific categories of science which frame the world following more rigorous procedures: they are more stable, less ambiguous, capable of allowing a satisfying shared observation. For these reasons, observed data stop providing that certitude which has been a central linchpin in positivist thought. Rather, the reflection on how theory penetrates in observation processes becomes central and underpins the thesis of theory ladenness¹² (Hanson, 1958; Brewer and Lambert, 2001)

Hanson (1958) undertakes a philosophical reflection about epistemological problems in the field of particle physics. He concludes that to perceive even an ordinary object of everyday life, it is not enough to see it. Rather, human beings need to have a preliminary knowledge about it. Likewise, for an individual to obtain information from perception, the objects encountered must be identified. To do so, the individual needs access to a relevant set of information. Hanson gives some examples of objects that contemporary people directly perceive because they are familiar to them, but that people of past generations would not recognise, being extraneous to them. Hanson (1969) suggests that in seeing there is more than being blindingly obvious. What an individual sees is what his consciousness and education allow her or him to see, and what she or he learns about what he observes is not determined only by the object that she or he is looking at, but mainly by what she or he already knows.

Affirming that to hold from the beginning the whole set of categories which are needed for the correct interpretation of a new context would mean having an omniscient mind (Hayek, 1945). Moreover, it would mean deceiving ourselves with the belief of being able to observe free from any *a priori* category – even unconscious – is equally absurd.

In *Critique of Pure Reason*, Kant (1781) argues that reason sees only what it produces by itself: space, time and categories intervene in the phenomenon formation and the empirical data is constructed transcendently through the *a priori* functions of sensitivity and intellect. Also, following Simmel (1900; 1950) it is possible to consider *a priori* comprehension based on pre-formed categories. However, because it is referred to as social reality, his idea of a priori does not seem to respect the fixity which is typical of the Kantian conception. The *a priori* by which the people recognise reality are modifiable by experience, they depend from a space-temporal dimension, they can vary from individual to individual and also inside the individual himself (Boudon, 1989; Migliozzi, 1996). This is a central process in that it allows the evolution of mental categories through experience. Such a process implies that to establish a contact with the knowledge shared by a group of people presupposes the willingness to open one's self to learning, and a capacity to modify one's thought categories in evolutionary terms.

7. RUBBISH OR WRECKS?

In 2006 I conducted an ethnographic research in the Mutoids community based in Santarcangelo di Romagna, Italy. For six months I lived with them and shared the everyday life of this group of people. Mutoids are a small community composed of about 20 people who are based in an ex gravel pit in the suburbs of Santarcangelo, near Rimini, since 1990. The initial core of the community was created by people of English and Scottish origins, but other people from Italy joined the initial group later on. They live in caravans or old buses that have been transformed into houses. "The Camp" is about 100 metres of not paved space where houses are disposed, lorries and cars are parked, and where wrecks that the group recycle are piled up. Members of the Mutoids live principally thanks to their recycling art, 'mutating' wrecks and other goods discarded by society into sculptures, mutant machines, installations, or doing performances inspired by a post-nuclear future. In the Camp's main square a great monument rises up. It was constructed by the Mutoids when they arrived in the gravel pit and is made of two lorries knocked vertically in the ground. They are linked together like a dolmen, but in a contemporary – post bombardment – version. Other sculptures are dispersed across the Camp and in front of the houses of their creators.



Author photograph of the Mutoid's Camp

The only way to study and understand a way of life which immediately seems to be so different from the mainstream one to which I belong, was to apply a qualitative research design. A questionnaire would not have been an effective tool to collect data about them. This is because of the difficulty and perhaps uselessness of writing questions about a context that is radically unknown, following an *etic* cognitive perspective. The categorial *iato* that separated me from a comprehension of their existence could be filled only with a direct experience of their life.

For example in the first period I spent in the field I did not really understand the role of the wrecks and other things jumbled in the Camp. I just did not wonder anything about them, I took them for granted, like a naïf frame populated by this different people. But this was a central issue that I did not recognise immediately. I was too much concentrated on gaining their trust and on the avoidance of doing something wrong, to pay attention to what was abundant in the Camp and which my mind recognised automatically as rubbish. Rubbish: probably few things could have been more misleading. To illustrate, when Connie, one of the Mutoids, invited me to her birthday party at the Camp, after having celebrated all night, bottles, plastic dishes and exploded balloons were jumbled all over the ground of the principal square. I had to go home to sleep a couple of hours, but I promised myself to be back in the morning to help with the cleaning up. The morning after, when I arrived at the Camp, I was really surprised to find that everything was neat and ordered. There were no signs pointing to the party of the night before: no bottles, no plastic dishes, not even a little piece of waste paper lied down on the ground. I found that circumstance very strange. Why should people who live surrounded by rubbish clean so fast and accurately after a party? Something did not match with my pre-existing habits of thinking and behaving. I could have ignored that contradiction, but something, possibly intuition, suggested to me that there was some relevant element I did not guess.

The only way to give sense to the whole situation was to state an hypothesis that (if true) explained as normal the event that I could not understand at my level of comprehension. This is an abductive¹³ reasoning. Because of its logic construction, this is the only inference that allows us to introduce new knowledge in reasoning, to be more precise, that lead us to a conclusion that is not included in the premises.

That was the first time I really understood the function of the wrecks jumbled all over the camp: It was not 'rubbish' but the discards of society that the Mutoids pile up and then use as the prime material for their houses, sculptures and performances, or for their everyday life.

Moreover, they are extremely sensitive to environmental issues: inside the community they practice the separate collection of rubbish that they obviously produce and discard, and outside they collect things that other people consider as rubbish, but they use to their necessities. I could not realize that without experiencing their reality. Furthermore, I could not predispose a tool to collect data about something I could not previously describe. The role of creativity, in this small example, was to change the rule though which I looked at the Mutoids' reality during the period I stayed in the field, and to face every emerging task due to the relationship with them.

8. CONCLUSIONS

Beyond the limits of peculiar methodological approaches, I have tried to locate creativity as a reading dimension and as a specific process in desining social research. Epistemological and methodological frameworks are central in a discussion of knowledge production. They contribute to understand the use of creativity along the distinction I have borrowed from Chomsky (1964). Surveys constructed to control hypotheses are oriented by the knowledge codified by the scientific community. This initial predisposition appears in a more subtle way even when the researcher uses a qualitative approach. In this paragraph I do not argue that qualitative approaches are superior to quantitative ones. Rather I critically analyse some differences between them; differences that are often well used in order to best exploit the potential of both of these approaches by a triangulation¹⁴ of different techniques.

A discriminating factor in choosing an approach is based on the level of the existing knowledge pertaining to a particular phenomenon. If the researcher can describe that portion of reality in a satisfying manner, she or he could consider his knowledge as sufficient and set a structured tool for information collection. On the contrary, when she or he does not have – for any reasons – a level of knowledge that allows her or him to describe a specific portion of reality, she or he cannot use a structured tool, but she or he first needs to experience that reality.

The quantitative approach is characterized by *rule-governed creativity*, the qualitative one by *rule-changing creativity*: these are two models of creativity that the Chomskian vision links to a set of rules. Thus in the first case the creation of the tools by which the researcher collects information is submitted to a set of rules related to substantial and procedural competences. In the second case the creative phase does not have a place in the creation of a tool, but rather in a performance, that is to say in the modalities of inter-relationship between individuals, through which the researcher comprehends the mental categories that people use to give sense to their reality.

Another difference about creativity regards the phases of knowledge production during research design. In the quantitative approach the creative phase is exhausted before going to the field by a unilateral act of the researcher. In the qualitative approach the creative phase is during the period in the field, mainly because it needs a continuing dialogic effort between the researcher and the subjects involved. The characterisation of research phases according to their degree of creativity puts emphasis on the superior flexibility of the qualitative approach that in the field allows – by means of experience - for the consideration of unforeseen cognitive ways out of the researcher's categories.

REFERENCES

- Amabile, T.M. (2001). Beyond Talent: John Irving and the Passionate Craft of Creativity. *American Psychologist*, 56(4), 333-336.
- Anolli, L., & Legrenzi, P. (2006). *Psicologia generale*. Bologna: Il mulino.
- Arlow, J. A. (1982). Scientific Cosmogony, Mythology, and Immortality. *Psychoanalytic Quarterly*, 51, 177-195.
- Bickman, L. (1976). Observational Methods. In Claire Selltiz, L., Wrightsman, S. e Stuart, W. *Research Methods in Social Relations* (Third Edition) (pp. 251-290). Cook, New York: Holt, Rinehart and Winston.
- Blumer, H. (1969) *Symbolic Interactonism: Perspective and Method*. Englewood Cliffs N.J: Prentice-Hall.
- Bonnefoy, Y. (eds.) (1992). *Greek and Egyptian Mythologies*. Chicago: The University of Chicago Press.
- Boudon, R. (1989). La Teoria della Conoscenza nella "Filosofia del Denaro" di Simmel. *Rassegna Italiana di Sociologia*, 4, 473-500.
- Brewer, W.F. & Lambert, B.L. (2001). The Theory-Ladenness of Observation and the Theory-Ladenness of the Rest of the Scientific Process. *Philosophy of Science*, 68(3), S176-S186.
- Bruschi, A. (1999). *Metodologia delle scienze sociali*. Bruno Mondatori: Milano.
- Bruschi, A. (2005). *Metodologia della ricerca sociale*. Bari-Roma: Laterza.
- Cardano, M. (2003). *Tecniche di ricerca qualitativa*. Roma: Carocci.
- Cardano, M. (2014). Ethnography and Reflexivity. *European Quarterly of Political Attitudes and Mentalities*, 3(1), 1.
- Chomsky, N. (1964). *Current Issues in Linguistic Theory*. Paris: Mouton.
- Coombs, C. H. (1964). *A Theory of Data*. Michigan: Mathesis.
- Corbetta, P. (1999). *Metodologia e tecniche della ricerca sociale*. Bologna: Il Mulino.
- Cozzi, D. & Nigris, D. (2003). *Gesti di cura. Elementi di metodologia della ricerca etnografica e di analisi socioantropologica per il nursing*. Milano: Colibri.
- Cowan, R. David, P. & Foray, D. (2000). The Explicit Economics of Knowledge Codification Tacitness. *Industrial and Corporate Change*, 9(2), 211-253.
- Eco, U. & Sebeok, A. T. (eds.) (1988). *The sign of three. Dupin, Holmes, Peirce*. Bloomington, Indianapolis: Indiana University Press.
- Gobo, G. & Tota, A. (1994). Creatività e Riflessività. Memorie di un Gruppo di Ricerca. In A. Melucci *Creatività: Miti, Discorsi* (pp. 206-223). Processi, Milano: Feltrinelli.
- Hayek, F. A. (1945). The Use of Knowledge in Society. *The American Economic Review*, 35(4), 519-530.
- Hanson, N. R. (1958). *Patterns of Discovery: an Inquiry into the Conceptual Foundations of Science*. Cambridge: University Press.
- Kant, I. (1781). *Kritik der reinen Vernunft*. Königsberg: Reiger.
- Kelle, U. (1995) Theories as Heuristic Tools in Qualitative Research. In I. Maso; P.A. Atkinson; S. Delamont & J.C. Verhoeven (eds.) *Openness in Research* (pp. 33-50). Assen: Van Gorcum.
- Linstead, S. (1994). Objectivity, Reflexivity and Fiction: Humanity, Inhumanity and the Science of the Social. *Human Relations*, 11, 1321-1345.
- Maso, I. (1995). Trifurcate openness. In I. Maso; P.A. Atkinson; S. Delamont and J.C. Verhoeven (eds.) *Openness in Research* (pp. 7-20). Assen: Van Gorcum.
- Migliozzi, D. (1996). Le Interazioni della Vita Quotidiana nella Sociologia Formale di Georg Simmel. In G. Guarneri & E. Morandi, *La Metodologia nei Classici della Sociologia*. Milano: FrancoAngeli.
- Montesperelli, P. (1998). *L'intervista ermeneutica*. Milano: FrancoAngeli.
- Moretti, S. (1999). *Processi Sociali Virtuali*. Milano: Francoangeli.
- Moretti, S. (2005). *Modelli e Conoscenza Scientifica: Problemi di Formalizzazione nella Ricerca Sociologica*. Milano: Guerrini.

- Muzzetto, L. (1997). *Fenomenologia, Etnometodologia: Percorsi della Teoria dell'Azione*. Milano: FrancoAngeli.
- Nigris, D. (2003). *Standard e non-standard nella ricerca sociale*. Milano: Franco Angeli.
- Peirce, C.S. (1960). A neglected argument for the reality of God. In C. Hartshorne and P. Weiss (eds.) *Collected papers of Charles Sanders Peirce (Vol. 6: Scientific metaphysics)* (pp. 452-492). Cambridge, MA: Harvard University Press.
- Pike, K. L. (1954). *Language in Relation to a Unified Theory of the Structure of Human Behavior*. Glendale: Summer Institute of Linguistics.
- Piore, M. & Sabel, C. F. (1984). *The Second Industrial Divide*. New York: Basic Books.
- Polanyi, M. (1958). *Personal Knowledge: Towards a Post-Critical Philosophy*. Chicago: University Press.
- Sacchetti, F. (2012). Abduzione e Scoperta nella Ricerca Sociale. *Studi di Sociologia*, 4, 403-427.
- Sacchetti, F. (2014). *Processi di Categorizzazione in Etnografia: il Ruolo degli Impliciti e delle Categorie ex ante*. Roma-Acireale: Bonanno.
- Schutz, A. (1932) *The phenomenology of the social world [La Fenomenologia del Mondo Sociale]*. Bologna: Il Mulino.
- Schwartz, H. & Jacobs, J. (1979). *Qualitative Sociology [Sociologia Cualitativa]* (Il Mulino). New York: The Free Press.
- Simmel, G. (1900). *Filosofia del denaro*. Torino: Utet.
- Simmel, G. (1950). *The Sociology of Georg Simmel*. New York: Free Press.
- Turner, V. (1982). *From Ritual to Theatre. The Human Seriousness of Play*, (2nd ed. 1992). New York: Paj.
- Weisberg, R.W. (2015). Toward an integrated theory of insight in problem solving. *Thinking & Reasoning*, 21(1), 5-39

NOTES

- 1 This argument is widely debated: Cf. Reichenbach's classic distinction between context of discovery and context of justification (Reichenbach, 1951). For a perspective on qualitative approach, Cf. Schwartz and Jacobs (1979); Linstead (1994); Maso (1995); Kelle (1995). For the quantitative approach, Cf. Coombs (1964); Corbetta (1999); Bruschi (2005); Marradi (2007).
- 2 The emic/etic dyad was born and developed in the linguistic field and afterwards enriched in the cultural anthropology context. The first conceptualization is due to the linguist Kenneth L. Pike (1954), who started the debate on the twin category from 1954 (see also Headland, Pike and Harris, 1990). In this context, to follow an etic perspective means to adopt the observer's point of view using previous knowledge of the reference group to which one belongs. Instead, an emic approach tries to achieve comprehension through the category of the examined culture (see also Sacchetti, 2014).
- 3 Author's translation.
- 4 By 'tool' I mean the medium between the researcher and reality which the researcher uses to collect information.
- 5 Here I am referring specifically to research that follows the hypothetical deductive model in the quantitative approach; in this approach models different from the hypothetical deductive one can be found, such as factor analysis or principal component analysis, which I do not consider here. For those topics, Cf. Bruschi (1999); Corbetta (1999).
- 6 Author's translation.
- 7 Sensitivity is a property of the modalities through which a variable is codified, e.g. the same variable could be operationally defined by three response modalities (less sensitive) or by five (more sensitive). See also Marradi, (1993).
- 8 Author's translation.
- 9 For the issue of simulation in social science Cf. Moretti (1999; 2005)
- 10 Author's translation.
- 11 Author's translation.
- 12 'Theory-ladenness' means loaded with theory. The expression 'theory laden' refers to observations and perceptions.
- 13 For a perspective on abduction see Peirce (1960); Eco and Sebeok (1988); Sacchetti (2012).
- 14 In the social sciences the term triangulation is usually adopted to mean the use of more than one technique, coordinated inside the same research project, to collect information about the same phenomenon.