The Epistemology and Methodology of Exploratory Social Science Research: Crossing Popper with Marcuse

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The Epistemology and Methodology of Exploratory Social Science Research: Crossing Popper with Marcuse

If you insist on strict proof (or strict disproof) in the empirical sciences, you will never benefit from experience, and never learn from it how wrong you are. (Karl Popper, 2002: 28)

Introduction
This article seeks to propose a rationale for exploratory research in the social sciences. Inspired by the recent debates around qualitative methods (Gerring, 2001; George and Bennett, 2005; Brady and Collier, 2004; Mahoney and Rueschemeyer, 2003; Ragin, 2008; to name just a few), I seek to demonstrate that exploratory research also has a rightful place within the social sciences. In order to live up to its potential, exploratory research needs to be conducted in a transparent, honest, and self-reflexive way – and follow a set of guidelines that ensure its reliability. Exploratory research, if conducted in such a way, can achieve great validity and it can provide new and innovative ways to analyze reality.

In most cases, exploration demands more from the researcher than confirmatory research, both in terms of preparation, as well as in terms of willingness and ability to expose oneself to foreign cultures and languages as well as the courage to engage in a critical and honest self-reflection and critique. It also requires intellectual engagement with the topic at stake far beyond the needs of those running regressions from their office computers. However, exploratory research normally demands less money to conduct, as most projects can be done by one researcher alone, without the need to mobilize, train, and pay, large research apparatuses. Given the disciplinary power of elite scholars and academic institutions when it comes to selecting research through funding and hiring, exploratory research thus has great emancipatory potential, because it can escape the disciplinary power of senior “peers” and mainstream funding agencies.

To legitimize and provide a solid epistemological ground for exploratory research in the social sciences, it needs to be grounded in a philosophy of science; it has to be articulated within an epistemological framework; and it has to formulate a comprehensive methodological framework that justifies its methods. Thought also needs to be given to the ontology of the social sciences, as decisions about what counts as real and what we shall accept as a fact necessarily impact our strategy of inquiry.

The Limits of Confirmatory Social Science
Confirmatory social science dominates the field. Most social scientists use quantitative or qualitative methods in order to prove, or corroborate, their hypotheses. They expect to confirm laws, regularities, or conditionalities of the if…then… sort. Confirmatory research is what graduate students train for and what qualifies most researchers to get a tenure track academic job. Confirmatory research has indeed many advantages – some of which are also very relevant for exploratory research. Confirmatory research allows for a clear formulation of a theory to be tested in its application, commonly formulated as hypotheses; it allows for bringing order into the research process by formulating theories and related hypotheses up front and developing a research design and methodological tools best suited to address the research question, which is also formulated up front. By formulating research questions, theories, hypotheses, a research design, and a method – and by forcing the researcher to operationalize the involved terms and concepts and think of indicators to assess them, confirmatory research provide a clear scheme that is easy to follow and
hence easy to teach. If trained appropriately in confirmatory research techniques, researchers know how to proceed.

By providing schematic and standardized procedures, confirmatory research also provides a mental map for how inquiry works and what it can achieve. Standing on the shoulders of Karl Popper (2002) and Carl Hempel (1966), confirmatory research proceeds deductively, by testing hypotheses. The great advantage of proceeding in such a way lies in the clear and well-structured research process that such an approach is able to secure. Mental models, ideas, or theories, are compared to empirical reality and tested for their explanatory power. This allows for an isolation of an empirical domain and a focusing on one clearly delimited facet of reality. It also allows for a zeroing in on one, or a small number of, potentially causal relationships and mechanisms. This is absolutely necessary for conducting any sort of empirical research, given the high complexity of reality. In reality, everything potentially relates to everything else – and without a clear theory and hypotheses, we would not be able to isolate specific causal relationships in order to analyze their strength and robustness. Theory and hypotheses allow us to simplify, isolate, and focus on particular aspects of a reality that, taken as a whole, is far too complex and contingent to be captured and explained. Confirmatory research thus brings guidance and discipline into an endeavor that would otherwise be impossible, potentially falling prey to the same kind of contingency that characterizes empirical reality.

Confirmatory research, more pragmatically, also is what society and policy makers expect social scientists to achieve, as, at the end, scientists are expected to explain and make predictions that help guide actions and policy-making. One normally does not get paid to speculate. With so many advantages, it comes to no surprise that confirmatory research is the only research that receives external funding and the only research taught systematically at universities, American or other. But what are its weaknesses and shortcomings? Several have been identified.

When testing hypotheses, we normally are not pressed to justify where these hypotheses came from. Popper argues that asking this question is falling prey to “psychologism.” After all, we need to concern ourselves not with where ideas come from, but how to assess them systematically. This, however, has led to a systematic neglect of capturing, and considering, the bias that goes into theory and hypotheses formulation. But, as such feminist scholars as Sandra Harding (1991) and Donna Haraway (1988) have convincingly argued, research cannot start from nowhere. Who we are, our interests, backgrounds, training, and culture influence what questions we ask, how we ask them, and even what we accept as confirming evidence. Our approach to knowledge is “situated” and the worst we can do is to pretend that it is not, thus playing the “God trick” (Haraway, 1988). Thinking about, and critically analyzing, where our theories and hypotheses come from must be included into the research process, else we cannot escape unreflected bias. The need to also analyze where our ideas, theories, hypotheses, approaches, and questions come from and how this pedigree influences our research and our conclusions cannot be achieved with confirmatory research. This aspect of research needs to be inductive and constructivist – and it triggers the need for an altogether different approach to conducting empirical research in the social sciences.

As if this impossibility to scientifically account for one’s location and situatedness were not enough, confirmatory research has another weakness. As Popper has made very clear, theories cannot be proven. He shows that, “[t]heories are not verifiable, but they can be corroborated.” (Popper, 2002:248) Popper concludes his examination of the Logic of Scientific Discovery by stating that, “[t]he old scientific ideal of episteme – of absolutely certain, demonstrable knowledge – has proved to be an idol. The demand for scientific objectivity makes it inevitable that every scientific statement must remain tentative for ever.” (Popper, 2002:280) In other words: there is no way how
to bridge the gap that forever separates our minds from empirical reality. All our theories, models and explanations about reality will always remain tentative, because they spring out of our own minds and nothing can guarantee that reality conforms to our ideas. We can find laws – but nature, let alone human behavior, might not follow any laws. We might detect causal mechanisms, but we have no guarantee that history unfolds according to causes. Independent variables are mind constructs and not independent in reality. Dependent variables are in reality dependent on much more than the independent variables we choose to examine. All we can do – and as a matter of fact all that confirmatory researcher do - is to develop highly reliable procedures and machines to process the data we feed into them. However, as reliable as our procedures have become, they are still only able to test our own ideas, theories, and hypotheses. When conducting confirmatory research, we mobilize great resources to test the fruits of our own minds – not reality.

The more precise and mathematical these methods and apparatuses operate, the more “scientific” they are deemed. By factoring out the human component from the research process, this research seeks to control for bias – but it fails to take account of the human impact that informs any research at the very beginning of the research process, as well as the human condition of the very phenomena it seeks to explain. Conducting contemporary confirmatory research, especially in the social sciences, is like tapping in the dark with a high tech laser beam instead of the old-fashioned broomstick. It still leaves us clueless about what is in the room and how our own movements influence our findings.

Sir Karl Popper has put a heavy burden onto the shoulders of confirmatory researchers and challenged their work on the most basic and substantial level. The truth of his assessment becomes evident when analyzing the history of our fields and critically evaluating our achievements. Confirmatory research has indeed confirmed very little. It spends most of it energy in developing and explaining new methods, computer programs, and other machines designed to ensure reliability – but the resulting reliability only applies to the methods, programs, and the machines themselves, never to the findings. Confirmatory research has become highly efficient in attesting the reliability of its own methods, but utterly unable to address the basic problems of reality.

If hard truths about reality, especially about social, i.e., human reality are all together out of our reach, then what can, and should, science, and social science in particular, do? Exploratory research offers some attractive alternatives. They rest on an explicit recognition that all inquiry is tentative; that reality is, in part, socially constructed; that researchers are part of the reality they analyze; and that the words and categories we use to explain reality grow out of our own minds and not out of reality. In other words: what we perceive and how we perceive it has more to do with us then with the reality we observe. Explicitly taking all these factors into account and thus debunking the myth of the possibility of neutral, objective, and value-free research, exploratory social science offers a different research program altogether – one that recognizes the importance and indeed necessity of philosophy for social science research and one that draws the necessary conclusions from the foundations philosophy has laid out.

The Tentativeness of Inquiry
If “hard” deductive science can only achieve tentative findings and statements whose truths cannot be attested, then we have good reason to reconsider induction. Induction is prone to be incomplete and faulty, as a whole Western tradition of philosophy has demonstrated. However, as it turns out, deduction is equally unable to lead us to the truth. Worse, while focusing our attention on methodology, deduction makes us overlook the very important problem of situatedness and leaves many crucial assumptions routinely made by researchers unexplained. Deductive, confirmatory
research thus throws out the baby with the water. Inductive, exploratory research offers a way to save the baby by admitting, up front, that the kind of knowledge it is able to achieve is tentative.

Observations always run the risk of being incomplete and missing important events and we have no assurance that the world unfolds uniformly, thus permitting us to learn from the past. However, we have good reason to assume that the world unfolds regularly and if we assume that, then we can learn from past events. If the world stops unfolding in a regular way, catastrophe is the most likely trigger and we will not need any social science any more. In the meantime, we should assume uniformity.

Admitting to the tentativeness of findings and explanations of reality translates into making non-exclusive claims about reality. If our theories and hypothesis about the world cannot bridge the gap that separates them from reality and if those theories and hypothesis have more to do with our own mental, social, and cultural situatedness, then our theories and ideas only allow us to make sense of the world for ourselves. Theory-driven empirical research – and all research is theory-driven - allows the researcher to explain reality so it makes sense to him or her. If successful, an explanation provides a fruitful and plausible way to look at and explain reality that also makes sense to others. It can never be the only possible way to explain it. This, then, leads to a more humble formulation of claims about reality and how reality “really” is. Instead of advancing arguments that make exclusive truths claims, exploratory research provides more or less plausible and hence fruitful ways to examine and explain reality that can be shared, if successful and plausible, after a critical evaluation. In this way, competing and even rivaling explanations can co-exist. This does not automatically lead into relativism. In exploratory research, there are better and worse explanations. What are the criteria?

Good and valid explanations in exploratory research are those that are able to demonstrate that robustness and plausibility of the link that connects a stipulated cause to an effect. If I can demonstrate how exactly investment in education leads to economic growth, then I am doing a good job at explaining this claim, while being aware that education is not the only cause for economic growth. Exploring the relationship between education and economic growth thus means revealing and unveiling the causal mechanisms that connect one to the other. It can only be achieved by formulating theories and hypothesis up front.

**A Priori Theorizing**

The advantages of a priori theorizing and hypothesizing explained above apply equally to exploratory research. There is no theory-free perception of the world, because we can only relate to the world by applying our own mental categories, words, and frameworks. We simply do not see those things we do not understand. Hence, a pure exploration that starts from scratch is impossible. It could only be achieved by someone analyzing a world unrelated and disconnected – thus not ours. Exploratory research, similar to confirmatory research, thus needs to start from an explicitly formulated theory and clear and precise hypotheses. Different from confirmatory research, however, exploratory research does not set out to test these hypotheses, because they cannot be tested and proved to begin with, as Popper has shown. Instead, exploratory research asks how much a given theory and a derived hypothesis can explain and how good it can explain it, or how much sense it makes. Exploratory research is successful if a previously formulated theory and hypothesis explains a lot or if it explains very little but explains it very well, thus providing a very valid explanation by elucidating a very strong connecting linking a cause to an outcome. In addition, exploratory research seeks to provide new and previously overlooked explanations and it can do so by actively engaging the researcher in a process of amplifying his or her conceptual tools and allowing him or her to pose
new questions and provide new explanations by looking at reality from a new angle. If research depends critically on our own mental models, available categories, theories, and concepts, then better research can be achieved by amplifying the mental analytical repertoire of the researcher. This process is one rightfully called “conscientization.” It is strongly and directly related to education, more precisely the German “Bildung” – that is: general, historical, reflexive understanding.

To provide a more detailed and complete introduction to exploratory research in the social sciences, I will focus on some of the aspects highlighted above in more detail and provide some examples to illustrate this approach.

From Words to Reality
Language interferes with our lives in many ways. By wording things, we give them reality. (Searle, 1995) As Immanuel Kant has demonstrated long ago, by categorizing phenomena, we create order in the world while not being sure if the world has any intrinsic order outside of our categorizing and naming activities. But this is not a philosophical essay, so there is no need to address this question and resolve this puzzle here. However, the insights produced by such authors as Immanuel Kant, John Searle (1995), and Peter Winch (2007), among many others must produce an acute awareness that language and reality are acutely intertwined, yet separate, realms. To confound language with reality is committing a mistake, as all those who grasp Wittgenstein even just a little bit will understand. Social scientists cannot afford to ignore this. Language functions as a separate, autopoetic system, thus reproducing itself, as both Ludwig Wittgenstein (2009) or Niklas Luhmann (1996) have demonstrated.

However, language, even though it functions as a self-referencing system, is connected to reality in important ways. Words refer to reality. Words allow us to make sense of a overly complex and chaotic world, a world that, as I mentioned above, might not make any sense on its own and might not be well-ordered – despite the old, Aristotelian, believe that the physical world has an ordering and even developing principle within. We don’t really know, and I fear we will never be able to find out – simply because we cannot escape our linguistic grasping of the world, our attempts to explain and categorize it with words and through language. We cannot think, in other words, about the world without using the very references we have created, such as “world,” “sense,” “order,” “before and after,” “development,” “evolution,” “people,” “social groups,” among others. Words not only help us explain and make sense of the world by ordering it, hierarchizing it, and putting it into neat categories to which we then attribute causal relationships; words also create realities and they restrict the possibilities of action. Let me explain: the creative potential of words has been called “constructivism” in some of the social sciences (e.g. by John Ruggie (1998) and Alexander Wendt (1999) in international politics). In sociology, the insight that reality is socially constructed is older and goes back to the work of Edmund Husserl, Alfred Schütz, Peter Berger and Thomas Luckmann (1966). The philosopher John Searle (1995) has convincingly, and systematically demonstrated how, and under what conditions speech acts create institutional facts. He has argued that, “[b]ecause the constitutive rule enables the function to be imposed on a speech act, then just performing that speech act in appropriate circumstances can constitute the imposition of that function, and thus will constitute a new institutional fact.” (Searle, 1995:54)¹

¹ This is not to say that all reality is socially constructed, as Searle himself admits. A realist theory of science does not rule out the existence of institutional facts, as Roy Bhaskar (2008), Andrew Sayer (2010), and Daniel Little (1998) have amply demonstrated – it only makes claims about the fact that reality exists independently from our perception.
To understand reality as social constructed merely means to be aware that there are no unmediated facts, that whatever action we can think of is first perceived by someone, then interpreted, and finally used in the perceiver’s own effort to make sense of it by placing it within a framework of available references. Feminist epistemology, as presented by such authors as Donna Haraway (1988) and Sandra Harding (1991), has long pointed this out, along with some sociologists of knowledge (e.g. Latour, Woolgar, and Salk, 1986).

This means that the models, ideas, and theories we know and understand condition the way we perceive reality, or even what reality we perceive. (Musgrave, 2000) If the analytical tools, which we derive from our theories and ideas about the world – consciously or unconsciously – if those tools only explain one way to “read,” understand, and make sense of our sensorial impressions, then this will be the only way we perceive and understand reality, or: this will be the only reality we get to know and understand. If, to give an example, we understand the world in terms of “race,” then race is what we will see. The same is true for class, gender, religious belief, or such concepts as markets, equilibrium, etc.

The task at hand, then, inspired still by Paulo Freire (1993) and Jean-Paul Sartre (1994), is to amplify and broaden or conceptual tools and thus be able to see more, sharper, and more accurately. Hence, proposing new words, concepts, theories, and hypothesis allows us to analyze the new realities to which those new words and concepts refer. By looking and analyzing reality from a different angle, we can hope to unveil previously hidden facets of reality – if we are able to demonstrate the plausibility and strength of the connecting our new approach establishes. This effort is at the core of exploratory social science research.

This sort of work, by its very definition, is inductive. Its end result is that by broadening, amplifying, and diversifying our conceptual tools and frameworks we will be able to perceive more, better, and differently, being able to make sense out of that which previously stroke us as nonsensical and simple white noise. This task becomes a bit more complicated when our interest lays in human, i.e. social behavior, because human interaction is inherently social and thus meaningful, and it thus constantly requires interpretation and understanding. (Gadamer, 1994)

An Exploratory Research Program
We can spend hours debating what “democracy,” or “citizenship” really is. But this discussion is beside the point. What exploratory research focuses on is to what reality a word like “democracy” refers to. What does democracy mean in Colombia today? What does it mean to a poor campesino, a black Chocoano, or an indigenous tribe member from Vaupés? We need to dissect, to analyze by pulling apart, words from the reality they refer to and, as exploratory social scientists, we should focus on the reality, not the words. This means, in most cases, that we need to look for indicators that tell us something about the reality represented by a word.

This sounds easy enough. However, the trickiness of words and language go further and tend to confuse us at deeper levels. Think about a word like “class.” What reality does it refer to? Do classes “really” exist? Some words clearly have structured our thinking so much that we use them not only to talk about the word and make sense of it, but to guide our actions – and to construct our identities around them. Identity construction, after all, is also a discursive process – one where we assemble those elements that we recognize as relevant and using them to construct who we are and who we want to be. To some extent, we assemble our identities with words, using categories that have proven helpful to us in other contexts. We think we are “rooted” – because rootedness resonates with what we want to be, what makes sense to us. Think of the word “race” and you get a
sense of how much such a category has offered some of us in terms of ordering the world and ordering our own thinking about who we are and how we differ from others.

When doing exploratory research, we need to remain alert to the pitfalls of reification and avoid any tendencies to essentialize words and categories. Instead of looking for the essence behind a word or concept, we need to explore what aspect of reality this word opens up for us and what a specific word allows us to see, or what aspect of reality it refers to.

In terms of research design, this necessarily implies that instead of pretending to be neutral, we need to be aware, explicit, transparent, and honest about our starting position, standpoint, situatedness, or positionality. This, in turn, requires that we formulate theories about the world, about how things relate, first, before we initiate any empirical research. To achieve this, we have to first formulate theories about the world, about how things relate. We have to propose a structure of order, an angle, if you will, that allows us to look at the world in a certain way, or through a certain light or prism. This, again, is necessary, because there is no neutral or clean-slated perception of the world, as our perception of reality is influenced and indeed conditioned by the mental structures, ideas, and theories we already hold about the world. We only perceive what we already know, what is familiar to us, or in the words of systems theory, we only perceive that which we recognize as meaningful and patterned, that which makes sense to us. This is why pure discovery of reality is impossible to us. We are utterly unable to look at the world “theory free” as we cannot escape approaching reality through words and categories.

The next best thing to pure discovery thus is a gradual extension and widening of our perception and understanding of the world parting from what we already know and have understood. This process requires the explicit, up-front formulations of explanatory models, i.e. theories. Given this impossibility of pure discovery and induction, the attempts formulated by those authors associating with “grounded theory” (Glaser, Strauss, Charmaz, among others) seem naïve – even after they have responded to some of the critiques raised in this regard (Bryant and Charmaz, 2010). The same is true for those proposing “itinerative research frameworks (e.g. Srivastava and Hopwood, 2009), or even those that have focused on “deviant cases,” but failed to explain and specify how exactly a deviant case leads to the formulation of a new theory (George and Bennett, 2005).

What are Theories For?
Theories are tentative explanations about how the different elements of the world relate to each other and why. This is not to say that they actually do. Theorizing about - and hence explaining of - the world is an effort to make sense out of it by ordering it and putting it in causal sequence. Doing so allows us to shed light on a segment of reality. Good theories lead to good questions – and good questions allow us to discover new aspects of reality. The good question never is “how it really was” – or “what really happened.” What really happened will differ to everybody involved – and all the involved will only understand what “really” happened after someone has offered a way to explain it after the fact – and others have accepted this explanation and the implicit framework that comes with it. (Goldstein, 1983) Once we are aware of the theoretical models and assumptions that guide our approach to reality, we can then expand and ask different and new questions that allow us to explore the empirical terrain that surrounds the empirical segments we initially focused on. Exploratory research thus becomes an act of gradual, structured and theory-led heuristic expansion from an original set of models, explanations and questions. It does not start from scratch.

In this context, the good question is one that is fruitful in allowing us to explore hitherto unexplored aspects and possibilities of explanation and causal relation. One that allows us to see
plausible connections that have previously not been seen, explored, or understood. Words, because they evoke certain realities, become functional in this endeavor. As words are separate from reality but refer to it in different ways, as argued above, new and different words, categories, concepts, models, and theories promise to allow us to see new things, or to see old things in a different way. Theories thus cannot be true or false as they have no ontological status. As thought models they can be more or less helpful and supportive of our constant effort to explain the world by making sense of it. (Popper, 2002)

Take the example of such a central social science concept as “citizenship.” Instead of explaining what it “really” means, I propose to engage in an effort to offer new angles, prisms, or lenses to look at those aspects of reality that fall under the very broad label of “citizenship.” For example, one can think about something like “second-class citizenship” not because it really exists, but because such a concept allows us to explore some easily overlooked corners of the reality represented by this word. One might also think of citizenship as a social role, because thinking of it in that way allows us to explore the roles and expectations we commonly associate with this term. Finally, think of citizenship as a good, or an asset – again, not because I think it really is that – but because it allows us to explore an aspect of citizenship that is crucial to its reality and has not been captured and explained well, namely that citizenship is worth something, and it might be worth more if not everybody has access to it. Finally, think of citizenship as something inherently conflictual, embattled, disputed, internally contradictory – and produce your research design accordingly and chances are that you will be able to unveil new aspects and facets of what kind of reality the word “citizenship” represents.

The purpose of doing this is to unveil the different ways how different people and groups live, experience, and invest the word “citizenship” with different meanings and how citizenship is negotiated, embattled, defended, or upheld in social reality and daily praxis. This is, in my mind, the most that honest social science can achieve. There are no hard rules or laws to be discovered in social life and the establishment of such hard laws and rules comes with a great cost of validity: we can always only measure the easy things, or the easily measurable aspects of very complex social phenomena. We can find great rules and laws – that apply to very little. Or, as I propose here, we can content ourselves with detecting new and fruitful ways to look at and analyze reality – none of which should lay claims to be exclusive, or true – at least not truer than another, equally fruitful way to analyze reality.

Some Practical Rules for Conducting Exploratory Social Science Research
In exploratory social science, the choice of cases is not random. It is predicated by the logic of analyzing the richest, most telling, cases and to unveil the thickest and most telling connection between two variables. Such a study is, in a strict use of the term, not a comparative case study, where cases are used to simulate experimental research settings. Instead, cases are chosen so that each single one can tell a lot about the underlying conditions and causal mechanisms at work. Instead of focusing on overlap and similarity on the independent or dependent variables, exploratory research seeks to detect causal mechanisms, that is, causal propositions that link independent to dependent variables. Cases are selected to shed the most light on the specific causal mechanism on focus. The guiding question for such a procedure is: where can I see and explain this best? Or: in what case is this causal mechanism most evident?

This methodological choice is driven by several insights. First, exploratory studies allow us to think, not just measure; to use our imagination, experience, insight, and skill to propose new and innovative ways how to understand and interpret reality. This is, to me, a very important component
of being a social scientist. The best scientists we had were not the bureaucratic-minded number crunchers that now dominate some of our disciplines. Especially in the social sciences, the best of us have been able to infuse and enrich their work with their life experiences, travels, and innovative ideas. Think of Alexis de Tocqueville as maybe the prime example of a thoughtful and insightful analyst, who proposed new and innovative ways of thinking about democracy after traveling for almost one year in North America with his friend Gustave de Beaumont. Or think of Karl Marx, whose proposal to think about the unfolding of history in terms of economic power and asset ownership has influenced the thoughts and actions of millions. Exploratory social science has by far been more influential than confirmatory social science. It has given ideas, inspired, helped understand reality in new ways and shed light on previously not understood phenomena. It provided new and innovative readings and interpretations of the world, or facets thereof, without being able to test and predicts the hypotheses it advanced.

Second, exploratory work can be done rigorously. Whenever this is achieved, it promises to achieve a degree of validity that is beyond the wildest dream of any confirmatory research, especially one relying on quantitative methods. To be rigorous, exploratory work needs to be honest and transparent. It also demands a high level of self-reflexivity from the researcher. However, to be rigorous, exploratory work needs to take into consideration the findings about epistemology and perception that different philosophers have elaborated. We cannot approach reality theory-free. Our very perception, that is: what we perceive as meaningful and how we perceive it, is influenced, indeed determined, by what we already know – our preconceived ideas about the world. If we do not know what a Cuacucu is, we will never see one, never recognize one – even if it passes right in front of us. Without the idea of a Cuacuco, the sensorial information of a Cuacucu is nothing but white noise to us. However, once we know, we will perceive the passing Cuacucu, see it, because we can now make sense of this sensorial information, put it in the category “fish” and recognize it as such. To perceive the world, in other words, we must rely on previously established ideas and theories.

A purely exploratory perception of the world is thus impossible, as we cannot free ourselves from our preconceived ideas, notions, categories, explanatory models, and theories. The only option we have, as observers and explainers of reality, is to explicate our theoretical frameworks and take them into consideration. This means that we need to be aware of our own “situatedness” as researchers (Haraway, 1988) and we need to always initiate our inquiries from an already formulated theory. Popper (2002) holds that epistemology must only concern itself with examining the logical consequence and coherence of new ideas, not where they come from, which is the task of psychology. Placing something outside of the real of legitimate reflection does not solve the problem; it simply avoids it. His own theory of perception and anticipation, called the “Searchlight Theory,” (Popper, 1974) nevertheless offers an explanation on just how new ideas are conceived, namely through the comparison of new sensorial information with already available knowledge - which leads us to anticipate according to past knowledge in a movement of problem-solving trial and error.

No matter how this epistemological problem is solved, the debate about it makes clear that we have an innate tendency to anticipate, based on the limited information we have to our disposal. Under conditions of a lack of a secure and validated paradigm that would allow us to deduce research questions and programs, we must instead embrace our tendency to anticipate and formulate clear and testable, that is: falsifiable, hypotheses – instead of avoiding it. That way, we can put our own anticipations, which spring from our previous experiences and already accumulated knowledge, to a test. This process, if conducted honestly and transparently, allows us not only to accumulate knowledge about the world by dwelling on our already gained knowledge and experience – it also
makes a collaboration of scientists possible. If we reach our tentative extrapolations and explanations in a transparent way, we can evaluate them critically – and expose them to the critical evaluation of others. This is what science can achieve at its best. Reaching tentative explanations, gained from our previous work and experience also provides a much more plausible explanation for reaching new explanatory models than the Deus-Ex-Machina mechanisms that Popper (1974, 2002) proposes as a replacement of what he calls psychologism. We can indeed not explain the emergence of new explanatory models with reference to our own cognitive or psychological structures, as we cannot rule out the risk of cognitive solipsism. Structured, self-aware, critical, and transparent anticipation, however, is not only what we should do as scientists. It is also what we do as human beings: building on previous knowledge, gradually expanding it and proposing new explanations that are derived from our previous knowledge. The knowledge we can obtain in this way is indeed not 100 percent reliable, as we cannot truly count on a uniformly evolving of history. It is, instead, tentative and subject to critique, revision, and all sorts of methodological errors – but this is precisely what we are able to achieve. Claiming to achieve more reliable or more valid knowledge about human behavior and interaction actually achieves less.

What we can achieve, different from the natural sciences, is to discern, describe, and explain causal linkages and mechanisms that connect two or more relevant variables in significant ways. Once this is done, we can establish a if... then... relationship that describes a likely pattern or a probability of consequence, if certain conditions are met or already in place. It is this sort of limited, or better delimitated and structured anticipation, which makes explicit use of available theoretical models and explanations and then relies on the finding of supporting empirical evidence in order to avoid the pitfalls of an extreme skepticism, which promises to advance our insight and understanding of the social world. It has this potential because it allows us to see and understand social reality in different ways, and from different angles. If done cumulatively, social science can then contribute to a more complex and complete reading of social reality – and might even aspire to contribute to the very real process of conscientization that should be initiated in schools and continued systematically in universities.

The knowledge produced in such a way could also be of more utility to everyday life than the highly formalistic and extremely technical procedures activated to conduct confirmatory research today. Most of the techniques that produce and calculate probabilities of correlations are so sophisticated that they take up most of the space, physical as well as intellectual, of confirmatory research production and its debate. It is in this process of describing and explaining not reality, but methodology, that most social scientists end up losing most laypeople, as well as uninitiated specialists. Such proceedings would be justifiable if the findings about laws and regularities would really fall within the realm of the possible in the social sciences – but they do not. As explained above, social life is far too contingent and in flux to be captured by rules and regularities. Put simply: laws to not apply in the social world – and thus should not be sought for in the social sciences.

The consequence of all this simply is that exploratory, inductive research can achieve reliability when conducted in a structured, self-aware, transparent, and honest way, which translates into being aware, as a researcher, of one’s situatedness, limitation, and biased outlook and by initiating any research project with an explicitly formulated theory, a clearly formulated hypothesis, a clear and well developed research design, and a methodology that best addresses the needs discerned in the research design. Proceeding in such a way allows for a clearly defined starting position in the process of knowledge building and gaining understanding and familiarity with a subject or problem. It also allows for a delimitation of the empirical field that is relevant to a given
research question – as purely exploratory research would otherwise be endless and lead into the traps of infinite regression.

Different from a purely deductive research design, such a proceeding also allows for a revision of the initial hypotheses and even for the reformulation of the research question – in a process of slowly and gradually making oneself familiar with all of the phenomena associated and related to the problem in question. This deductive – inductive research design thus starts by entering a hermeneutic cycle of creating understanding and expanding this understanding up to the point where all the phenomena related to a given problem and research question can be explained.

Induction thus becomes part of a deductively initiated research project and allows for a pressing forward of findings up to the point where the causal mechanism previously established through a theoretical framework is explained. In other words, the outer limits of how far such a research process should reach need to be established by a previously formulated theory and hypothesis, as otherwise this process would be endless.

The exploratory character of social science research refers to the very domain of what can be detected, described, and explained. Given that our naming, wording, categorizing, and hierarchizing of the world is intrinsically linked to our perception of the world, all we can aspire to as social science researchers is to offer new categories, models, and theories that allow us to analyze a specific phenomenon in a new and fruitful way. Instead of examining the substantive content of words and categories, our efforts should be geared towards holding interpretative models and reality apart and thus avoid the pitfalls of reification that lure at almost every corner of inquiry into a meaningfully structured social reality. If we did the structuring in the first place, we should not take our own categories as given, or invest them with an ontological status they have only acquired through our own action of naming. Instead we need to propose new, or newly composed, models that approach reality differently, in new and innovative ways and from different angles. As social reality constantly changes, this endeavor is endless, as someone else can describe and explain the same segment of reality I have described today differently tomorrow. However frustrating this might be – it is the only way to produce truly reliable knowledge about the social world, a world that is socially constructed and reproduced continuously by the same people that seek to explain it.

In a strict sense, exploratory research, just like confirmatory research, is thus only able to test the strength and plausibility of a causal link previously established by a theory or model – hence by the researcher. This makes any research self-referential. Instead of exploring the world, scientific inquiry in the social sciences only tests the validity, reliability, or to use less technical terms, robustness and strength, of previously established causal links, which are derived by theoretical models and hypotheses. This implies that any research project can only claim to examine one explanation at a time.

This should never mean that the given explanation is the only explanation possible. Reality is far too complex for such a claim. A scientific explanation rather provides one way to look at reality, one way to make sense of one particular segment, previously established, of reality. It necessary simplifies and it can never claim completeness, as social reality is in constant flux, thus creating new constellations that can be examined and explained differently, from different angles and by using different prisms. “Really” or “fully” explaining something is thus impossible. Exploratory research is over once the empirical reality referred to by a concept or theory is explained so that “it makes sense” to the researcher. Such an explanation is successful, if others find this individual sense-
making effort fruitful, helpful, or insightful, so that his or her sense-making overlaps with theirs.\textsuperscript{2} The practical process of conducting exploratory research thus necessarily follows the pattern of the hermeneutic circle, as described by Hans Gadamer (1994). (Reiter, 2006)

**The Emancipatory Potential of Exploratory Research**

Exploratory research has an inherently anti-authoritarian and anti-dogmatic trait, because in most cases, it does not require the mobilization, and payment, of a huge research apparatus the way that “systematic” research does. Systematic research, because of its claim to be systematic, in most cases requires much time, effort, and money, which is why most systematic research projects are conducted by scholars working at elite universities, who receive funding from highly selective, and highly disciplining, funding agencies, such as the NSF or the Social Science Research Council. The review processes involved in selecting research projects and publications almost never support “unsystematic” research, which in most cases translates into research not conducted within the established, quantitative confirmatory paradigms. Disciplined in such a way, it comes to no surprise that new findings are rarely produced. The stifling process of review by powerful and hegemonic mainstream institutions and “peers,” if anything, narrows the array of what is possible and doable in the social science. They function as a disciplinary power par excellence. (Feyerabend, 2010) Indeed, as Paul Feyerabend has argued, “[t]wentieth-century science has given up all philosophical pretensions and has become big business. It no longer threatens society; it is one of its most powerful supporters. Humanitarian considerations are at a minimum, and so is any form of progressiveness that goes beyond local improvements. Good payment, good relations with the boss and colleagues in their unit are the chief aims of these human ants who excel in the solution of tiny problems but who cannot make sense of anything transcending the domain of their competence.” (Feyerabend, quoted in Motterlini, 1999:114)

It should not be surprising that the most systematic research always seems to originate from Ivy League professors. The same researchers able to conduct expensive research projects are oftentimes also involved in the decision-making about who should receive funding for what sort of research, so that the whole enterprise runs the risk of becoming self-serving, narrowing down what research is.

Exploratory research, to the contrary, does not require the mobilization and payment of big research apparatuses. It can be conducted alone, oftentimes with nothing more than access to a library and a voice recorder. It often involves travel and knowledge of another language, thus demanding more intellectual preparation and courage from the researcher, yet less money and institutional support. As such, it offers interesting opportunities, especially for young researchers and graduate students, who otherwise have to rely on the disciplinary power of their senior colleagues. In

\textsuperscript{2} Hence, even in exploratory and inductive inquiry, Karl Popper’s insights apply, namely that “[f]rom a new idea, put up tentatively, and not yet justified in any way – an anticipation, a hypothesis, a theoretical system, or what you will – conclusions are drawn by means of logical deduction. These conclusions are then compared with one another and with other relevant statements, so as to find what logical relations (such as equivalence, derivability, compatibility, or incompatibility) exist between them.” (Popper, 2002: 9) Where exploratory research departs from Popper’s approach is in his stark formulation of the impossibility of induction, which results from his expecting, or demanding, too much from the statements derived from induction. If, however, we depart from a place where certainty is not what we aim for and if we also admit that paradigms are not what we can reach in the social sciences, then induction becomes a disciplined and self-reflexive practice of using common sense, where we anticipate in transparent ways and then seek to assess the plausibility of the causal connections thus proposed by looking for empirical information that supports it.
short: exploratory research has emancipatory potential and promises to unveil new relations and causal mechanisms that escape the disciplinary scrutiny of the established research apparatus.

**Dialectics**

A strong rationale for choosing an exploratory research design is that exploratory social science has the potential to be more insightful than confirmatory research by applying dialectical thinking. Dialectics, explains Theodor W. Adorno (1973), means “to achieve something positive by means of negation.” (Adorno 1973:XIX) The systematic treatment of dialects goes back to Georg Wilhelm Friedrich Hegel and his *Phenomenology of the Spirit*, first published in Germany as part one of his *System of Science* in 1807. Hegelian dialectics has three components, namely circularity, where all existence is constituted by its own negation, thus forming a whole only through this circle; the contradiction and its resolve (Aufhebung); and idealism. (Sarlemijn 1971:4) In 1841, the young Karl Marx famously “put Hegel back on his feet” by stripping him from its idealistic component, and proposing a dialectic materialism instead. (Marx, Karl. 1971 [1841/42]: 28) It is this version of dialectics that inspired the critical theorists of the Frankfurt School, especially T.W. Adorno, Max Horkheimer, and Herbert Marcuse. Instead of Hegel’s ontological dialectics, what interests exploratory social scientists today is the analytical methodology that emerges alongside its ontological counterpart.3

According to Marcuse (1960), “the power of negative thinking is the driving power of dialectical thought, used as a tool for analyzing the world of facts in terms of its internal inadequacy. (…) ‘Inadequacy’ implies a value judgment. Dialectical thought invalidates the a priori opposition of value and fact by understanding all facts as stages of a single process – a process in which subject and object are so joined that truth can be determined only within the subject-object totality. All facts embody the knower as well as the doer; they thus ‘contain’ subjectivity in their very structure.” (Marcuse, 1960: VIII)

In other words: there can be no objective or neutral social science, because the researcher is always and automatically involved and implicated with the object and the subjects of his or her inquiry. Dialectical thinking, i.e. thinking about inherent contradictions and understanding progress not as a linear process but a gradual unfolding of oppositional forces provides a fruitful way to conduct social science, even more so if and when social scientists accept that they themselves are part of history’s unfolding and deeply involved in the reproduction of the knowledge they seek to analyze, which is what Marcuse suggest in the quote above. A prime example of such thinking is provided by Karl Marx and Friedrich Engels (1848), in their attempt to describe and explain the revolutionary power of markets in the *Communist Manifesto*, as well as by Adorno’s and Horkheimer’s (1944) *Dialectic of Enlightenment*. Both books, despite their shortcomings in terms of producing adequate predictions about the future, still stand as powerful diagnoses of our times. The depths of their insight have secured these documents a place in history. Consider, for example, this passage from the *Dialectic of Enlightenment*:

> In the enlightened world, mythology has entered into the profane. In its blank purity, the reality which as been cleansed of demons and their conceptual descendants assumes the numinous character which the ancient world attributed to demons. Under the title of brute facts, the social injustice from which they proceed is now as assuredly sacred a preserve as

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3 Understanding and explaining the ontological ramifications of dialectics exceeds not only the space available, but also my training as a political scientist.
the medicine man was sacrosanct by reason of the protection of his gods. It is not merely that
domination is paid for by the alienation of men from the objects dominated: with the
objectification of spirit, the very relations of men – even those of the individual to himself –
were bewitched. The individual is reduced to the nodal point of the conventional responses
and modes of operation expected of him. Animism spiritualized the object, whereas
industrialism objectifies the spirits of men. Automatically, the economic apparatus, even
before total planning, equips commodities with the values which decide human behavior.
(Horkheimer and Adorno, 1997:28)

Horkheimer and Adorno detect in the project of de-mystifying the world, which they trace
back to ancient Greece and term “enlightenment,” the very seeds of its reversal into an even worse
state of affairs, where individuality succumbs to mass society and human desires and actions blindly
follow the dictates of empty consumerism. Thus the project of rationalization turns into irrationality
and freedom from the powerful grip of nature and vengeful deities, which restricted the lives during
antiquity, is substituted by an even worse unfreedom: that of the market and the fetishism of
products we seem compelled to buy, knowing that they will not bring us happiness or peace of mind.

As this example demonstrates, dialectical thinking aims at exploring the internal
contradictions of phenomena. In seeking to do this, one can follow Herbert Marcuse’s (1955)
prescription, namely that “any particular form can be determined only by the totality of the
antagonistic relations in which form this relations exists.” (Marcuse 1955:26)

In a slight variation to the initial dialectical tradition, which is still burdened by Hegel’s
legacy in that it suggests history itself unfolds dialectically, exploratory research uses dialects as an
analytical tool and way to look at reality. It does not claim that history itself unfolds dialectically,
but that thinking about and analyzing history through the prism of dialectics allows for new insights
and angles of observation. When thinking about citizenship, for example, dialectical thinking leads
one to look for inherent contradictions and negations that together fall under the label “citizenship”
and the reality for which this label stands. Thinking about citizenship in terms of its internal or
inherent contradictions thus promises to produce fruitful ways of analysis, allowing for deeper
insight and understanding. Such a dialectical thinking about citizenship allows us to go beyond the
very common simplistic dualistic models that dominate the social sciences. Instead of focusing on
dualisms and discrete phenomena, dialects point our gaze towards processes and those connecting
elements that link different phenomena, which translates into a search for internal, and maybe
inherent, dynamisms, contradictions, and different forces pulling into different directions.

Hence, by approaching reality dialectically, one can analyze a reality of connectedness,
entanglements, and mutual continuations, which allows for a depiction of reality as one where
privilege and access are constantly negotiated and fought over. The resulting depiction of reality
promises to be much richer and more telling than those strangled by dualistic lenses, as such
supreme examples as Thomas Holt’s *The Problem of Freedom* (1992), or Gary Wilder’s *The French
Imperial Nation State* (2005), to name but two, can amply attest to.

**The Problem of the Research Domain**

A final, procedural, word about the research domain and the unit of analysis of this endeavor is
called for, given the differences, maybe even contradictions, between every-day knowledge and
language and academic lifeworlds, with their specific and technical language and methodologies.

In exploratory research design, cases are selected to demonstrate a high level of clarity when
it comes to the unveiling of connecting mechanisms and links. They should convey a richness and
saturation of empirical information that allows for a clear depiction of how something comes about
and why. The implications of assuming such a position from the very start are many, and I shall pinpoint some of the more common and consequential.

When conducting social science under the awareness that the ordering of reality is as much a product of our own minds as a result of the reality “out there,” then exploratory cases should be selected because they offer analytical richness, not because of their historical specificity. The aim of exploratory research is to establish plausibility among different variables, previously defined by the researcher - not to add to the factual, historical knowledge of the cases discussed to this purpose, if such a thing were possible. Exploratory research is thus firmly committed to a constructivist view of reality. The outcome of a successful exploratory research project is to propose a new, insightful, fruitful, and plausible way to think about and explain reality – not to detect new material facts.

Furthermore, exploratory research is by its very nature inter-disciplinary, and should freely borrow from the different social sciences. It is precisely by adopting, comparing, and trying out a linguistic, ethnographic, anthropological, geographical, sociological, economical, or political science gaze that new insight can emerge and rich exploration can occur.

Conclusion: Exploratory, Deductive-Inductive, and Dialectic
In this article, I have sought to argue and demonstrate that reliable inductive, exploratory, dialectic research can be achieved if conducted in the structured, transparent, and honest way described above. If successful, the findings and insights produced in such a way can help shed new light on phenomena that have already been explained partially and in different ways. Furthermore, if successful, exploratory research can help to conscientize those that read it by unveiling previously unthought-of connections and causal mechanisms. Given that the procedural apparatus able to generate the findings presented here is not a sophisticated computer program or a mathematical model operating at high levels of abstraction, exploratory research also addressed non-specialists and non-academics, offering to them the same sort of knowledge produced from reflexive, self-critical, transparent, and dialectical research. There are no secrets or complicated procedures that require years of initiation. Instead there is engaged dedication to the phenomenon under scrutiny and prolonged, systematic inquiry, paired with reflection, comparison of different cases, formulation of tentative explanations, revisions, dialogue, and finally, the formulation of new and hopefully fruitful ways to look at the reality represented by such words as “citizenship,” “democracy,” and the like.

Literature Used

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