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Comment on "The Complex Market: Communications of Exchange, Observing Competitors, and Prices" by Pascal Goeke and Evelyn Moser/2. Real Agents in Real Markets: Socio-Cognitive Scaffolds that "Reduce" Market Uncertainty

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Abstract

This paper discusses the work by Pascal Goeke and Evelyn Moser (2018), which provided a remarkable contribution to the study of modern markets. The Authors debated four sociological approaches to markets, i.e. interaction, network, institutions and performativity-based arguments, to elaborate a new comprehensive definition of market as tension between noise and order. In this regards, I argue that their theorizing calls for further empirical analysis. Their "over-socialized" perspective should consider both the bounded rationality of real agents and the context-dependency of markets in more detail, given that economic action is shaped by structural, institutional and cultural forms of embeddedness. The paper raises the importance of a more "integrative research", in order to combine the deductive approach provided by Goeke and Moser and inductive research on real markets and real actors.

Keywords: sociology of markets; embeddedness; modern markets; observation theory.

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1 Introduction

The notion of market has been broadly discussed in the last decades. Nevertheless, a unique definition is still missing. On the one hand, neoclassical theory does not offer a coherent and comprehensive concept of market itself (North, 1977). On the other hand, economic sociology did not produce a univocal picture. Indeed, research on the origins, dynamics and complex functioning of markets as social structures has given rise to a segmented field of studies (Fligstein & Dauter, 2007), which has been almost only theoretical. In this vein, Goeke and Moser (2018) must be praised for their attempt to combine various theoretical perspectives and offer a unified picture.

First, it must be said that they focused on modern markets, which have been rapidly changing in the last decades. The recent massive technological development has modified the traditional market landscapes by increasing real-time communication, global scale transactions and disintermediation (e.g., Jallat & Capek, 2001). This raised market complexity and uncertainty. On a macro scale, the increased interconnectedness of economic, social and political systems and the emerging of endogenous contagion effects between previously unrelated markets would confirm this (Squazzoni, 2013). On a micro scale, market complexity is connected to the diffusion of Web-based technologies, which have triggered new types of instant-anonymous interactions (e.g., Preda, 2009) and provided new communicative-calculative devices to monitor other actors' behavior (e.g., Knorr Cetina & Preda, 2005). This implies that modern markets are the realm of *strong substantive uncertainty*, given that actors must handle unknown events without any possibility of defining their probability distributions (Dosi & Egidi, 1991).

In this respect, one of the principal theoretical concerns among sociologists of markets has been explaining how social order arises from complex markets arenas (e.g., Beckert, 2009). In their essay, Goeke and Moser addressed this issue by suggesting "the idea that the question of social order has to be treated as a question of how complexity arises and is dealt with" (2018, p. 4). Furthermore, they discussed four sociological approaches to markets, i.e. interaction, network, institutions and performativity-based arguments, to elaborate a new comprehensive definition of market. Drawing from White's theory of markets (White, 1981) and Spencer-Brown's theory of form (Spencer-Brown, 1972), they focused on "mono-contextual" (fist order) and "poly-contextual" (second order) observations. While every first order observation has a blind spot, i.e. a set of unobservable unspoken distinctions, second order observations emerge when actors try to reduce environmental uncertainty by observing other actors' first order observations. The act of observing those who are observing triggers many different interpretations, which, in turn, will be observed recursively by other actors. Here, "everything ends in complexity, since it is no longer possible at any moment to connect every element with every other element." The article ends up trying to synthesize and overcome the four dimensions through an original conceptualization of modern markets as tension between noise and order.

After this innovative excursus, any reader should recognize that Goeke and Moser provided a remarkable theoretical contribution to the study of modern markets. However, although laudable, in my opinion, their work underestimates both the cognitive structure of real economic agents and the contextual nature of real markets environments. In their theorizing, they seem to indicate a *necessary* behavioral pattern for any economic agents, i.e. falling into the "vortex" of mutual recursive observations that "ends in complexity." Here, it is important to note that handling such a level of complexity is merely impossible for real actors, given their bounded rationality (Simon, 1991). Indeed, economic agents cope with market uncertainty by drawing on cognitive shortcuts (e.g., heuristics), pre-codified behavioral patterns (e.g., habits), social norms or social structures. These socio-cognitive factors play a crucial role in stabilizing economic action in complex decision making environments. This is the core point I would like to elaborate on here.

2 Re-embedding Economic Action

As said, one of the most controversial points in Goeke and Moser's article is understanding how economic agents actually deal with ubiquitous market uncertainty. In my opinion, this problem must be addressed *empirically* more than theoretically. In this respect, looking at cognitive, structural, and cultural mechanisms that agents rely upon when determining their actions without knowing what to do is key here (Beckert, 1996).

In order to cope with highly complex market situations, as Goeke and Moser correctly pointed out, economic agents have to overcome the "blind spot" inherent to every first order observation. In doing so, they have to "dis-embed" their reasoning by looking at which distinctions other observers applied in first-order observations. However, immediately afterwards, in order to decide what to do, they are condemned to escape the massive complexity of market environments by "re-embedding" their own views (Squazzoni, 2013).

Indeed, real economic agents, given their limited calculative capabilities, need ways to simplify the endless regression of mutual observations in order to cope with market uncertainty. In line with Squazzoni (2013), empirical research showed that economic agents, under growing market complexity conditions, are not able to raise their computational abilities proportionally. On the contrary, they systematically tend to simplify their decision domains by relying on emotional behaviors and testable heuristics, which actually include social information (Boero et al., 2010; Gigerenzer & Brighton, 2009; Monti et al., 2012). Indeed, as suggested by previous research in behavioral economics, the vast amount of information flowing from the markets would be cognitively impossible to handle for human beings. For instance, the notorious "paradox of choice" argument (Schwartz, 2004) demonstrates that an increasing of available information is not associated to an equal increasing of personal welfare. Conversely, informational overloads (e.g., Eppler & Mengis, 2004) lead to higher level of stress, unclear outcomes and heuristic behavior.

Not only do economic actors break the recursive observation loop by relying on emotions and heuristics; they also mobilize social connections. Here, empirical research showed that communications, opinions, and social influences are fundamental materials for real agents' decision making. For instance, research in empirical finance indicates that stock traders respond to massive market uncertainty by following emotional behavior and relying on e-communication platforms, such as blogs, forums or social media (e.g., Casnici et al., 2015; Saavedra, Duch, & Uzzi, 2011; Sprenger et al., 2014). These aspects seem quite disregarded by Goeke and Moser's "over-socialized" concept of economic action. In their conceptual scheme, agency is eclipsed by market environment mechanisms, while individual relations are left in the background. Actors are represented only abstractedly as if they were calculatedly powerful and situated out of any "real" context. In my view, this over-simplification requires serious reconsideration in their further research.

3 A "Tool-Box" to Address Market Uncertainty

As claimed by Keynes, uncertainty push actors towards mimesis, as well as advice, fashion, and habit (Keynes, 1937). Furthermore, when the market complexity increases, economic agents tend to rely on social "devices" that restrict their flexibility and create a rigidity in the responses to changes. According to Beckert (1996), social devices are conceived as "all forms of rules, social norms, conventions, institutions, social structures, and power-relations that limit the choice set of actors and make actions at the same time predictable." Social devices can be arranged in four wide categories: (1) traditions, habit and routines, (2) norms and institutions, (3) structural predispositions of decisions and (4) power.

By following habits and routines, economic agents may overcome the complexity of reflexive observation and recursive calculation, making their choices easier and more predictable. Habitual behavior has been broadly studied in sociology, and has been recognized as a mechanism for stabilizing social interaction and decisions (e.g., Becker & Knudsen, 2005; Castellani & Novarese, 2015).

Furthermore, economic action is deeply embedded in sets of social conditions, i.e. cultural assumptions (e.g., DiMaggio, 1994; Zelizer, 1994), political and legal conditions (e.g., Campbell & Lindberg, 1990; Fligstein, 1996) and, in general, economic and non-economic institutional frameworks (e.g., Granovetter, 2017; Polanyi, Arensberg, & Pearson, 1958). Institutions and social norms generate specific perceptions about the appropriateness of actions within a context and thus create reciprocal expectations on others' behavior. Consequently, institutions and social norms restrict the number of potentially feasible actions, while providing, at the same time, a cognitive orientation to action. In sum, uncertainty leads actors to rely on socially anchored scripts and culturally-based understanding of situations, allowing them to give sense of complex circumstances. This reduces the first order observation's "blind spot" and the absolute necessity to observe recursively other actors' interpretations.

In my opinion, Goeke and Moser's criticism against institutionalist approaches to markets has been not fully convincing. By referring to a "theoretical gap between the allegedly demanding market precondi-

tions and the facility of joining markets" (2018, p. 6), they raised the question of which institutional norms actors need to know to participate in markets and how these norms become acquainted with them. In my view, identifying universal mechanisms of institutional embodiment is difficult, because of the profound context-dependency and situational nature of institutions. Furthermore, such context-dependency should not lead to remove institutions. Exactly *because of* the contextual nature of institutions, sociology of markets should encourage empirical research in order to test theoretical hypotheses and corroborate abstract modelling.

Not only traditions, norms and institutions do shape the economic action in complex market environments. Empirical research shows that actors tend to react to uncertainty by relying on social connections, i.e. interacting with a small selected sample of "reliable" individuals. As pointed out by Granovetter (1985), social relations are mainly responsible for trust formation in economic life. For instance, DiMaggio and Louch (1998) showed that during high-risk transactions (e.g., purchasing a used car), actors tend to activate personal contacts to reduce trade uncertainty. A similar mechanism was detected in financial markets, as stock volatility triggered abnormal communication patterns directed to the most trustworthy users in online platforms (Casnici et al., 2015). Furthermore, Baker (1984) found that small markets were more efficient than big markets in limiting volatility, as micro-network communication patterns induced more stable price trends. In these cases, networks are first and foremost the interactive mechanisms that stabilize markets, as "they help information circulate, stabilize incentives, and engineer the trust or generalized morality" (Fourcade, 2007). Social information, trust and reciprocity, which are mediated by social relations, are often the only tangible guidance available to handle complex market scenarios so avoiding recursive observation. Therefore, leaving out these aspects from theoretical modelling may lead to oversimplifying real markets' dynamics.

Furthermore, social network configurations also affect the quality and amount of resources that actors can potentially access. For instance, Granovetter (1973) indicated that particular network topologies (i.e. the abundance of weak ties) lead to more successful job searching. Moreover, Burt (1992) showed that structural holes are associated to privileged access to significant resources. More in general, social capital literature suggests that information and resources are not equally distributed. Indeed, particular agents own strategic resources and are better equipped to deal with market uncertainty. This demonstrates that real markets are populated by heterogeneous economic agents, which deal with market conditions in many different ways, i.e. they have to tackle different "blind spots". When considering implicitly agents as a "homogeneous" and undifferentiated ensemble, we lose sight of the structural preconditions that shape economic action.

In this respect, the role of power and authority on economic processes should be considered more seriously. Power is a mechanism to reduce the range of possible responses of alters, while increasing the predictability of alters' behavior (Beckert, 1996). Exercising power in context of market uncertainty may be cognitively more sustainable as a means to gather information about others' interpretations and behaviors, as well as to escape from the "poly-contextual" observation loop.

Therefore, the four "devices" (e.g. habits, social structures, social relationships and power) are forms of cognitive, cultural, structural and political embeddedness restricting the horizon of possible outcomes (Zukin & DiMaggio, 1990). When the uncertainty increases, these four "devices" may drive actors towards a more stable view of market situations, allowing the emergence of cognitively affordable expectations on alters' behavior. In other words, they can enable actors to lead back unstable interpretations towards meaningful and codified situations. Cognitively affordable expectations break the reflexive loop of mutual observations by re-shaping economic action from a "multi-contextual" complex dimension towards a "mono-contextual" re-embedded perspective.

4 Concluding Remarks

Goeke and Moser addressed the problem of social order in modern markets and provided an innovative conceptualization of markets as tension between noise and order. By considering "mono-contextual" and recursive "multi-contextual" observations between economic agents, their work has suggested the need for theorizing on modern markets, which are characterized by deep uncertainty, depersonalization and disintermediation.

Here, I tried to argue that their theorizing calls for further empirical analysis. Their "over-socialized" perspective should consider both the bounded rationality of real agents and the context-dependency of markets in more detail. On the one hand, economic actors' expectations are formed by structural, institutional and cultural forms of embeddedness (Beckert, 2009). On the other hand, market exchange is deeply entangled in local social structures and specific horizon of meaning. This is why investigating *markets* without analyzing specific real *marketplaces* can hinder sociological analysis (Barbera & Negri, 2008).

Empirical research showed that actors, due to their social embeddedness and bounded rationality, systematically react to complex market situations by (i) using cognitive shortcuts, (ii) following routines and social norms or (iii) relying on their social relationships. I argued that when over-exposed to market uncertainty, "real" agents cannot but break the infinite regression of mutual observations, turning potentially uncontrollable "multi-contextual" observations into contingency-related codified situations, which are cognitively sustainable.

After reading this interesting article, I am convinced that a better understanding of these puzzles can come from combining the deductive approach provided by Goeke and Moser and inductive research on real markets and real actors (Barbera & Negri, 2008). I hope that this debate here could inspire "integrative" research.

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