Sociologica

N. 2/2013

Doi: 10.2383/74855

Essays

Essays

Economic Circularities and Second-Order Observation: The Reality of Ratings

by Elena Esposito

doi: 10.2383/74851

1. External Observation Inside the Economy?

How should we now be describing the condition of sociologists observing economic processes? Is it possible to observe the economy from the outside, and where would such an outside be located? This question has considerable practical implications, especially when it comes to describing abstract and reflective processes, such as recent financial movements, in which observations and descriptions mingle directly with market operations, and in which a specific sociological sensitivity can offer a major contribution. Reflexivity, emphatically discovered by economics,[1] has always been one of the assumptions of sociological observation. Today, the available theoretical developments allow for us to give these questions a more complex and more effective answer than those which have guided research for the past several decades.

For a long time these questions have appeared relatively unproblematic. Max Weber's classic answer, as it is formulated even in the title of "Economy and society" [1922], seemed reasonably sufficient: economy and society as two distinct and interconnected areas. According to this approach, the economy was understood as a particular field of institutions and behaviors, which follow their own rules and their own criteria, and outside of which is the broader field of society as a whole. In order to ad-

[1] Besides Soros [1987], the whole field of information economics [Stigler 1961; Stiglitz 1985; 2003; Grossman 1989] or Akerlof's "psycho-socio-anthropo-economics" [1984].

equately study the economy and its processes one needs to also take the relations between the two areas and their constraints into account. Economic rationality, for example, cannot be analyzed abstractly, by isolating the economy from those influences from external social structures. One must always connect the inside (economy) with the outside (society), and see how seemingly irrational behaviors are often motivated by considerations extraneous to pure economic logic, but are nonetheless meaningful and not at all arbitrary. According to Granovetter's well known formulation (who not by chance refers to Weber), "the behavior and institutions to be analyzed are so constrained by ongoing social relations that to construe them as independent is a grievous misunderstanding" [Granovetter 1985, 482].

This "embeddedness" is now taken for granted in economic sociology and has given rise to a great deal of useful research. One recent version, diffused under the label of performativity theory,[2] led to a series of illuminating studies of financial markets and their dynamics, and also helped to identify apparently insolvable difficulties involving the issue of the observation of the economy and of the position the observer [Esposito 2013]. Performativity theory notoriously starts from the assumption that economics does not consist in an external neutral observation of economic processes. Economics contributes to producing the economic reality it describes: its assertions and its models "perform, shake and format the economy" [Callon 1998, 2] and have very concrete effects on its dynamics. Theory is not an external observation but is inevitably and necessarily inside the object of study, whether it is aware of this fact or not.

This fact immediately compels us to raise another question: where is the observer located? Is the sociologist inside or outside of the economy? Is the society to which his observation belongs inside or outside of the economic dynamics? In Callon and colleagues' [2007, 316] terms: "How can a discourse be outside the reality it describes and simultaneously participate in the construction of that reality as an object acting on it?" An answer has been sought in the distinguishing of "confined economics" and "economics in the wild;" by placing sociologists into a broader context that includes other disciplines, management and practice [*ibidem*, 336]. However, in so doing, sociological theory dealing with the economy then also becomes a form of "economics" and should itself be subject to both the effectiveness and the constraints of performativity.

In this situation the classic distinction between economy and society becomes increasingly blurred and we inadvertently move to a condition in which the observer

[2] Since Callon [1998]. See MacKenzie [2006; 2009], MacKenzie, Muniesa and Siu [2007], Callon, Millo and Muniesa [2007].

(each observer) is inside the society that he is describing and acts upon it with his observations – a society that includes economic behaviors and which can never be observed from the outside. Niklas Luhmann's systems theory speaks of the "autology" of sociological theory [Luhmann 1997, 16ff.], whereby each observation, even that of sociology, belongs to society – i.e. to its object – and effects upon it. An autological theory needs to take this into account, and be aware that it is unable to control its effects.

What is here proposed is to change the perspective of the sociological observation of the economy. In this context, the relevant distinction is no longer that between society and an economy that is more or less tightly embedded in it, but instead one between different observation perspectives, and specifically between first-order and second-order observation [von Foerster 1981; Luhmann 1988, 68ff.; Luhmann 1991, 23ff.]. This distinction has proven to be enlightening in descriptions of social dynamics.

First-order observation is that of an observer who observes the objects in the world. Second-order observers observe observations – indeed they observe how observers observe. But social reality is not constituted in this way: it is not made up of objects or of isolated observers. In order to describe the social one must describe how these observers observe each other, and observe that the other observers also observe observations. This brings about a reflexive level, opening the way to indeterminate complexity: not only the reference to the fourth, fifth, nth order of observers who observe higher order observations, but also (and this is empirically the most relevant case) to the situation in which the observer who observes the observation of others turns out to be himself observed by others as an observer, thereby activating a recursive dynamics that is very difficult to control (as well as to describe). Everyone belongs to the world as an observer observed by others that he intends to observe.

The first consequence is that at this level any reference to the world remains fairly non-instructive. In the circular intertwining of observations any reference to objects is lost. In observing observers who observe observers one does not look at how the world is: the world is the result, not the premise of the intertwinement of observations, and can therefore not account for them. As von Foerster [1981] repeatedly stressed, this does not mean that there is no reality or that reality is not important – on the contrary, he cunningly remarks that he does not negate reality; he even argues that there are many realities, as many as there are observers facing the world, all absolutely not-arbitrary (nobody invents reality as he sees fit) but all relative to a specific perspective.

In this article I apply this approach to the specific case of economic reflexivity and show what advantages it offers in order to explain how and why the economy has evolved towards an increasing abstraction of its criteria and its operations (expressed by finance), abandoning any reference to the world and its data. The operations

of finance refer primarily to the operations of finance and thereby develop circular and self-reflective criteria. But why does this happen? What kind of structures are developed? How is this connected to the overall evolution of "risk society" [Beck 1986; Luhmann 1991] and its structures?

In the following paragraphs I articulate and specify this radicalized interpretation of the inclusion of the observer in the reality he observes. The behavior of financial actors can be described by combining two concepts: beauty contest and moral hazard – and thereby translated into the terms and the tradition of observation theory. Keynes' beauty contest can be interpreted as a systematic recognition of second-order observation: financial operators primarily observe other observers and what they observe (§ II). This observation produces particular circularities, due to the fact that one cannot observe reality from outside of society (§ III). If finance consists in second-order observation, however, its movements cannot be explained in reference to the world, but in reference to observation and its structures: the reality reference of finance is increasingly provided by ratings, which can only offer information concerning what others observe (§ IV). This dependence on observation produces specific problems and specific puzzles, which derive from the fact that modern society has moved – in every field – from first-order observation to second-order observation (§ V). Unexplained trends in the financial world can be connected to the circularity of observation.

2. Beauty Contest as Second-Order Observation

After a few years of reflection, the seemingly inextricable tangle of esoteric movements of finance has started to appear more intelligible – albeit no more controllable. With all of its complications, the current state of the financial world can be described as resulting from a combination of two concepts, both of which are well known and much quoted, though often simplified and partly misunderstood. These two concepts are not usually combined.

The first is the famous beauty contest described by Keynes, an allusion which has been circulating in reflections on finance for many decades: the analogy of finance as a beauty contest in which the jury must choose the most beautiful women from a sample of photographs – the winner is the one who guesses which faces were most voted on by jurors. The problem, and the great stimulus for observations of finance, is determining the criteria that a prudent juror should follow: "It is not a case of choosing those [faces] that, to the best of one's judgment, are really the prettiest, nor even those that average opinion genuinely thinks the prettiest. We have reached the

third degree where we devote our intelligences to anticipating what average opinion expects the average opinion to be. And there are some, I believe, who practice the fourth, fifth and higher degrees" [Keynes 1936, 156].[3]

Apparently this is a simple case of embeddedness: it is not enough to observe behavior as if it were independent from social relationships, i.e. from connections with other operators. It is not enough to orient to abstract beauty criteria. One must consider what others think. But here, abandoning any reference to "objective" criteria (to the outside world) and adventure in the field of opinions and social structures, the situation immediately becomes far more complex: it is not enough to refer to what others think, one must now refer to what others think others think. It is second order observation in the sense described above.

The result of the beauty contest cannot be explained by discerning who is the most beautiful girl. This is not what jurors observe if they want to win the competition. One must observe observers and how they observe their world: observe what others think of the faces of the girls and determine the average opinion. But even this is not enough: observers know they are not alone and know that the other jurors are also observing the observations of others and determining the average opinion. This forces the question of how the average opinion will appear according to their perspective? One should be able to observe how others observe it, i.e. a sort of average opinion on average opinion, moving to Keynes' third degree. And once one gets to this level it is hard to say where one should stop, because this opinion can also be observed at higher and higher observation orders: fourth, fifth, and so on.

The interesting (and empirically relevant) aspect, however, is that this regression does not lead to a indeterminate situation where observation loses any and all reference – where reality no longer has any binding force. In the beauty contest the reference to the observations of others is not arbitrary: one can win or lose, and one wins if one has observed correctly. But this correctness rests upon other criteria, which are far more complex than the simple reference to the beauty of the girls. The metaphor, we must remember, concerns finance: it indicates that the financial world is guided by

[3] This is actually a curious concept, much more suitable to describe the world of finance that the real situation of a beauty contest, where the winner isn't the cleverest juror but one of the contestant girls – who have no role in Keynes' model. In finance the reference reality is created by the mutual expectations of operators and the contestants are irrelevant – like a beauty contest in which the girls were the result of the expectations of jurors (an unpleasant image in many respects). Keynesian beauty contest model, however, is so important and established in the description of the movements of finance that I will take it as reference regardless of its flaws – which turn in benefits referring to the self-referential dynamics of markets. To clarify these points I found very useful to the discussion during the Conference "Embeddedness and Beyond," Moscow 2012: I would like to thank the participants, notably David Stark and Flaminio Squazzoni.

precise, and not random, criteria, which have nothing to do with the actual quality of goods or with the soundness of companies – or with other alleged "fundamentals" of the economy. These exist and are relevant, but only concern first-order observation. They do not lead the dynamics of operations, which focus instead on second-order observation, the mutual observation of the observation of others, and this up to very high and seemingly inextricable levels of abstraction and circularity. And it is to the latter that the attention of scholars (and sociologists) should be turned to.

3. Moral Hazard and Self-Defeating Prophecies

In order to adequately describe the complexity of the financial world, our reference to the beauty contest must be combined with another, which has also been observed and much discussed in recent times: the elusive notion of *moral hazard*. This notion introduces a moment of reflexivity that blocks the continuous regression from every observation order to a higher one: the condition in which the second-order observer is himself observed by the observers he observes. In this way his own observation affects the world he wants to describe.

The concept of moral hazard, originally developed in the field of insurances, has now extended to every aspect of economic behavior, from the micro-economic level of contract theory and individual decisions to economic politics and finance. Moral hazard indicates that the consequences of a decision affect the situation the decision refers to, changing its outcome and its constraints: e.g. the well-known cases in which an insured person is far more willing to take risks than those who are not insured. Insurance, which should protect against risks, produces new risks it cannot control (or only with great indeterminacy), because the world in which insurances act is different from the uninsured world the insurer is able to observe. The same thing happens in economic politics, which must always take into account the ways in which financial markets react to regulatory measures, usually sabotaging them with behaviors that discount the effect of the measures in advance. For example, the ECB recently took precautions not to make their decisions to support national economies public,[4] knowing that the very effect of the announcement would change the conditions of the markets, and hence the effectiveness of the measures.

A world ruled by beauty contest, such as finance, is inevitably prey to moral hazard, precisely because of the circularity of observation: the second-order observer is himself observed as observer by the observers he observes, and therefore his behavior affects the world he observes. In other words: at the level of second-order

[4] See Mario Draghi's statements in August/September 2012.

observation (which is, as we know, the level of finance) one can not see the world from outside. The observation of reality affects the reality it observes, producing unexpected effects and surprises – not because the observer observed in an imperfect way or neglected some factors, but precisely because his behavior produced additional factors that did not exist before and could not be observed. The consequences of the behavior of observers are always partly surprising, even if they are not at all random. They depend strictly on what has been done: if one does nothing or does otherwise, the reality faced is different. The reality of observers results from their observation, and is therefore usually different from what was expected.

The concept of *adverse selection*, which is often connected with that of moral hazard, describes this constellation: a condition of chronic lack of information, due to the fact that the relevant information is produced by the very behavior of the actors involved in the decision, and does not exist in advance. The shareholders of a company cannot know if a manager is fit to lead before testing her, and must therefore make their decision without the crucial information that is ultimately meant to drive their decision – and no additional collection of information allows them to fill this knowledge gap.

For a sociologist, however, this enigmatic condition is not surprising. One of the classical thinkers of the discipline, Robert K. Merton, described it many decades ago in the context of a discussion about self-fulfilling/self-defeating prophecies [Merton 1936; 1968, 477]. Predictions and observations, as Merton shows, do not contribute as one might think in the determination of the future, but instead make it increasingly unpredictable – they contribute, in Merton's terms, to perpetuate a "regime of error." When predictions are fulfilled, this is often because they start from a false definition (e.g. from an unrealistic description of markets),[5] which modifies the situation it acts upon, causing behaviors that make it true in retrospect –allowing the one who articulated the definition to think that it was true from the beginning. When predictions are not fulfilled, however, as is the case with self-defeating prophecies, the initial definition is usually true (or at least correct on the basis of the available information), becoming false only because it has been communicated. Indeed, the more the prediction and the consequent strategy are correct, the more they are convincing and will be followed, ultimately proving effective in modifying the conditions on which they are based, i.e. in falsifying themselves. A false prediction tends then to become real due to the fact that it was communicated and is strengthened by sub-

[5] The famous case of "performativity" described by McKenzie [2006] and McKenzie and Millo [2003] with reference to the Black-Scholes formula to price options.

sequent interpretations, while a true prediction tends to self-falsify and to produce a situation of uncertainty and disorientation.

In terms of recent performativity theory, one could say that the observation of the economy is always performative, in the sense that it has effects on the world, but it cannot control them – indeed, performativity often leads to confirm false observations and to disconfirm correct ones, producing the well-known counter-performative effects and phenomena such as "model risk" [Rebonato 1999]. Going further still, we should note that performativity itself can be observed. An observer can observe how the mutual observation of agents in the market produces effects of resonance [Beunza and Stark 2012, 410] that take the form of a bubble, and can perform opposingly, "exploiting resonance" to gain profits. Well known cases, like that of John Paulson, the hedge fund manager who earned 15 billion dollars going against market trends during the 2008 bubble [Zuckerman 2009], do not necessarily reveal a superior ability in evaluating the fundamentals of the economy (Paulson himself was a relative amateur in real estate), but the plausibility of moving to a higher observation order: from the observation of the other observers to the observation of observation itself as a fact affecting the world – and hence the requisite attention to seize the right moment and deviate from the performative trend and take advantage of the results. In Zuckerman's reconstruction, Paulson's success was not based simply on one of the countless attempts to navigate a speculative mania, which are notoriously very dangerous and in which he was not alone. Paulson did more: he was actively committed to producing even more toxic debt that he could then bet against [*ibidem*, 179ff.], i.e. to performatively intervene on the observation of actors, while retaining a detached position. Under these conditions a degree of not belonging (i.e. the status of a not-too-experienced operator) can also be an advantage.[6] It is, in a sense, an external observation – external to the observation of other operators, but not external to the economy. Even this perspective will then be observed, i.e. internalized, and can not warrant a permanent advantage.

In general, it can be assumed that in times of high uncertainty attention tends to shift from first order observation to second order observation: one observes what others do rather than how things are. When the world becomes unreliable, it is not enough to observe the world. Indeed, the more market volatility increases the more observation becomes abstract and indirect, up to observing what others do, and this not to do the same but to act differently – not to conform but to deviate. This would

[6] But it is by no means a guarantee: Zuckerman [2009] shows how many other inexperienced traders suffered large losses. It is not enough to be outside, you need to be able to stand inside and outside at the same time.

explain the emergence of an enigmatic "volatility skew" during the recent financial crisis: a condition in which some traders apparently believed it to be more probable that improbable events Mandelbrot and Hudson 2004; Esposito 2011, 148ff.] This is not simply a case of arbitrariness of financial trends: the black swan would not simply reveal the insuppressible role of chance [Taleb 2001; 2007], but rather the ability of observers to observe the dependence of markets on probabilistic calculations and models, obtaining information not on how the world will in fact go but on what others expect. The improbability of the events at stake remains absolute with respect to the world, and far less so with respect to observers. Under conditions of performativity this information is extremely valuable in order to imagine what might happen, one way or the other [Esposito 2013].

Extending attention from the single observation to the overall context, and ultimately to society as a whole, performativity theory (and observation theory) can escape this paralyzing circularity and provide orientations on the general functioning of economy and finance. In Keynes' terms: you have to move to the fourth or fifth degree of observation, those of an observer who knows that he is observed and takes this fact into account, formulating a theory in which the observer himself is part of the object he observes and subject to the same constraints he intends to study.

4. The Reality of Finance as Reality of Ratings

If the reality of finance is the joint result of beauty contest and moral hazard, what consequences can be drawn and what theoretical tools are required?

First, the theory of finance must always be located at the level of third or fourth order observation: to explain the movements of finance, one must not start from the solidity and efficiency of companies or from the reliability of banks, but from the way in which these factors are observed in finance and in its operations. One must then observe observers observing observers. But how can one observe what others observe? Observation theory starts from the premise that individual observers are black boxes for each other [von Foerster 1972]; the theory of social systems was formulated to describe how reliable and (to some extent) shared social structures develop from a nebula of mutually inaccessible psychic systems (Luhmann's famous and controversial assertion that the thoughts of persons do not belong to society; see Luhmann 1997, 24ff.). It is never possible to enter the mind of others, nor is it even necessary in order to achieve second order observations.

Individual observation is not directly observable, but can be observed indirectly through communication. This is not because communication expresses exactly what

the issuer has in mind (we all know the distance between what we think and what we can say or want to say), nor is it because the recipient understands the exact meaning of what is communicated (a successful communication always entails a misunderstanding: everyone understands the communication differently), but simply because communication allows one to observe what others observe, and this level of sharing is quite sufficient. One does not need to know how they observe. Think again of Keynes' beauty contest: the mechanism works if the jurors have some instrument to observe what the other jurors observe at their disposal, while in order to win the competition it is totally irrelevant which girl each of them considered to be the most beautiful or what the juror actually thinks. The intransparency of individual thoughts, besides being a guarantee for the freedom and self-determination of individuals, does not present an obstacle to the construction of shared social structures: one doesn't need to know what others think, but what others observe.

Society, then, must make forms that allow observers to observe each other's observations available, and draw an orientation (either conforming or deviating). When complexity increases, reference to the world is no longer sufficient: one requires tools that allow for observations of what others (in their own way) observe. In the case of finance, these tools are primarily assessments of rating agencies. The reality of finance, to which traders refer and to which they orient their decisions, is no longer the first-order reality of the alleged "fundamentals" of the economy, nor is it that of their reflections on markets and their movements: it is the mediated and shared reality provided by rating agencies. At least since the 1970s, the reality of finance is the reality of ratings. Ratings indicate to financial operators (to issuers and buyers, to speculators and investors, and increasingly also to regulators) what to observe and how, the movements and trends in the markets – starting, in a curious but not random way from a supposed "objective" observation of credit risk.

The movement from the observation of markets to the observation of ratings (which observe markets) is an evident phenomenon, widespread but still largely mysterious: "there is no doubt credit rating agencies are among the more powerful and less understood financial institution on the planet" [Langohr and Langohr 2008, 473]. It is also a relatively recent phenomenon, linked to the tumultuous changes that made the finance of the last decades increasingly abstract and increasingly mysterious [Sinclair 2010]. It is no coincidence that the growing size and importance of credit rating agencies (CRAs), which have existed since the beginning of the twentieth century, coincides with the period, starting from the 1970s, in which the global financial system became market-based and moved from fixed to flexible exchange rates, from price control to market pricing, that the techniques of structured finance have spread enormously – i.e. markets have become far more complex and risk has

taken a central role. In these increasingly intransparent and uncontrollable markets, CRAs had an enormous expansion (from 1976 to 2006 the ratings business more than quintupled [Moody's Investors Service 2007] – and spread to all areas; they have become increasingly criticized but also increasingly indispensable. It is a widespread conviction that if they were abolished one would have to create analogous institutions to replace them, and that it would be difficult to achieve the same efficiency [e.g. Langohr and Langohr 2008, 371].

Why is it that we need such a mediated and indirect construction? Why can observers not simply observe the markets and understand the trends in finance and make investments? The answer to these questions stem from the consequences of the constellation presented above, from the combination of beauty contest and moral hazard, i.e. from the inevitable circularity of the observation of observers. When one abandons any reference to the world and moves to the reference to observers,[7] there is no longer any unique or independent reference, although there remains a reality that is setting constraints, and this by no means randomly. These constraints (which exist and remain) depend on the mutual observation of observers, i.e. on a far more abstract, circular and mediated reality. A reference is needed that makes it observable in a reliable and shared way: this is the task of rating agencies.

Economic literature and theory describe the function of CRAs differently than observation theory, albeit along similar lines. They argue that CRAs perform a vital function in these intransparent markets: without their indications on the reliability of credits, for example, one would have to be wary of anyone offering credit; good operators would be disadvantaged and bad ones promoted – with the result of an increase in the cost of external financing and a decrease in offer.[8]

The problem remains the omnipresent asymmetric information. It is now widely recognized that security markets are information markets, where, first and foremost, information is exchanged [Stigliz 1985; 2003; Grossmann 1989]. According to the ideal model of markets,[9] this information should be embedded in security prices: observing an efficient market, an operator should have all the relevant information. The problem is that information is a very elusive entity that cannot be exchanged without altering its nature,[10] and observers cannot confine themselves to observe prices, but must also observe how they are communicated. A communicated information

[7] As we saw, this happens especially in conditions of high uncertainty.

[8] A phenomenon analogous to the well-known one described by Akerlof [1970] for the market for lemons.

[9] The Efficiency Market Hypothesis starting from Fama [1970].

[10] Heinz von Foerster [1972, 6] observed some decades ago that information is not a given of the world but must be related to the observers: "The environment contains no information; the environment is as it is."

is changed, because an observer will also ask why it was communicated and with what intentions. The goods exchanged on financial markets change in the course of trade. There is therefore an inevitable asymmetry between insiders and outsiders: investors do not know really what happens within a company, and no transparency norm can change this and fill the information gap. Some information can not be disclosed to outsiders without changing its meaning: for example, in cases where bad news on the prospects of a company have spread, insiders can know very well that this is a transient condition or that their impact will be immaterial. Nevertheless, they cannot communicate this fact, because the market (after the bad news) would not believe their claims. It would observe the insiders and inevitably wonder why they are saying such things, integrating the transmitted information with suspicions concerning their motives. Or, to be credible, insiders should give away significant proprietary information, which can not be diffused without jeopardising the interests of investors.

Ratings should serve to "bridge the information asymmetry between insiders and outsiders" [Langohr and Langohr 2008, 12ff.; Kessler 2007, 311], occupying an intermediate position between inside and outside, integrating the information included in prices (market-implied ratings) with additional information that prices cannot express, but which is needed in order to evaluate and interpret them. This would be the added value that ratings offer, and the reason why a customer should be willing to buy the performances of CRAs – and increasingly so as markets become more complex and less transparent.

But do ratings really fulfill this function? Can they fulfill it? The increasingly widespread criticism of the work of CRAs and of their presuppositions casts doubt on this construction [Sylla 2002; Hilscher and Wilson 2012]. It is almost impossible to evaluate the informational value of ratings: it has often been complained that ratings lag behind the market, and that markets anticipate most of the changes in ratings [Partnoy 2002; Kessler 2007, 315] and ratings systematically fail to anticipate crisis [Reinhart 2002]. It is actually the embarrassing case of products whose quality cannot be assessed before buying them: the quality of ratings is revealed only ex-post, when one can verify the accuracy of their predictions [Langohr and Langohr 2008, 407].

Even this accuracy is far from univocal. The fundamental indeterminacy of ratings is that you cannot evaluate their efficiency in orienting markets. In many cases, prices actually tend to correspond to changes in ratings, and hence to confirm them, but this can be due to the effect of ratings themselves, which affect markets and their movements [Partnoy 2002]. Do the movements of markets confirm ratings because their predictions were correct or because markets have changed as a result of the

predictions of ratings? Is it the case of a typical performative condition[11] which produces pro-cyclical effects: the reason why CRAs have been accused of being "pyromaniac firemen" (e.g. Alain Minc in January 2012), creating the very problems they are meant to solve.

From the point of view of observation theory, these problems of circularity are an inevitable consequence of the ambiguous position of ratings with respect to finance: their function should rely on their external and internal placement at a given time, so as to solve the informational asymmetry. But the inclusion of the observer is inescapable: if he wants to make his observations available to finance, each observer (hence also CRAs) must intervene in the circuit of the observation he observes, he must himself be observed, and this has consequences. The claim of objectivity of CRAs depends on the pretense of operating within finance as if they were outside, and as if they could provide an objective measure of risk. But the very authors who claim the essential informative role of CRAs must recognize that "ratings are meant to be exogenous, in the sense that they are outside indicators, but at the same time the embeddedness of ratings in many contracts, rules and regulations implies that ratings have direct real effects and tend to become endogenous" [Langohr and Langohr 2008, 474].

5. Observing What the Others Know

Ratings can only be internal to finance, and hence anything but neutral – but this doesn't mean that they are useless, arbitrary or that we can do without them. The assertion that if they would not exist we would need to invent something else to carry out their function, and that nothing could assure that it would do so as well or better, remains correct and acceptable. But this function cannot be founded by locating ratings as external observers, which is impossible. Ratings have another feature, which distinguishes them from other operators "embedded" in the movements of finance: they are "very visible" to all operators [*ibidem* 2008, 474]. Observing ratings, operators can observe what other operators observe and take this as a reference [Sinclair 2010, 5]. This visibility, and the fact that everyone is aware of it, allow ratings to provide market participants a common standard or language to refer to credit risk, which is observable and testable [Langohr and Langohr 2008, 90].

This works regardless of whether ratings are correct or not, i.e. of the insoluble question of their correspondence to the world (their indeterminable informational value). Ratings, as theorists tirelessly claim, do not offer statements of fact but only

[11] The so called Barnesian performativity: see MacKenzie [2006].

opinions, no matter how elaborate and controlled – they remain opinions among many others [*ibidem* 2008, 474 and 17ff.]. These are opinions concerning a particularly uncertain object, since they refer to the likely future of securities or issuers [*ibidem* 2008, xiii] – of which, moreover, they claim to consider precisely the unlikely aspects: the unexpected losses. Here the circularity is even more staggering, considering that the requirements for dealing with unexpected losses also depend on the effectiveness of the measures taken for dealing with expected damages, i.e. it depends on what you expect – in the face of a future that has not yet arrived and depends on our present behavior [Smith and Walter 2002].

These temporal aspects are complex and difficult to manage [Esposito 2011]. Ratings, faced with such an elusive and circular object, nonetheless provide a reference: that "anticipation of what average opinion expects the average opinion to be" which was the enigma of Keynes' beauty contest. Observers in the market know that they do not know how things are and that they cannot know what others know and think. What they have are opinions – always internal, circular and uncertain. But observers can know what other observers observe in order to form their opinions: a shared and visible reference, an opinion that is available to everyone and that everyone knows to be known (even if one doesn't know what they will think of it). This is the "common standard" provided by ratings, and it works regardless of its correctness – which would be totally irrelevant: what matters is how ratings are observed by observers on the basis of reputation and other intangible factors, and not on their relationship with an alleged external reality (which actually adapts to ratings, rather than the other way around).[12] It is on this opinion, as we know, that success in the beauty contest depends.

Ratings signal for the case of finance an ever growing trend at the level of society as a whole: the increasing dependence on reviews in every aspect of social reality – in the choice of restaurants, books, computers and any kind of purchase [Blank 2007], as well as the explosion of audits in all sectors, from finance to health care to education [Power 1997]. In all of these cases, there is a systematic move from first-order observation of data (the restaurants to visit, the books to read) to second-order observation of the observation of others (what others think of the restaurant and the book at stake). The choice, and hence the relationship with the world, depends on this.

[12] This also explains a further paradox of ratings [White 2002]: the "catch 22" model of the restrictions on entry in the market of ratings. Regulators establish criteria to protect the quality of ratings and enhance fair competition. But these criteria cannot focus on the output (the efficiency of predictions of the probability of default) without considering the input (the reputation of ratings firms). The result is a condition in which a new firm cannot obtain national reputation without being recognized as a rating organization with national reputation.

Our society tends to expand in all areas the well-established pattern of the mass media, which construct what becomes the shared reality of all citizens. "What we know of our society, and in general of the world we live in, we know through the mass media" [Luhmann 1995, 9]. The reality we all refer to includes what we know through television, movies, books and newspapers, and do not faithfully report reality but construct their own reality – as reviews do [Blank 2007, 4ff.],[13] which must be credible. Media provide us with what becomes the reality spendable in communication and in social life: knowledge of what others know, which we can refer to and expect to be understood, and serves to further communication (regardless of what is actually believed or thought by others – just as in the model of the beauty contest).

The reality of our society tends to become the reality of second-order observation [Luhmann 1997, 766ff.] – which helps to explain the similar and parallel trend whereby the reality of finance tends to become more and more the reality of ratings, which not only guide the choices of operators and companies but also drive the decisions of regulators. The Basel II agreements, for example, use the assessments of CRAs to determine the capital requirements of banks, triggering a further circular movement where regulation decides its measures starting from its results on the reality to be regulated [Esposito 2011, 165ff.].

6. Conclusions

Studying the movements of finance in this way also raises many problems – for example, how to explain the recent decreasing authority of rating agencies, in particular in the case of sovereign issues. In the course of 2012 the decisions of S&P and Moody's on the ratings of States were often ignored by investors, who went in the opposite direction. The downrating of France in November 2012, for example, was totally neglected, indeed even countered by markets. ECB's decisions over the past year were completely decoupled from the indications of CRAs. Nevertheless it seems that CRA performances remain essential: they continue to be produced, diffused and commented on. How can we explain this trend?

Starting from the let-down in the case of Lehman Brothers, the idea has spread that the evaluations of CRAs are unreliable. Observers apparently still need a shared reference, and CRAs are, at the moment, the only viable option – even if the ways in which it is used are changing, in a frame of more complex and articulated observations. It is as if markets performatively integrated CRAs assessments and the relative

[13] The theory of newsmaking showed it long ago: see Altheide [1976], Altheide and Snow [1979], Gans [1979].

observation – one observes now that others also don't believe in them, but still observe them. And then the problem shifts: how do traders observe ratings in a negative way, in order to observe each other? One should try to reconstruct the performative structure of this observation, in which the shared reference acts negatively rather than positively: it indicates what others know, knowing that this is not reliable. How do they use this information?

Or rather: do traders still observe ratings in order to orient their decisions? At the moment when one should perceive that agents no longer pay attention to the assessments of CRAs, their informational value collapses: they become opinions like any other, without the added value owed to their capacity for indicating what others observe. And then one would need to investigate what would take their place: what do observers now observe in order to observe the observation of others (i.e. their reality reference), if ratings are no longer informative? How is the intransparency of markets dealt with in order to avoid arbitrariness?

These are empirical questions referring to complex problems, on which we do not have enough data. We remain unable to provide an answer, but these problems make the need for a careful and complex theory of observation even more evident. The study of the embeddedness of finance in society requires sophisticated tools, which go beyond the integration of research on finance with the reference to the network of interactions in which actors are included: an adequate study of finance and its peculiar circular structures requires, here as in many other cases, a reference to society.

The tools for realizing this kind of analysis belong to the tradition of sociology. The ability to theorize the circularity of observation and its effects is the most fruitful legacy of the classic question of embeddedness in a society and an economy that are increasingly complex. In fact, the reference to finance and to observation allows us to rephrase the problem of embeddedness as a combination of beauty contest (observation of observations) and moral hazard (circularity of observation). From this point of view, the apparent puzzles of the movements of financial markets become explainable – even if they cannot be controlled. This interpretation could be extended to the study of economic phenomena in general, shifting the focus on the forms and conditions of the inclusion of the observer in the object he observes.

The move of finance to second-order observation and its forms, as we have seen, cannot be analyzed studying only the economy, not even taking into account performativity and the reference of actors to social relationships. It corresponds to a structural transformation of society as a whole, that has to face an open future and the ubiquity of risk – manifested by finance and its puzzles in the most urgent and significant way. Embeddedness, if it is useful, should always work both ways, indeed

with a spiral mechanism: the reference to society serves to explain the structures of the economy that then serve to clarify the evolution of society.

References

Akerlof, G.A.

1970 "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism." *The Quarterly Journal of Economics* 84: 488-500.

1984 *An Economic Theorist's Book of Tales*. Cambridge, MA: Cambridge University Press.

Altheide, D.L.

1976 *Creating Reality. How TV News Distorts Event*. Beverly Hills-London: Sage.

Altheide, D.L., Snow, R.P.

1979 *Media Logic*. Beverly Hills-London: Sage.

Beck, U.

1986 *Die Risikogesellschaft: Auf dem Weg in eine andere Moderne*. Frankfurt a.M.: Suhrkamp.

Beunza, D., Stark, D.

2012 "From Dissonance to Resonance: Cognitive Interdependence in Quantitative Finance." *Economy and Society* 41: 383-417.

Black, F., Scholes, M.

1981 "The Pricing of Options and Corporate Liabilities." *Journal of Political Economy* 81: 637-54.

Blank, G.

2007 *Critics, Ratings and Society: The Sociology of Reviews*. Lanham: Rowman & Littlefield.

Callon, M.

1998 (ed.) *The Laws of the Market*. Oxford: Blackwell.

Callon, M., Millo, Y., Muniesa F.

2007 (eds.) *Market Devices*. Oxford: Blackwell.

Esposito, E.

2011 *The Future of Futures. The Time of Money in Financing and Society*. Cheltenham: Elgar.

2013 "The Structures of Uncertainty. Performativity and Unpredictability in Economic Operations." *Economy and Society* 42(1): 102-129.

Fama, E. F.

1970 "Efficient Capital Markets: A Review of Theory and Empirical Work." *Journal of Finance* 25: 383-417.

von Foerster, H.

1972 "Notes on an Epistemology for Living Things." *Biological Computer Laboratory Report – Department of Electrical Engineering, University of Illinois*, 9.3.

1981 *Observing Systems*. Seaside, CA: Intersystems Publications.

Gans, H.J.

1979 *Deciding What's News*. New York: Random House.

Granovetter, M.

1985 "Economic Action and Social Structure: The Problem of Embeddedness." *American Journal of Sociology* 9: 481-510.

Grossman, S.J.

1989 *The Informational Role of Prices*. Cambridge, MA: MIT Press.

Keynes, J.M.

1936 *The General Theory of Employment, Interest and Money*. London: Macmillan.

Kessler, O.

2007 "Unsicherheit, Ungewissheit und Risiko: Temporalität und die Rationalität der Finanzmärkte." Pp. 293-321 in *Die Markt-Zeit der Finanzwirtschaft: soziale, kulturelle und ökonomische Dimensionen*, edited by A. Langenoh and K. Schmidt-Beck. Marburg: Metropolis.

Hilscher, J., Wilson, M.I.

2012 "Credit Ratings and Credit Risk". *AFA 2013 San Diego Meetings Paper*, January 31st.

Langohr, H.M., Langohr, P.T.

2008 *The Rating Agences and their Credit Ratings. What They Are, How They Work and Why They Are Relevant*. Chichester: Wiley.

Luhmann, N.

1988 *Die Wirtschaft der Gesellschaft*. Frankfurt a.M.: Suhrkamp.

1991 *Soziologie des Risikos.* Berlin-New York: de Gruyter.

1995 *Die Realität der Massenmedien*, Opladen: Westdeutscher Verlag.

1997 *Die Gesellschaft der Gesellschaft*, Frankfurt a.M.: Suhrkamp.

MacKenzie, D.

2006 *An Engine, Not a Camera. How Financial Models Shape Markets*. Cambridge, MA: MIT Press.

2009 *Material Markets. How Economic Agents Are Constructed*. Oxford: Oxford University Press.

MacKenzie D., Muniesa, F., and Siu, L.

2007 (eds.) *Do Economists make Markets?* Princeton: Princeton University Press.

MacKenzie, D., and Millo, Y.

2003 "Constructing a Market, Performing Theory: The Historical Sociology of a Financial Derivatives Exchange." *American Journal of Sociology* 109: 107-145.

Moody's Investors Service

2007 "Corporate Default and Recovery Rates, 1920-2006." *Moody's Special Comment*, February.

Partnoy, F.

2002 "The Paradox of Credit Ratings." Pp. 65-84 in *Ratings, Rating Agencies, and the Global Financial System*, edited by R.M. Levich, C. Reinhart, and G. Majnoni. New York: Kluwer.

Power, M.

1997 *The Audit Society. Rituals of Verification*. New York: Oxford University Press.

Rebonato, R.

2001 "Managing Model Risk." Pp. 82-116 in *Mastering Risk: Volume 2 – Applications*, edited by C. Alexander. London: Financial Times-Prentice Hall.

Reinhart, C.

2002 "Sovereign Credit Ratings Before and After Financial Crises." Pp. 251-268 in *Ratings, Rating Agencies, and the Global Financial System*, edited by R.M. Levich, C. Reinhart, and G. Majnoni. New York: Kluwer.

Sinclair, T.J.

2010 "Credit Rating Agencies and the Global Financial Crisis." *Economic Sociology Newsletter*, 12: 4-9.

Smith, R.C., Walter, I.

2002 "Rating Agencies: Is There an Agency Issue?" Pp. 289-318 in *Ratings, Rating Agencies, and the Global Financial System*, edited by R.M. Levich, C. Reinhart, and G. Majnoni. New York: Kluwer.

Soros, G.

1987 *The Alchemy of Finance. Reading the Mind of the Market*. Chichester: Wiley.

Stigler, G.

1961 "The Economics of Information." *The Journal of Political Economy* 69: 213-225.

Stiglitz, J. E.

1985 "Information and Economic Analysis: a Perspective." *Economic Journal* 95 (1985): 21-41.

2003 "Information and the Change in the Paradigm in Economics." Pp. 569-639 in *Economics in an Imperfect World. Essays in Honor of Joseph E. Stiglitz*, edited by R. Arnott, B. Greenwald, R. Kanbur and B. Nalebuff. Cambridge, MA: The MIT Press.

Sylla, R.

2002 "An Historical Primer on the Business of Credit Ratings." Pp. 19-40 in *Ratings, Rating Agencies, and the Global Financial System*, edited by R.M. Levich, C. Reinhart, and G. Majnoni. New York: Kluwer.

Taleb, N.N.

2001 *Fooled by Randomness. The Hidden Role of Chance in the Markets and in Life*. New York-London: Texere LLC.

2007 *The Black Swan: The Impact of the Highly Improbable*. London: Penguin.

Weber, M.

1922 *Wirtschaft und Gesellschaft*. Tübingen: Mohr.

White, L.J.

2002 "The Credit Rating Industry: An Industrial Organization Analysis." Pp. 41-63 in *Ratings, Rating Agencies, and the Global Financial System*, edited by R.M. Levich, C. Reinhart, and G. Majnoni. New York: Kluwer.

Zuckerman, G.

2009 *The Greatest Trade Ever. The Behind-the-Scenes Story of How John Paulson Defied Wall Street and Made Financial History*. New York: Broadway Books.

Economic Circularities and Second-Order Observation: The Reality of Ratings

Abstract: Can observers observe the economy from outside? Recent developments in economic sociology tend to blur the classic distinction and combination of economy and society and to move to a condition in which the observer (each observer) is inside the society he describes. The behavior of financial actors can be analyzed combining two concepts with a long tradition and many implications: beauty contest and moral hazard – and can then be translated into the terms and the tradition of observation theory. Keynes' beauty contest can be interpreted as a systematic recognition of second-order observation: financial operators observe primarily other observers and what they observe. This observation produces particular circularities – first of all the insoluble problem of moral hazard, which reproduces in the field of finance Merton's famous model of self-defeating/self-fulfilling prophecies.

If finance is second-order observation, however, its movements cannot be explained by reference to the world, but rather to observation and its structures: the reality reference of finance is increasingly provided by ratings, which offer information not on how the world is, but on what the others observe. The spread of ratings in recent decades and the doubts about their reliability are related in the article to the generalized move of modern society to second-order observation, that produces specific problems and specific puzzles, but also structures and constraints.

Keywords: observation theory, embeddedness, performativity, ratings, finance, beauty contest, moral hazard

Elena Esposito, teaches Sociology of Communication at the University of Modena-Reggio Emilia. She published many works on the theory of social systems, media theory and sociology of financial markets. Among them *The Future of Futures. The Time of Money in Financing and Society*, 2011; "The structures of uncertainty: performativity and unpredictability in economic operations", *Economy and Society*, 2012, 41, pp. 1-28; *Die Fiktion der wahrscheinlichen Realität*, 2007; *Die Verbindlichkeit des Vorübergehenden. Paradoxien der Mode*, 2004.

Essays

Observing Finance as a Network of Observations

by David Stark

doi: 10.2383/74854

I. "You can observe a lot just by watching." Yogi Berra

This quote from one of my favorite Yankee philosophers should be the motto of ethnographers. Watching, being there, in situ, with eyes and ears open, in an attitude of curiosity, not knowing in advance what you are looking for but prepared to recognize it when you find it – this is still one of the very best techniques for data collection. But, of course, ethnographers have no monopoly on observing others. In fact, one of the key premises of observation theory as articulated by Niklas Luhmann and developed by Elena Esposito [2011; 2013a] is that society is constituted by this process of mutual observation. In an earlier, extraordinarily rich paper, Esposito proposed the idea that "the real purpose and function of the market… is to provide an arena for the mutual observation of observers" [Esposito 2013a, 10]. In the paper under discussion here, she elaborates this idea in order to apply observation theory to the field of finance and, in particular, to the study of ratings.

Readers who are not from North America might be under the impression that the "Yankee philosopher" of my opening sentence is some New England gentlemen, perhaps akin to the poet Robert Frost. Although some of Berra's statements do read poetically, Yogi was no country gentleman. But he was, indeed, a Yankee – a New York Yankee – one of baseball's most outstanding players, the catcher on a repeat

championship team that fielded some of the sport's greatest athletes.[1] In addition to his baseball talents, Yogi Berra was an accomplished quipster, famous for pithy remarks such as "It's like déjà vu all over again," "Never answer an anonymous letter," and "When you come to a fork in the road, take it." Truisms, true; but sometimes more paradoxical and always, curiously, revelatory. Although his succinct account of inflation – " A nickel ain't worth a dime any more" – might seem to be his most telling contribution to the theory of finance, in fact, I'll be using several of his other observations as a device for restating and discussing Esposito's excellent paper.

We begin with Esposito's argument that notions of the economy as having an inside and outside are mistaken. There is no stance from which one can observe the economy from outside. There are different perspectives, to be sure, but none gazes into the economy from a position outside it. You can observe a lot just by watching, as my Yankee friend says. When you do, you see that observations are a part of the world, they are part of the economy. These include the observations by everyday actors as well as those by economists – and even by sociologists. For these reasons, Esposito argues that the framework of embeddedness – with its notions of economy and society – is not a useful starting point for economic sociology. Sociologists are not outside the economy, observing it from some standpoint in society. For Esposito, the economy is not embedded in observations. Observations are part and constitutive of the economy. I agree. And I have argued elsewhere that it is time for economic sociology to move beyond the notion of markets as embedded in social relations, of value nested in values, of economy resting on some mattress of culture [Stark 2009]. Instead of these nets, and nests, and Russian dolls a better metaphor for the economy would be that of the mobius strip—the topological form without inside and outside.

II. "That place is so crowded nobody goes there anymore."

In Part II of her essay, Esposito adopts the notion of the "Keynesian beauty contest." In such a contest, all the judges are also, in an important sense, the real contestants since they are competing to see who can anticipate, in Keynes words, "what average opinion expects the average opinion to be." Yogi Berra is no John Meynard Keynes, but he does understand the difference between a value investor

[1] New York Mets fans will demand full disclosure so let's get it all on the table: As a kid, I played behind the plate in Little League baseball. Fellow catcher Yogi Berra and fellow Oklahoman Mickey Mantle were my childhood heroes. So, of course, I was a Yankee fan.

and a chartist, the latter like a fashionista on the restaurant or the clubbing circuit who pays attention to the music or the food only insofar as it necessary for the real game which is paying attention to the crowd. The goal in such a contest: to anticipate the crest and still be (figuratively) the first out of the door when the place gets too crowded just before the "music stops" (the stock plummets, the bubble bursts).

Esposito's use of the Keynesian beauty contest is more sophisticated than a simple chartism. She wants us to see contemporary finance as almost entirely disconnected from materiality. The dominance of derivatives and the prevalence of circularity (note that Keynesians use "specularity" [Dupuy 1989]) results in a situation "abandoning any reference to "objective" criteria (to the outside world) and adventure in the field of opinions and social structures..." [Esposito 2013b, 4]. For Esposito, the metaphor of the Keynesian beauty contest "indicates that financial world is guided by precise, and not random, criteria, which have nothing to do with the actual quality of goods or with the soundness of companies – or with other alleged 'fundamentals' of the economy" [Ibidem, 4]. One need not to have adopted some financial theory equivalent of the correspondence theory of truth to note that it is hyperbolic to insist that the financial world has nothing to do with the soundness of companies. I want to focus instead on the notion of second-order observations.

At this point the reader must be reminded that I am operating with the philosophical depth of an American baseball player and so might be forgiven for being confused with all this talk about the differences between Luhmannian first- and second-order observations, leading to Keynesian "third, fourth, and fifth degrees" of circularity.

Esposito labels this section "Beauty contest as second-order observation." The object of study of sociologists, we learn, should not be first-order observations because "They do not lead the dynamics of operations, which focus instead on second-order observation, the mutual observation of the observation of others, and this up to very high and seemingly inextricable levels of abstraction and circularity." [Ibidem, 4].

Not frivolously: I am confused about the concept of a "second-order" observation. In the passage just quoted above, a second-order observation is "the mutual observation of the observation of others." Can I observe your observation? Can you observe mine? If we mutually observe each others' observations, are these then "second-order obseverations"? If so, how? What would it mean that I have observed your observation? Of course, I cannot be in your head; I cannot observe your perception. I can, however, observe your stated views or inscribed communications about your observations.

Imagine, for example, that you are a securities analyst. I can read your reports, your estimates about the earnings of a given security. But this is no different – as an order of observation, which is the question at issue – from looking at a stock ticker, or listening to a CEO on a conference call, or reading a company report. Since I cannot read your mind, my reading of your inscribed communication (your "observation") is necessarily a first-order observation. Perhaps I am (stubbornly) misunderstanding, but I do not see how the "mutual observation of the observations of others" is a "second-order observation," when it seems, instead, a straightforward case of multi-sided first order observations.

What about watching you observing? Could this be a "second order observation"? Observing how you pay attention – your posture, for example, or your degree of attentiveness – seems to me trivial. In any case, it would still be a first-order observation. Perhaps then a second order observation refers to your observation about my observation, or mine about yours. This very commentary could be seen as a meta-observation, for example, my observations about the observations of Esposito. But meta or not, from a first-order versus second-order problematic this is no different from the securities analyst's observations (in effect, a report about reports) which we had already established is a first-order observation.

What is important here is that I do agree with Esposito that something is going on, and especially so in the field of finance, that cannot be captured with the notion of a first-order observation. It is precisely because this process is important that I think the language of "observation" might not be the most appropriate analytic tool for investigating the problem. I can observe your observations in the sense of making first order observations of your communications about your observations. But, as valuable, (in many cases, more valuable) than your stated communication would be if I could have access to the interpretive schema that gave rise to your communicated observations. In other words, I would like access to your *model.* In some cases you might wish to reveal your model. But in the more interesting cases, your model (the schema through which you interpret the world and make decisions, including how you interpret your observations about my communications) is proprietary. If you choose not to reveal it, it cannot be observed. But it might be inferred. We will return to this question of the veil of hidden models.

The question is whether Yogi Berra gets the last word or not, and if so, how. Perhaps you can observe a lot just by watching. Perhaps, as well, there is much that you cannot observe by watching. And perhaps there are some things that you can observe but not by watching. That is, it could be that, if I had just been observant enough, I might have noticed that Yogi was trying to alert me all along to the possibility that there could be a difference between observing and watching.

III. "The future ain't what it used to be."

In Part III, Esposito amplifies the concept of "moral hazard" in a fascinating way, going beyond the notion that insurance produces new risks. For her, the most interesting aspect of the circularity of observations pertains to uncertainty about the future. And the most troubling apect is that models that predict the future can and will, by being used, bring about a different world than the one predicted. This is a diabolical circularity: The more a prediction is followed, the more it will modify the conditions on which it was based, and thereby change the world. Now we can understand just how apt is this statement by our Yankee philosopher: "The future ain't what it used to be." Observations about the future bring about different futures.

This is the shortest section of the paper under discussion, partly because Esposito has written elsewhere [Esposito 2009, 2013a] and at greater length about this topic. Esposito notes that any model would need to make assumptions about the actions of others. Things get really interesting, she argues, when models become more sophisticated and begin to take into account that others are not simply acting but are acting on the basis of models (which themselves take into account that others are using models, each of which is probability based). As models become more sophisticated, more powerful, and better able to take into account model risk, prices become more volatile and the system as a whole less predictable. That is, the reliability of models contributes to the unpredictability of the system: "Under these conditions, every reliable forecast is destined to falsify itself, because the future reacts to the expectations imposed on it – where every additional reliable forecast contributes to an increased unpredictability of the future" [Esposito 2009, 370]. I am far from conversant in matters of probability theory so you should not rely on my summary. But in the spirit of a Yogi Berra quip, it would read: It's probably improbable that improbabilty will last.

IV. "If the world were perfect, it wouldn't be."

How then does one calculate in the Keynesian third degree (attempting to ascertain what the average opinion considers as the average opinion) under conditions of diabolical circularity (when uncertainty about the future is generated by attempts to predict the future)? With everything in an uncertain motion, to what can I tether my algorithm? Esposito answers that ratings provide such a fixed point of reference. To fulfill this function, ratings do not need to be perfect. In fact, their function as a point of reference, Esposito argues, can be detached from their predictive function. What matters is that they provide a common standard, "a shared and visible refer-

ence, an opinion that is available to everyone and that everyone knows to be known (even if one doesn't know what they will think of it)" [Esposito 2013b, 11]. In a situation of the generalized invisibility of others' observations, it is not the correctness of ratings but their high visibility that gives them value.

V. "If you don't know where you're going, you'll wind up somewhere else."

Esposito's paper prompted me to think again about my own research on finance. I didn't know exactly where I was going in that work, but I now see that I am ending up quite close to observation theory even though I had not previously understood the explicit connection. For example, in a recent paper, "From Dissonance to Resonance: Cognitive Interdependence in Quantitative Finance" [Beunza and Stark 2012], Daniel Beunza and I ask the question: How do traders deal with the fallibility of their models? In particular, how do they deal with the fact that, in identifying patterns in the markets, these same instruments can also blind the trader from seeing some things. As instruments of perception – and indeed, like the optic nerve itself which allows us to see but must also produce a blind spot – models that reveal also conceal.

How does the trader avoid such cognitive lock in? The answer is that traders leverage the fact that other traders are observing from a different vantage point. The traders at the merger arbitrage desk we studied could not observe what is on their rivals' screens. That is, as a trader I cannot observe your observations directly, and I don't have access to your model. What I would like to do is make reasonable inferences about your model. Beunza and I show that, in the case of merger arbitrage, traders place on their screen an image of the "spread plot" which they skillfully use as a representation of the aggregate views of their rivals.

When the spread plot moves in a direction different from one's own estimates, traders can ask, "What am I missing?" and make corrections in their models. In itself, watching the spread plot is a first order observation. But when the spread moves in a different direction than the estimates derived from my proprietary model, the resulting triangulation is a second order observation that allows me to make inferences about how you are interpreting the world which can cause me to reflect on (to think again about) my own model. Such "reflexive modeling" can help an individual trader to avoid disaster. But it should come with a warning label: when the system lacks requisite diversity, the cognitive interdependence can create positive feedback that yields an arbitrage disaster – such as the $2.8 billion in losses to merger

arbitrageurs (including the team we studied) in the GE-Honeywell deal. When the system lacks diversity of viewpoints, the same practices that do prove effective in mitigating individual cognitive lock in can lead to a collective lock in of enormous proportions.

Beunza and I base our argument on extended ethnographic observations of merger arbitrageurs in the derivatives operation of a major international investment bank on Wall Street. This paper was drawn from observations of one merger arbitrage desk in one trading room (in fact, further limiting our account to what transpired on a single morning). In a subsequent paper, Matteo Prato and I use a very different method – a statistical analysis of 10,933,662 pairs of securities analysts' estimates on US publicly listed firms' earning per shares – to study the effects of social structures of observation on valuation.

"Attention Networks: A Two-Mode Network View on Valuation" [Prato and Stark 2013] builds on the observational theory principle that valuation depends on the contingent viewpoint of the observer and on the views expressed by the observed. The observer's viewpoints and observed views are for us embedded in the evolving two-mode (agents-assets) network structures of attention that characterize financial markets. Our argument starts with a simple question: What does it mean to focus on a financial asset?

One way to think about this is as a singular relationship of an actor to the asset. Another, quite popular way among sociologists, is to think about an actor examining an asset in relationship to an abstract category. We take a different view: Instead of positing that it is the "structure of classification that guides valuation" [Zuckerman 2004, 411], we argue that it is the structure of attention that guides valuation. In place of arguing that valuation is embedded in socially constructed categories, we argue that it is shaped by networks of attention.

We define an attention network as an evolving network created by multiple agents allocating their attention and expressing their judgments across multiple situations. Valuation, we argue, is shaped by an actor's location (or viewpoint) within such an attention network. That is, as a first step, we propose to study the relationship between paying attention and allocating attention. Focusing attention and allocating attention are not so very different. The objects across which one allocates attention are the ground against which the figure can be seen. If we as researchers can know the other objects that an actor has in her field of view, then we know the viewpoint from which she makes an assessment.

In assessing a focal situation, actors can make associations, analogies, and comparisons with the other situations that are present in their portfolio of attention. Specifically, a feature viewed as salient for evaluating one issue might be recognized as

relevant for another. That is, the issues across which an actor allocates her attention will shape the properties that are selected as salient and worthy of consideration when assessing the focal situation.

We refer to this as the viewpoints effect. Our first proposition is that valuation is perspectival: One's assessment of an issue is shaped by one's viewpoint, given by one's contingent portfolio of attention. We hypothesize, specifically, that two actors who assess a given situation vis-à-vis a similarly (differently) composed portfolio of other situations are more likely to autonomously converge (diverge) in their interpretations of the given situation.

Viewpoints are the first but not the only step in developing an observational network approach to valuation. Building on the second relational property of attention in a two-mode observational network (i.e., links among the competitors who pay attention to the same market issues), we expect that market actors are more likely to come across the assessments of the competitors who focus their attention on the same issues. When two competitors allocate their attention across more similar portfolios of problems, their views become prominently visible to each other. Associations made by one actor become noticeable to the other and vice-versa. Conversely, mutual exposure would be limited when two competitors are not in their respective fields of vision because they are allocating their attention to different market aspects.

Thus, our second proposition, referring to the views effect, is that valuation is doubly perspectival: actors' valuations are not only shaped by their contingent viewpoints, given by their fleeting portfolios of attention, but also by the views of others, which themselves are shaped by their changing viewpoints. We, therefore, further hypothesize that, the more (less) two actors have encountered the same third actors' views on the other situations to which they have not been attentive jointly, the more their interpretations of a given situation will converge (diverge).

We test these propositions in the context of securities analysts, whom we might think about as professional observers. In particular, we study the end of year earnings estimates that securities analysts make about the firms in their portfolio of coverage. Our findings support the idea that an actor's position in an observational network – via viewpoint and selective exposure to others' views – shapes valuation.

Our analysis shows, in the first instance, that an analyst's estimate of the end-of-year earnings per share of a given security is shaped by the other securities in her field of view. In terms of Podolny and Hill-Popper's [2004, 91] insight that valuation takes place from the "particular orientation of an individual to an object of exchange," we found that, when evaluating a given security, an analyst is not facing that security alone. In place of a singular relationship – a given analyst to a given security – we

found a more multi-sided set of relations. The security is not alone. As our findings indicate, it is evaluated in terms of the other securities that are in the analyst's field of view.

Our analysis further demonstrates that analysts' estimates are influenced by the views of other analysts with whom they shared stock coverage and that these effects are amplified when individuals shared attention patterns with the same third parties. How does a given analyst search when she knows that she has limited cognitive abilities? Our answer began with a simple proposition: The analyst is not alone. Again, the relationship between analyst and security is not a singular one – there are multiple analysts evaluating that security, each of whom is simultaneously evaluating other securities. Given limited individual cognitive abilities, analysts leverage this multi-sided relationship. Just as the view of the focal stock is not only shaped by the information on that security but also by the other securities that form the background, so we argue that the view of the focal stock it is not shaped only by the views of others about that security but also by their views of other securities that are not shared.

If my views are shaped by my peripheral vision and yours are shaped by your peripheral vision, then to the extent that we mutually influence each other, we can say that my views are shaped, in part, by your peripheral vision.

Our sociological account of valuation exploits two-mode networks as a method of analysis. Objects are located within a network structure of attention given by the actors who observe and evaluate them. Meanwhile, actors are also located within a structure of attention given by the ties that connect them through the objects they observe and evaluate. Note the peculiar feature of this network. There are no direct ties among the agents. They are not proximate because of some personal connection. Their location in the social space of attention – their proximity to or distance from each other – is a function of ties formed through objects. In mapping these networks, we chart socio-cognitive networks.

Whereas problems like the Keynesian beauty contest are stimulating economists to think about intersubjectivity [Fullbrook 2001], we think about our adoption of two-mode network analysis as a method for studying interobjectivity.

VI. Conclusion: "It ain't over 'til it's over."

Heinz von Foerster's "We don't see what we don't see" might well have been a Yogi Berra aphorism – for both men appreciated that a good tautology can be informative. Does observation theory have a blind spot? Of course, it must. To the extent that it provides a lens to see, it must also conceal some element or moment

or instance from observation. Every theory has a blind spot. In place of the singular "I am a Luhmannian" (or the equally singular, "I am an ethnographer," or "I am a network analyst"), the corrective is binocular theoretical vision. To the plea, "Oh, but surely you, just like I, need an identity," one can reply that a real identity is one that is with the discrepancy, at the difference, within the dissonance. Dante expressed it slightly differently in this passage from the Purgatorio of The Divine Comedy: "Fix not thy mind on one place only."

Dante's injunction is good advice to address the problem of getting trapped in your own successes. A sociological double vision can help to avoid such cognitive lock-in. Of course, double vision is a kind of malady, things are out of focus. But "focus" can be overrated, especially if it's the single-minded variety.

We so often hear advice, whether it is to organizations or, for example, to our students: "Get focused!" But, continuing with this visual metaphor, there is also something to be said about the importance of peripheral vision. It's critical for athletes. It's a useful and necessary skill for moving very quickly together with many other people, going in different directions, as I've been aware when navigating from one subway line to another during rush hour in the Times Square subway station. And it's vital for organizations. In highly uncertain settings, you should not be locked-in looking ahead (in the doubly mistaken view that the future can be foreseen and that it must necssarily be ahead) but must also be attentive to the movement that is happening around you. Peripheral vision achieves awareness of that movement.

In science, as for organizations, the binocular has benefits. We are blind to our blind spots, von Foerster tells us. We cannot find a point from purely outside, as if in some kind of aerial sociology, objectivity and/or reflexivity were a function of distance. We are always inside. There is no mobius strip social theory. In place of no inside/no outside we can operate in another topological form – the structural fold – inside more than one community [Vedres and Stark 2010; De Vaan, Vedres, and Stark 2012]. In this way, we can strive for reflexivity as a property not of an individual but of a collectivity. What's better than an observation? A conversation.

References

Beunza, D., Stark, D.

2012 "From Dissonance to Resonance: Cognitive Interdependence in Quantitative Finance." *Economy and Society* 41: 383-417.

de Vaan, M., Vedres, B., Stark, D.

2012 "Game Changer: The topology of Creativity in Video Game Development." Columbia University Center on Organizational Innovation, Working Paper Series.

Dupuy, J.-P.

1989 "Common Knowledge, Common Sense." *Theory and Decision* 27: 37-62.

Esposito, E.

2009 "The Certainty of Risk in the Markets of Uncertainty." Pp. 359-372 in *Vinzenz Bronzin's Option Pricing Models: Exposition and Appraisal*, edited by W. Hafner and H. Zimmermann. Berlin/Heidelberg: Springer.

2011 *The Future of Futures. The Time of Money in Financing and Society*. Cheltenham: Elgar.

2013a "The Structures of Uncertainty. Performativity and Unpredictability in Economic Operations." *Economy & Society* 42(1): 102-129.

2013b "Economic Circularities and Second-Order Observation: The Reality of Ratings." *Sociologica* 2:

Fullbrook, E. (Ed.)

2001 *Intersubjectivity in Economics: Agents and Structures*. New York and London: Routledge.

Podolny, J.M., Hill-Popper, M.

2004 "Hedonic and Transcendental Conceptions of Value." *Industrial and Corporate Change* 13:91-116.

Prato, M., Stark, D.

2013 "Attention Networks: A Two-Mode Network View on Valuation." Columbia University Center on Organizational Innovation, Working Paper Series.

Stark, D.

2009 *The Sense of Dissonance: Accounts of Worth in Economic Life*. Princeton University Press.

Vedres, B., Stark, D.

2010 "Structural Folds: Generative Disruption in Overlapping Groups." *American Journal of Sociology* 115(4): 1150-90.

Zuckerman, E.W.

2004 "Structural Incoherence and Stock Market Activity." *American Sociological Review* 69(3): 405-432.

Observing Finance as a Network of Observations

Abstract: This essay contributes to observation theory by commenting on Esposito's paper, "Economic circularities and second-order observation: the reality of ratings." The key question of that paper is summarized as: How does one calculate in the Keynesian third degree (attempting to ascertain what the average opinion considers as the average opinion) under conditions of diabolical circularity (when uncertainty about the future is generated by attempts to predict the future)? Esposito answers that ratings provide a fixed point of reference not because they are accurate but because they are highly visible. The second half of the paper is itself a second-order observation. It uses another viewpoint (that of observation theory) to reinterpret my earlier ethnographic and network analytic research on finance.

Keywords: Observation theory, attention networks, financial models, reflexivity, valuation

David Stark is Arthur Lehman Professor of Sociology & International Affairs at Columbia University where he directs the Center on Organizational Innovation. He is the author of The Sense of Dissonance: Accounts of Worth in Economic Life (Princeton University Press) and, most recently, of This Place, These People: Life and Shadow on the Great Plains (with photographer, Nancy Warner, Columbia University Press).

Essays

Observations on a Conversation: Reply to Commentary

by Elena Esposito

doi: 10.2383/74855

> Zhuangzi and Hui Shi were roaming around and got to a bridge above the Hao River. "The minnows swim around so free and easy," said Zhuangzi, "that's how the fish are happy." Hui Shi said: "You are not a fish, whence do you know that the fish are happy?" Zhuangzi replied: "You aren't me, whence do you know that I don't know the fish are happy?"[1]

To observe observation, as we know, produces a lot of puzzles - not only when you disagree, but especially when you agree. The commentaries in this issue show it clearly. This is not surprising and not at all unwelcome, since the premise of the discussion is the mutual intrasparency of the perspectives involved. Intrasparency, however, should not be an obstacle for conversation, and here I will try to take it a step forward. Actually the debate shows how conversation can make this intransparency productive, and even result in a different kind of insight – I am very grateful to all participants for it.

In different ways, all commentaries express the same criticism. The criticism actually relies on two types of correlated doubts: the first about the ability of observation theory to adequately deal with the blindness of observers, the second about the authentic specificity of second order observation.

That the observer presents "a certain blindness," we know at least since William James[2] - the point here is how and in which form he can be aware of it, and how theory can take this into account. Sarah Quinn describes convincingly the "systematic not seeing" of certain groups in financial markets, which is due not simply to the fact that "some elements fade away in the social distance", but much more radically to the fact that "systems of observation are systematically skewed" towards some interests and cannot or don't want to see others.[3] Flaminio Squazzoni notes that observers tend to

[1] Cited from A.C. Graham, *Chuang-Tzu. The Inner Chapters*. Indianapolis: Hackett, 2001, 123.

[2] "The spectator's judgment is sure to miss the root of the matter, and to possess no truth. The subject judged knows a part of the world of reality which the judging spectator fails to see, knows more while the spectator knows less" [James 1899, 114].

[3] Quinn's critique refers to the fact that Wall Street "chooses" not to see what it doesn't see.

drastically simplify their observational field, producing a systematic imperfection of observation. David Stark – with Yogi Berra – explicitly raises the issue of observation theory's own blind spot, confronting it with the practices that traders consciously use to try to see their own blindness (reflexive modeling). Can observation theory deal with these phenomena?

The second objection concerns the distinction between first order observation and second order observation: are they really so different that the transition to second order can establish a different way to describe finance, its processes, and its relationship with society? What is empirically the difference? Stark asks, and it is a fundamental question, how and when second order observations are different from "multi-sided first order observations." Squazzoni remarks that mutual observation happens regularly in markets, usually on the basis of prices (whose movements have primarily the function to allow investors to infer the orientation of other investors). Quinn asks on what social scientist can found their claim of "looking at more things" than the observed agents. When and why does the normal observation of the world and of the others become (also) a second order observation?

I will try to reply jointly to both objections, starting from the difference between the two observation orders. The difference can be expressed in a formula, as always a little oversimplified: first order observation is used to see things, second order observation is needed to see that one does not see. At the end of his work a second order observer doesn't know more about the world, but should be able to move in the world in a more competent way.

Observing the world is the task of first order observation, and since a second-order observer is always also a first order observer the relationship with objects remains a prerequisite. Also a first-order observer knows very well that he is not alone. He knows that there are others who also observe the world and see things that he does not see, or see his same objects from another perspective. He also knows that their perspective can be relevant: first because he cannot see everything, and then because he can never be sure of not being wrong. A first-order observer observes others to learn more about the world – he realizes a "multi-sided first order observation" in order to arrive at a wider knowledge of the world, including what he sees *plus* what the others see. Ideal for this observer would be being able to take the perspective of the others in such a way as to integrate in his own image of the world what he would

This is a different problem – socially highly important but theoretically easier. If you choose not to see, somehow you have already seen, and then Wall Street can decide to "look up and in, instead of out and down" – with the very serious social consequences we all know. Here, though, the problem is the ineffectiveness of controls or the prevalence of private interests, not primarily the blindness of observers.

see if he were in their position (in space and in time). In this idealized world, traders would then be able to access the models of other traders (Stark). They could actually behave "as if" they were standing outside the market (Squazzoni).

As David Stark points out, this is impossible, because you cannot enter the head of someone else. Moreover, even if you could, you would find many assumptions you do not share or you don't understand (not everything the other sees is useful or interesting for me). You must then introduce many correctives (encodings and decodes, interpretations and attempts at understanding), which can be very complicated, but don't mark the transition to the second order.

Stark's "attention networks" are located at this level, and in fact he openly declares that they are guided by objects: the purpose of the construction is to articulate a "interobjectivity" that deals with the problem of mutual intrasparency of observation perspectives. I cannot get into the head of the other and I can access his observation only indirectly: through what he tells me, through the traces he leaves (the spread plot), through the objects he observes (the ticker) or also observing the objects he or others close to him were attentive to. But I am always using the perspective of the others to expand my knowledge of the world, bridging gaps or correcting errors.

Second-order observation, on the other hand, is as we know observation of observers. What does it mean, if the other is by definition inaccessible? The point here is that there is no need of the other to be accessible, the enigma is only apparent. Intrasparency cannot be overcome, but there is no need to overcome it in order to get to a more complex and articulated form of observation. The observer does not see someone else's observation, but can observe it – obviously always from his perspective and according to his categories (and with his blindness). Second order observation is no access to an alien world, it is an articulation of one's own world. What one faces is not the outside world by itself, but how this outside is seen from within. In terms of systems theory: what the system accesses is not the environment "as it is" (a kind of autonomous truth) but always its hetero-reference, the way the system sees the environment - what is outside the system. Referring to observers: the observer does not see what others think, only what he can imagine that others think – which can be more or less different from what he himself thinks (and this can happen in many different forms).

This is however not a small difference. It indeed changes the whole sense of observation, entering a new quality of variety and complexity – above and beyond dissonance. You don't need to be in disagreement to be different – you are different even when you resonate, when you say the same or look at the same object, because your motives, categories and interests will inevitably be different. If I understand it,

my world will be enormously more complex, even if it remains closed and idiosyncratic as the one of first order observers.

Second-order observation, as we said before, is not needed to see more, but to see that you do not see, i.e. to see blindness (your own blindness and the blindness of others). As von Foerster says: "If I *don't see* I am *blind*, I am *blind*; but if I *see* I am *blind*, I *see*" [1981, 290]. What do I see? Obviously not the world through the eyes of the others, which is still inaccessible. I always see only what I see, and don't see what I don't see. But I learn to better manage my actions and relationship with others, I'm better able to obtain information, and different information, from the stimuli I receive, I can transform my lack of information into a different source of information. I can for example learn to differently process acoustic stimuli and information that come from the others, and build a way of orientation which needs less images. An aware blind man can move around the world with great competence, precisely because he is and remains blind.

The same happens in the relationship with others: instead of regarding the inaccessibility of the perspective of the others as a limitation, I can start to consider it as an advantage. I won't try then to translate it more or less imperfectly into my perspective (looking for an identity), but I will use the increased complexity deriving from the fact that it is and remains different, in a form that can provide me with information (always and only in my categories, always and only within my perspective – using the difference).

The curious form of "interobjectivity" provided by ratings is located at this level – and is independent of the fact that their assessments are correct or not, or that the observers deem them to be correct.[4] I can even think that ratings are wrong and know that the others think the same, but if I want to competently work in finance I must continue to observe them and to draw information from them - not in order to know how the world is, but in order to observe what the others (in their own way) observe.[5]

What does it mean on a more concrete level? Let's take reflexive modeling. As Beunza and Stark [2012] show, the trader who practices it sees to some extent his own blindness. In Wittgenstein's words: "the idea [...] is like a pair of glasses on our nose through which we see whatever we look at. It never occurs to us to take them off" [2001, 103] – at most, as wary traders, one can try to see what one sees with the

[4] Sarah Quinn very rightly reminds us of the unilateral selectivity of ratings.

[5] A very different condition from the "as-if-outside" attitude described by Flaminio Squazzoni. The observer is completely and consciously inside the observed word – so much that he even exploits this position to get information. In the much discussed Paulson's case, his advantage would have been not simply looking at what the others see (and act differently), but acting on what they see (and look at what happens).

different glasses used by others. One remains at the level of first-order observation, which works until a case of resonance occurs, where the mutual short-sightedness of traders does not cancel out each other but add up, leading to a condition of general blindness, which the observer can no way control.

The reflexivity of second-order observation, though, would suggest a different approach: to try to take the glasses off and check if you can see something different. Presumably you will be more careful to where you go and how you move, will trigger other sensors (hearing, touch), will communicate with others on other channels. You will access then a different and more radical "diversity of viewpoints," that does lead not only to correct one's errors by integrating the perspective of others, but to correct the very claim to be able to see, integrating it with the knowledge of one's own blindness: a sort of diversity from view itself. It would mean not trying to correct one's own models supplementing them with other models (as far as you can know them), but reflecting on the use of models itself and on their consequences: on view in general and on other points of reference.

This would be a different kind of reflexivity, in which catastrophic resonance effects become much less likely – and complexity much higher. One could reflect for example on model risk and unintended consequences (such as moral hazard): the "extreme events" mentioned by Squazzoni would not appear as surprises but rather as effects of the widespread use of formalized models.[6] Or one could reflect on the way in which the use of models not only affects what you see of the world, but also changes the world itself that you are observing. Such a trader would be able (in Quinn's image) to look "out and down" at the consequences of his action on people and society. Of course he could never predict what's going to happen nor what these consequences will actually be, but he could process more information – giving up with no regret the hope to see everything.

According with this attitude, reflexive blindness reflects on itself and produces a different kind of insight, whose reference is not a supposed world outside but the way the others observe. The one who observes better (not necessarily "more" – more than what?) is not the one who sees more things, but the one who is able to adopt more distinct possibly incomparable perspectives. The observation of the blind spot is not the point of arrival but a starting point. Stark is right: a conversation is better than an observation. Or in other words: only communication, not an isolated individual, can realize a really complex observation, where several blindness "irritate" each other.[7]

[6] A typical case in which first-order reference to the world cannot explain what's going on: these events are and remain so highly unlikely (less than 1 on 1050) that their occurrence is practically impossible – but nevertheless they happen.

[7] The concept of "double contingency" [Luhmann 1984, 148 ff.] expresses this condition.

This holds, and it could not be otherwise, for observation theory itself, which also has its own blind spot and does not overcome it by being aware of it. It can see its own blindness but this doesn't remove it – it simply moves the blind spot to a different level, producing a new blindness it cannot see. This is not a flaw but an inevitable condition one could learn to exploit [Esposito 1992]. It is exploited for example in a conversation like the one presented in this issue of *Sociologica*, which among other things reflexively shows what second order observation could "watch" (Yogi Berra): watch how people outside finance observe how finance observes itself (Sarah Quinn), how economic agents (often knowingly) simplify the complexity of observation (Flaminio Squazzoni), how traders know that they don't know (David Stark). Therefore I wish to thank again the authors who contributed to this conversation in such a productive way.

But there is another blindness that this debate highlighted, which concerns the sociological observation of finance itself. Our debate referred to the figure of Keynesian beauty contest, that for many decades had great success in describing mutual observation in the financial world [Hertz 2000]. But if you reflect on the beauty contest starting from our discussion, you can see that the situation is more complicated – I didn't see it before this conversation.

David Stark[8] remarked quite rightly that in Keynes' strange beauty contest - and in the original situation of finance as well - you don't really understand who wins and what it means to win. If you refer literally to Keynes competition, the jurors are at the same time the real contestants (not the girls, they count for nothing). As observation theory maintains, it is never possible to observe finance from outside. Is the winner the one who guesses how the others vote, hence votes like them? But he is also a juror: he must observe the others, who in turn try to guess how he votes, who votes as they vote. Then if one wins they all win (actually very little), and there is no real winner. But most likely no one wins, because no one knows how to vote. What kind of contest is this?

Actually finance never puts on stage a specific contest like this. Traders are never in an authentic situation of Keynesian beauty contest (nor in a pure situation of second order observation[9]): finance is already in progress, things happen and are observed in order to decide what to do. And there is no single winner; some gain and others lose money. To reason on an abstract Keynesian beauty contest does not make much sense: the contest does not exist as a competition with a possible winner.

[8] On the occasion of a very inspiring seminar at Copenhagen Business School on May 27, 2013.
[9] Or of double contingency.

Nevertheless the debate on it goes on since many decades. As in all cases of patently nonsensical questions, the fact that they are discussed seriously when there can be no solution leads to shift attention to the observer. How is it that a clearly absurd model has been used for decades as a metaphor of the functioning of financial markets? What does this show about the implicit assumptions of the theory of finance, and possibly about the blindness of observation theory itself? The work on these issues must still be done: "it ain't over 'til it's over."

References

Beunza, D., Stark, D.

2012 "From Dissonance to Resonance: Cognitive Interdependence in Quantitative Finance." *Economy and Society* 41: 383-417.

Esposito, E.

1992 *L'operazione di osservazione*, Milano: FrancoAngeli.

von Foerster, H.

1981 "On Con-structing a Reality." Pp. 287-311 in *Observing Systems*, edited by H. von Foerster. Seaside (Cal.): Intersystems.

Hertz, E.

2000 "Stock markets as «simulacra»." *Tsantsa* 5: 40-50.

James, W.

1899 "On a Certain Blindness in Human Beings." Pp.113-129 in *Talks to Teachers on Psychology and to Students on Some of Life's Ideals*, edited by W. James. New York: Holt.

Luhmann, N.

1984 *Soziale Systeme*. Frankfurt a.M.: Suhrkamp.

Wittgenstein, L.

2001 *Philosophische Untersuchungen*. Kritisch-genetische Edition. Frankfurt a.M.: Suhrkamp.

Observations on a Conversation: Reply to Commentary

Abstract: The very productive debate in *Sociologica* shows that second-order observation is not needed to see more, but to see that one does not see, i.e. to see blindness. Reflexive blindness reflects on itself and produces a different kind of insight, whose reference is not a supposed world outside but the way observers observe.

The debate highlights not only the blindness of finance, but also a certain blindness of the sociological observation of finance and even the blindness of observation theory itself. To see it can become an advantage, if inserted in an ongoing conversation.

Keywords: second-order observation, blindness, reflexivity, conversation, modeling

Elena Esposito, teaches Sociology of Communication at the University of Modena-Reggio Emilia. She published many works on the theory of social systems, media theory and sociology of financial markets. Among them *The Future of Futures. The Time of Money in Financing and Society*, 2011; "The structures of uncertainty: performativity and unpredictability in economic operations", *Economy and Society*, 2012, 41, pp. 1-28; *Die Fiktion der wahrscheinlichen Realität*, 2007; *Die Verbindlichkeit des Vorübergehenden. Paradoxien der Mode*, 2004.