

Elena Esposito

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

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

*by* Elena Esposito

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## 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,<sup>1</sup> 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-

<sup>1</sup> 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,<sup>2</sup> 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

<sup>2</sup> 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].<sup>3</sup>

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

<sup>3</sup> This is actually a curious concept, much more suitable to describe the world of finance than 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,<sup>4</sup> 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

<sup>4</sup> 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),<sup>5</sup> 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-

<sup>5</sup> 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.<sup>6</sup> 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

<sup>6</sup> 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,<sup>7</sup> 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.<sup>8</sup>

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 [Stiglitz 1985; 2003; Grossmann 1989]. According to the ideal model of markets,<sup>9</sup> 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,<sup>10</sup> and observers cannot confine themselves to observe prices, but must also observe how they are communicated. A communicated information

<sup>7</sup> As we saw, this happens especially in conditions of high uncertainty.

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

<sup>9</sup> The Efficiency Market Hypothesis starting from Fama [1970].

<sup>10</sup> 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<sup>11</sup> 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

<sup>11</sup> 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).<sup>12</sup> 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.

<sup>12</sup> 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.],<sup>13</sup> 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

<sup>13</sup> 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.

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

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**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.

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

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**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.