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Analyzing Expectations Sociologically: Elements of a Formal Sociology of the Financial Markets

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1. Introduction

Financial markets are meaning machines. Like no other contemporary social institution they lend themselves to the projection of hopes and fears, of illusion and catharsis, of the promise of absolute wealth and a whispering of ultimate demise. Against this semiotic hyperproductivity which began sparking aesthetic, public, and scholarly discourses already in the 17th century, contemporary categories used to analyze the market for the market participants themselves remain surprisingly dry and uninventive. It is still mainly the category of expectation that is used to interpret market movements, inflicting great boredom on those who regularly watch financial news. Surprisingly as well, the social study of finance has so far not displayed any systematic interest toward the category of expectation, and has instead left the term to neoclassical finance and their psychological critiques.

The aim of this essay is to reclaim the notion of "expectations" for sociology as the one notion that is in elective affinity to the social dynamics of the financial markets. In other words, it will treat the predominance of the category of expectation in financial meaning making as indexing some crucial features of financial markets themselves. Methodologically the essay follows the research program of formal sociology in Georg Simmel's sense, inferring the particular structures of financial sociality, not at the cost of an economic viewpoint on the markets, but rather as taking their economicity as a point of departure for a formal-sociological analysis.

The essay proceeds as follows. First, it will argue for the necessity to sociologically determine the specificity of social meaning in the financial markets through a formal analysis of the social situation in which investment takes place (2). Second, the price mechanism will be pinpointed as point of

departure for such endeavor, because it is this mechanism that constellates actors to one another and thus structures the investment situation (3). Then, the essay will reference debates about a sociological notion of "expectation" in the discussion about the ontology of the social norm, with the aim to depict expectations as a form of sociality that is genuine to the financial market (4). Section (5) concludes.

2. Formal sociology: the characterization of "interactions" (Wechselwirkungen)

Simmel's formal sociology: The case of money

Society is not an absolute entity which must first exist so that all the individual relations of its members – super- und subordination, cohesion, imitation, division of labour, exchange, common attack and defence, religions community, party formations and many others – can develop within its framework or be represented by it: it is only the synthesis or the general term for the totality of these special interactions. (Simmel 1978: 175)

Obviously delimiting his approach from that of the positivist-functional sociology of Émile Durkheim, Simmel does not propose to explore society from the assumption that it is pre-given and "there" but insists that it has to be enacted; hence his question, "how is society possible?" (wie ist Gesellschaft möglich, cf. Simmel 1992 [1908], 42) The clue to answering this question resides not in assuming the existence of society apart from and above individuals, but in an analysis of ways of "sociation" (Vergesellschaftung, Simmel 1992 [1908]) which bring individuals into mutual relation and interaction with one another. The reconstruction of these relations is seen by Simmel as fundamental perspectives on sociality; and the notion of "society" is introduced as depicting a novel perspective on the social, not a totality that is given the same way that nature is given (Simmel 1992 [1908]: 17). With respect to his "Philosophy of money," the work that the present essay will refer to predominantly, he even regards this endeavour as "philosophy," a term one would recast, with Giddens (1979), as "social theory" today. At the same time, Simmel's analyses often provide a perspective on structures

and tendencies of modern societies, which is why Simmel forms an outlook on society – a contemporary analysis – that operates with the close description of social relations which are deemed exemplary for contemporary societies.

Simmel's program of formal sociology is strictly inductive, which explains the breadth of his empirical interests in all sorts of forms of sociation in contemporary society and in society in general – among those, economic sociation. In his "Philosophy of money," the social-theoretical ("philosophical") and the contemporary-diagnostic perspective are intricately woven together. Simmel's interest is mainly with money as a medium of exchange, the reason being that social relations mediated through money are highly significant both for a general social theory (or "philosophy") and for a social diagnosis of contemporary societies. While on the one hand money and the exchanges between individuals it makes possible are, for Simmel, paradigmatically social processes because money is "entirely a social institution and quite meaningless if restricted to one individual" (Simmel 1978: 162), at the same time they form part and parcel of modernity's most characteristic features, like a high degree of individuality that coexists with an equally high level of interdependence between individuals.

For Simmel, money functions as a means as such, it is the "purest reification of means" (Simmel 1978: 211). This is to say, money has the ability to bridge the gap between any individuals' wants and desires and any objects that could satisfy them. Therefore, on the surface money seems to have value, as it brings into reach those objects a person regards as valuable; yet in actuality money merely encodes and represents the discontinuity between a desire and its fulfilment that is the actual constituent of value.

From this it follows that money also redefines social relationships. On the one hand, it anonymizes and formalizes those relations. In the presence of money as a general medium of exchange, the person desiring an object does not have to create an extra motivation or persuasion for the person who owns that object to sell it since money, being an ultimate means to any end, is equipped with an inherent motivation to be accepted in exchange for any object. On the other hand, money creates tight and virtually all-encompassing interdependences between individuals since it can be accepted from any person regardless of her origin, gender, age, education, and affiliation. Thus, exchanges – relations – between any persons become possible. In Simmel's analysis, money-governed exchange regimes make emerge a form of sociality that privileges

anonymous interrelations between individuals and at the same time highly individualized life-styles which can disrespect others' sanctions thanks to the self-motivating function of money exchange; precisely the nonchalant inattentiveness to one another that Simmel observed in contemporary societies and in particular in the "economic jungle of modern urban life" (Simmel 1978: 199).

The sociality of the price

The one thing that materializes society between any two individuals who agree upon mutual exchange is money. While the desires for objects which equip those objects with value remain personal and insofar have no sociological resonance, money, represented by the price, bridges the gap between subject and object through a representation that involves other exchanges, and thus society (Simmel 1989: 213). Therefore, the price is for Simmel the ultimate sociological fact. At the same time, the price – and here we start moving beyond Simmel – is that category which distinguishes financial markets from all other markets. While this will be explained in more detail in the next section, I will first interpret Simmel's take on the price a bit more thoroughly.

For Simmel, according to my interpretation, the price has a dual quality. On the one hand, it is a localized manifestation of the property of money as a generalized medium of exchange, making possible an ultimate convertibility of all values, that is, of all individual desires (Simmel 1989: 124). This thought has not only been taken up in economic sociology later (e.g., in Parsons/Smelser 1956) but was already prefigured in Marx's famous analysis of money as the ultimate means which "objectifies" social relations. On the other hand, though, in Simmel the price also figures as a factor in the self-fashioning of individuals and their desires: as the price renders desires convertible across individuals, it does so across life courses as well. In Simmel's terms, the "sequence of purposes" (Zweckreihen, Simmel 1989: 204) between ends and means become prolonged, if not protracted; the desire for a certain object is remediated as a desire for money which, in turn, casts the different desires as comparable to each other with respect to their "price." According to Simmel, this leads to an intellectualization of life, as one's own biography becomes rearticulated and rationalized in terms of convertibility between desires (Simmel 1989, 591-616). Here, however, Simmel risks collapsing his analysis into a cultural criticism of contemporary, i.e. fin-de-siècle society, for which an idiom of individualism, self-objectivization, and intellectualism was all

too common. The “philosophical” problems he raised with respect to the money medium, though, may be developed further, embracing the price not only as a medium of exchange but as an object of value itself, that is, as a desire.

This brings us directly to the financial markets. For it is here that the price takes on the quality of money itself, that is, of being desired. Many observers have argued that in the financial markets, money is turned upon itself, not longer remaining a medium but also becoming a commodity itself (Marx 1962; Weber 1988 [1894]; Parsons/Smelser 1956). Simmel himself had argued, as mentioned earlier, that money has the ability to replace the desired objects due to its potential to bring any object into reach. The point to be made with respect to financial markets is that not only money as a general means but the price as a concrete object can become the focus of desire. In this sense, the price replaces money which in turn replaces desires or rather, becomes the ultimate desire. It is through this argument that Simmel’s analysis, which ultimately led him to a cultural criticism of society and away from a formal perspective, can be taken to a fresh start: the price as an object of desire is the point of departure for a formal sociology of the financial markets, which has to begin with an analysis of the nature of the price in financial markets as opposed to the rest of the economy.

The argument to be made in the remainder of this essay is thus that the fundamental characteristic of the financial markets – namely, to be markets on which prices are traded – results in a type of sociation not imagined by Simmel but analyzable in the framework of his heuristic, that is, as a formal description of the ways individuals relate to one another in the presence of the financial market price.

3. The price mechanism as the core characteristic of financial markets

Financial market prices as products

Financial markets differ from markets in the production-based economy in several crucial aspects, which have been points of debate among sociologists. In particular, there has been a discussion ongoing about whether an economic-sociological perspective should highlight the social embeddedness of financial markets like, for instance, through bank organization, social networks, and the social and cultural construction of prices (Abolafia 1996, 1998; Sassen 1991, 2005; MacKenzie 2005; Power 2005, 2005a;

Clark/Thrift 2005); or whether the emphasis should be put on the detachment of financial markets from the production-based economy and therefore highlight its uniqueness (Baudrillard 1992; Albert et al. 1999; Baecker 1988; Castells 1996; Lee/LiPuma 2002; Knorr Cetina 2007). This debate, however, misses out on a couple of crucial points. First, it does not take into account that financial markets can detach themselves from their production-based contexts by virtue of certain features of their social, political, and technological embeddedness, as for instance in global cities, an argument which subverts the confrontation of embeddedness and detachment (cf. Lengenohl 2008). Second, the embeddedness thesis tends to lose sight of the economic dimension of the financial economy, treating the economy a field, system, or part of society to be wrested away from economics, with the consequence that the peculiar economic quality of the markets gets effaced. Third, a similar fallacy characterizes the detachment thesis, as its proponents often point out the genuine social – or “postsocial” – uniqueness of market interactions as avant-garde modes of interaction or signification (Knorr Cetina/Bruegger 2002), thereby also forgetting about – sometimes even openly denying (Baudrillard 1992) – the economic effects of markets.

There is thus some reason to assume that the contradiction between embedded and detached markets, which is often accompanied by a second opposition between production-basis and the absence of such basis, leads astray. At the very least, it leaves no space for an exploration of the argument that the financial markets are more production-based than any market of the production-based economy. Yet it is obvious that the values of the products traded on the financial markets depend in a much more existential way on their means of production than non-financial products. When a cornfield is devastated, an industrial production plant is closed, a company goes bankrupt, or a famous painter dies, their products still may retain and often even gain in monetary value. In the case of these “material” products, that is, the value development is in principle independent of the means of production. However, this does not at all apply to financial market products. An option, a future, or a swap gain their value from their ability to be traded on the financial markets. When trade into these products stops, they slip into inexistence and their value cannot be fixed. In other words, the production sites of financial products are financial markets.

This is so because financial products are prices. One buys the right or sells the obligation to execute a certain price in a given product (which may be or may not itself be a financial product). Financial products are thus comparable to money in that their use value is identical with their exchange value. However, given the specificity of financial markets that they are essentially future-oriented markets, the use/exchange value of a financial product depends not only on a synchronous comparison with alternative (financial) products but also on a diachronic comparison between bid and put prices of that product (or vice versa). The present price of a financial product thus varies in relation (a) to the price it will have achieved in the future (usually at a given date of expiration) and (b) relative to the price gains of alternative products. For instance, an option about a certain deal which is expected to achieve a higher rise in price than another deal traded through another option at a given point in time in the future will rise in value relative to the second option. Yet the time factor introduces an irreducible risk in this operation, to which portfolio theory has significantly responded by pointing out the necessity to reduce the time span of investments in order to minimize investment risks (cf. Markowitz 1952, 1991; Lee/LiPuma 2004: 142-147).

The futurity of financial markets, if connected to Simmel's arguments that the value of a given object is a function of it being desired, and that this value becomes socially objectivized through a generalized exchange medium generating a price, has two fundamental corollaries. It must first be guaranteed that a price will have been formed in the future, as this is the precondition for it being desirable in a future-oriented investment situation. Second, it must be possible to trade the product at any given time if the relationality between present price, future price and price of an alternative product – that is, in Simmel's terms, the objective value of the price as the articulation of its desirability – changes. The consequence is that price formation for financial products must be operative at any given moment.

To buy or sell a financial product means to buy or sell a price; but neither the price that is traded nor the price for which it is traded have any existence independent from the way they are produced, namely through price formation. Financial markets are exchanges and means of production at the same time and for the same entities: prices. If trade stops, the traded products/prices cease to exist as objectivized desirabilities. Products that can't be traded dematerialize, morph into economic virtuality, and take on a spectral

existence, like the "toxic" papers lying in the now proverbial basements of banks for which at present there is no market.

This line of argument displaces the discussion between the embeddedness and the detachment theses in the social study of finance and political economy. The alleged materiality of the "real" economy and the detachment of the financial economy from the former is not the crucial issue here. First, value is not bound to materiality; Simmel, as mentioned, points out that value is nothing but the distance between a subject and a desired object, irrespective of the ontology of that object. Second, not only "material" products and the material production have material consequences. Instead the point of concern and analysis are the ways in which ascribed value is maintained or modified, and how those ways refer to the means of production.

The mathematicity of price formation as means of production

Due to the requirement that price formation must take place at any given moment that the sociality of financial market products imposes, a type of price formation is needed that calculates on the basis of a supply-demand computation only. Historically as well as systematically it has been argued that financial markets tilt toward giving the circulation of products priority to channelling them from producers to consumer (Sombart 1955, vol. 1, 200-202; Knorr Cetina 2007). In economic-functional terms this has been explained with the double role of speculation to form markets and keep them liquid as well as levelling out contingent differences between prices (Sombart 1919, vol. 2, 663), a point that has been taken up by arbitrage theory (Beunza/Hardie/MacKenzie 2006). If the priority is thus circulation, this requires a redistribution mechanism that self-organizes. This is exactly what the mathematical price mechanism does.

With respect to the present argumentation, the mathematicity of the price "mechanism" – rightly termed so by economists – guarantees the continuation of trade, and thus the continuity of the financial products' value (desirability). If financial markets were (on a regular basis) subject to contingent non-market intervention comparable to that of the non-financial economy, continuous price formation would not be possible because the interventions would mark defining points without providing a continuous sense of the value of the traded products. Financial products would, as it were, exist as tradable and thus valuable (desirable) entities only at the moment of intervention,

because only at these moments there would be a price. Simmel, throughout his work highlighting the mutual definition of money and commodity, remarks that money achieves “actuality” only at the moment it is used for purchase, while a commodity “exists” only as it is sold: “Just as money is real money only at the moment when it buys something, i.e. when it exercises the function of money, so the commodity becomes a commodity only when it is sold; until that time, it is only a possible object for sale, an ideal anticipation.” (Simmel 1978: 138) Financial products, however, being money, commodity and price at the same time, have not only no use value apart from their exchange value but also no exchange value apart from their use value to be exchanged, and are thus threatened with complete annihilation as carriers of use and exchange value when trade stops.

In parentheses, this points to an additional differentiation in regard to the materiality or virtuality of financial products. They are not by themselves material or virtual, but oscillate within a continuum between materiality (when price formation is ongoing) and virtuality (when price formation is suspended and prices cannot be fixed). The uniqueness of the mathematical price mechanism is that it produces representations of prices – with prices having no existence outside such representations – on a continuous basis, lending financial products the maximum of materiality they can have. Financial products escape the discussion about their ontology, as the latter depends exclusively on the actuality of the price mechanism.

This astonishing mechanism of mathematical price formation, though, comes at a cost. It was Jürgen Habermas (1995 [1981]) who most systematically pointed to the inability of the market as a “systemic” mechanism to provide explanations and interpretations for what is going on in it. This goes back to his differentiation between two modes of social coordination and orientation: instrumental action, in which actors are interested solely in the effects of others’ actions; and communicative action, in which actors seek to achieve agreement about a certain claim or judgment and thus have to take into account the possible motivations that others might have for their actions and judgments. This distinction, Habermas continues, is not only an analytical differentiation but lies at the heart of the societal macro-structure of western modernity. As instrumental action becomes more and more institutionalized in social mechanisms like the administration or the market, the immediate experiential universe of actors, their “lifeworld,” becomes liberated from those instrumental obstacles to communicative action, and thus communicatively

rationalizable. Although financial markets have not caught the particular attention of Habermas, they can be said to embody systemic mechanisms of instrumental action in an almost ideal-typical way: through the price mechanism, economic actors see only the consequences of others’ actions, cumulated in the prices, while the possible motivations behind those cumulated effects are effaced.

It is exactly at this point that a Simmelean approach can be applied. Following my extrapolation of Habermas, the financial investment situation is such that actors have to make decisions on the basis of orientations which reflect only effects, but not motives, of others’ actions. This can be said to be a fairly unique type of sociation of individuals, that is, a form of sociality. As such it implies the objectification and institutionalization of subjective value into a generalized mode of meaning whose features shall be analysed in the next section.

4. Financial sociation: The category of the “expectation”

Expectations in financial discourse

Contrary to Habermas, who insists that systemic action can discard the motivations of others, the production of meaning at financial market does involve representations of others’ motives all the time, be it in public debate and media reports, in professional circles in which novel analytical models like “sentiment analysis” are imported from behavioural finance, or in other arenas.¹ For the purpose of the present essay, which is concerned with a formal sociological modelling of the financial investment situation, the empirical question of how market participants make sense of their actions can be recast as a formal analysis of the ways in which they relate to each other in the financial markets and in the presence of the mathematical price mechanism. Simmel points out that money, which he holds to be a “category of reified social functions” (Simmel 1978: 209), is a structuring moment in sociation in that it connects as well as disconnects individuals. While on the one hand it puts a distance of nonchalant inattentiveness between them, it also interconnects virtually all individuals through networks of economic exchange. As regards the first point, a very similar argument has been circulating at least since the 19th century with respect to the financial markets, especially the stock exchanges. For instance, Werner Sombart (1928, 1077-1079) identified the great European stock exchanges as places where a certain drive

toward more abstract, objectified (*versachlichte*) and rationalized interpersonal relations in modern societies in general originated. With respect to the second point of Simmel's argument, the 19th century has as well witnessed judgments which located the rise of the stock market within a new type of sociality. However, these interpretations of the rising importance of the stock exchange and the financial markets in general do not explain the ways actors refer and relate to each other. In regard to this question, what is more important than the above mentioned social diagnoses of the *fin-de-siècle* contemporaries are recurring remarks about expectations as a basic mode of interpretation in financial markets as already mentioned in the introduction. It is to this literature that I turn next.

Apart from media representations where the category of the "expectation" is a very ubiquitously used explanatory device, expectations figure in at least two academic contexts.

■ First, there is work in neoclassical finance, which has been trying to apply the general theory of rational expectations in macro-economics (cf. Kirchgässner 2008: 84-5) to a modelling of financial markets. Very briefly put, the term "expectation" figures as a key device in these models, as it allows conceiving of financial markets as information-efficient markets, given the presence of actors who conduct their trades according to expectations which have been formed on the basis of information available to all. The market – that is, the prices – can be modelled as reflecting all available information; which is to say, it does not develop any dynamics of its own as long as expectations are rational (cf. Fama 1970; Fama/Miller 1972).

■ At this point behavioural finance intervenes, arguing that concrete actors' expectations are everything but rational. Focusing on herd behaviour, the psychology of booms, busts and bubbles, and the "bounded rationality" of human beings in general, this research concludes that financial markets do develop a life of their own, as actors have irrational expectations or interpret others' expectations in an irrational way (cf. most prominently Shleifer 2000, Shiller 2001).

■ From this, sociological and political-economic research has concluded that financial markets display a high degree of reflexivity of expectations; which is to say, the markets do not reflect anything outside the expectations and expected expectations that govern actors' tactics and strategies (s. Beunza/Stark 2010).

It is not unfair to say that this sociological syntheses come rather late, given the proximity of the notion of the expectation to sociological endeavors. Also, the sociology and political economy of the financial markets has so far remained within an ultimately psychological notion of expectation, and thus has not that much to add to the findings of behavioural finance. The challenge thus is to re-appropriate the notion of expectation for a sociological analysis.

A formal-sociological definition of expectation

A brief excursus into a debate in German-speaking sociology of the 1950s and 1960s will serve to move beyond the stage of the debate, introducing a sociological notion of expectation into the social study of finance. In 1958, Ralf Dahrendorf published his influential "Homo sociologicus," a monograph which established the notion of the social role, and with it the notion of the expectation, as a key category of sociology and social theory. According to Dahrendorf, human beings in modern societies are confronted with the "annoying fact of society" (*ärgerliche Tatsache der Gesellschaft*, Dahrendorf 1965, 21), that is, with norms and underlying expectations which address persons not as persons but as role carriers. While human beings have their very unique characteristics, what makes them social beings is exactly the presence of norms and expectations not addressing persons but action patterns. Against this notion of the norm Heinrich Popitz (1967), who was to become one of the representatives of German-speaking sociology in the 1970s, contended in his habilitation lecture published as "Der Begriff der sozialen Rolle als Element der soziologischen Theorie" that Dahrendorf had conflated sociological with social abstractions, and thus had effectively followed a psychological notion of expectation as opposed to a sociological one. Popitz argued that the existence of expectations and norms cannot be sociologically deduced from the observation of norm-obedient behavior, as such behaviour may have other motivations. Norm- and expectation-obedient behaviour may be the result of an individual's desire to respond to a given expectation, but it may as well be the outcome of traditional or habitual behaviour not subjectively directed toward others' expectations.

For Popitz the most important conclusion was that norms are stabilized not by actual obedience to norms and expectations but by any behavior that may be socially interpreted as being obedient to norms and expectations. For the present essay the most interesting point following from this is that expectations are not mental states but social devices

of interpretation and ascription. Popitz's critique of Dahrendorf may be compared to the way Harold Garfinkel (1967) criticized the Parsonsian theoretical model for putting too much emphasis on the socialization function, arguing that social norms have no existence outside of the situations in which they are perceived as functioning. From a sociological perspective radicalized in formal terms, norms and expectations are first of all interpretive frames that structure situations and the ascriptions taking place in them.

Expectations as meaning devices in financial markets

This returns us to the financial markets. In the light of the recasting of expectations as ascriptions, the question is not why financial markets are governed by expectations, but instead why market observers prefer to see expectations in these markets and to ascribe them to other market participants. The non-triviality of this question becomes especially evident from the fact that alternatives to the ascriptive mode of expectation exist. For instance, one could ascribe the moving rates at the stock exchange to traditional or habitual or simply irrational behavior. While this sometimes does take place (especially in behavioral finance), the category of the expectation, as a rule, is added to such interpretations in explanations like, "There's a high level of volatility because investors are nervous and do not know what to expect," or, "Fear triggered by xyz reigned the stock exchange today, with people expecting the worst," etc. Why is it that the category of expectation is so often used in the production of meaning in financial markets?

I argue that expectations as a meaning category stand in an elective affinity to certain crucial features of the financial investment situation, and can thus be regarded a sociological-formal quality of the financial markets as a unique site of sociation. This can be demonstrated through confronting expectations as mode of social meaning and ascription with other such modes:

■ First, an index of futurity is characteristic of expectations. Unlike memories, habits and traditions, expectations refer to the future respective to a given point in time. More specifically, they refer to something which will, or will not, have happened. Expectations are thus protentions in the sense of Edmund Husserl and Alfred Schütz, that is, their structure of anticipation is that of the grammatical *futurum perfectum*. Therefore, the interpretation that something happens according to expectations introduces an accomplished future state as defining reference point of interpretation.

■ Second, expectations are concrete and specific. They anticipate a guess regarding clearly definable events or states in the future. Their specificity distinguishes them from presentiments or suspicions, their concreteness from typifications or interpretative frames. Interpretations that rely on the category of expectation thus screen the (possible) futures for concrete and specific events that might (or not) happen.

■ Third, expectations not only orient action but call for decisions. Contrary to the proverbial "hopes and fears," which like expectations are directed toward the future and may be concrete and specific, the meaning structure of an expectation does not permit inactivity. Expectations necessitate decisions and actions. Framed as an expectation, even inaction refers back to a decision, namely, the decision to expect the actualization of a clearly defined moment, and not just – as with hopes and fears – unspecified waiting. Interpreting situations in terms of expectations, thus, refers to a moment in which a decision to (not) act is interpreted as being or having been taken.

■ Fourth, expectations conceptually presuppose expectations of expectations (*Erwartungserwartungen*). In social settings governed by the logic of expectations, expectations irrevocably have to refer to other actors' expectations prior to the formation of one's own expectations, as it is the actions of others that have to be taken into account for considering one's own actions. This point is most crucial in regard to financial markets, as in such markets it is only the consequences of others' actions that become visible to actors. Whereas in face-to-face interactions memories, habitualities, hopes, fears, and other modes of meaning can in principle be articulated without necessarily leading to future-oriented decisions and actions, in the financial markets it is only the consequences of such decisions and actions that are in cognitive reach of actors. In other words, whatever takes place in the financial markets can meaningfully be referred back only to the attribution of expectations, because it is only expectations that can be expected to invariably lead to action.

To sum up: the empirical, interpretative heuristic of the expectation fits the problematic of financial markets to anticipate future actions of others while only the consequences of their past actions are visible. The point is not that market actors are psychologically restrained to expectations, but that they have only one conceptual-cognitive frame at their disposal that allows linking the observed consequences of others' actions (prices) with their possible

motivations: expectations. The specific infrastructure of financial markets – a purely mathematical economicity in the absence of communicative interaction between the participants – results in a situation in which only the effects of other's actions are unambiguously visible. It is impossible for market actors to reconstruct from these visible effects typifications, presentiments, hopes, fears, etc. of the other participants, because those modes of meaning do not result in an imperative to decide and to act. In other words, they cannot be assumed to be reflected by the trades made. Market actors have no cognitive choice but to reduce the other market participants to carriers of expectations, inferring their (expectations of) expectations, for only (expectations of) expectations can be expected to leave traces in the market.

Thus, the specific form of sociation at the financial market renders itself as a peculiar mode of ascription, as a social abstraction governing the processes of meaningful interaction market participants. Ironically, this mode is none other than that of sociological (wo)man, that is, a modelling of actorhood and social meaning strictly oriented toward the category of expectation. Market participants cannot make sense of one another but as *homines sociologici*, i.e. as actors whose actions leave traces of their expectations in the market. Like economic value is objectivized and institutionalized through the medium of the money, in future-oriented financial markets meaning is objectivized and institutionalized as expectation. This, I contend, is the formally, and genuinely, financial type of sociation.

5. Summary: Expectations and the Social Study of Finance

The social study of finance is gaining ground, pinpointing the social in the markets. The present essay is intended to contribute to this endeavour. Yet it follows a different direction than the greater share of the social study of finance, which circumscribes a sociological approach through playing out the social constituency of markets against their economic effects. The alternative strategy is to depict the sociological meaning of the markets in their specifically and genuinely economic constituency; in the case of the financial markets, in mathematical price formation as means of production for financial products. The social in the markets is thus not theorized as the social construction of the economic, but as the social forms of meaning which are of a specifically financial-economic nature, and which can be subjected to a sociological char-

acterization. To this aim, Simmel's approach of a formal sociology was used in order to demonstrate that the genuinely financial mode of meaning is a sociologization of interactions, that is, the channelling of meaning through the heuristic of expectation. This formal element corresponds to the economic mode of operation of financial markets, which is mathematical price formation. The reduction of the virtual multiplicity of social meaning to the form of expectation, being a correlate to the mode of operation of financial markets as means of productions, turns market participants into empirical sociologists who decipher expectations, and nothing but expectations, in the traces of the effects of others' actions.

Coda: The crisis

It is doubtful whether the theorization suggested in this essay is of any immediate use in the current, financially triggered, economic crisis. Arguably it will not help advance the discussion about concrete projects of regulation. Still it may be referenced to widen the focus of that discussion.

Some advances in the political and juridical regulation of financial markets seem to aim at forcing more accountability on major financial market actors like investment banks, demanding an increase in capital stocks as counterweight to their financial ventures. Inasmuch, though, as regulation strategies follow the idea of keeping the price mechanism pure and to "price in" all risks, they attribute the crisis to market failure, effectively following a neo-liberal approach that sanctifies the market mechanism and expectations as major mode of financial sociation. This may enhance the productivity of financial markets as means of production for financial products, i.e. prices, as the present recovery at the financial markets seems to indicate. Yet it will fail in times of crisis in which the expectation mode of sociality invariably compounds the crisis.

It seems plausible that any attempt at "regulation" will have to contemplate whether it aims at the prevention of crises or at the improvement of instruments to tackle crises. However, against the background of the theorization proposed in this essay, I do not think that financial markets can be prevented from failing and causing crises, or made capable of developing mechanisms of self-repair, as long as their mode of meaning is predominantly expectations. They will be exposed to "psychological" roller-coaster rides and major breakdowns as long as their sociological infrastructure allows it, that is, as long as ascriptions of expect-

tations dominate the production of meaning in financial markets while the possibility to negotiate those ascriptions between market participants is absent. Actually the importance of expectations, and especially of their reflexive redoubling as expectations of expectations, seems to have increased, as traders report on accelerated market dynamics resulting from the acceleration in which market participants anticipate of others' anticipations (cf. Langenohl 2008: 20-23). As mathematical pricing models increasingly include (expectations of) expectations in markets, like for instance with sentiment analysis, the increasing automatization of financial operations, feeding the category of expectations directly into trading machines, is bound to further compound the situation.

The discussion thus might turn to possibilities of limiting the reach of market participants' attributions of expectations and their absolute convertibility as heuristics in times of crisis, encouraging them to embrace alternative attributions, heuristics, and modes of sociality. What these alternatives would be ("ambiguity" might be a good candidate, yet will be hard to feed into automatic trading systems), and how they might be institutionally fostered (sociology since Max Weber has put some hope in professional ethics, which, though, is hard to maintain these days), remains to be discussed; yet a glimpse into the prehistory of the financial markets as we know them might be worthwhile.

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Endotes

1A theory that would explain the necessity of representations of others' motivations and their normative context in the financial markets would probably have to go through Talcott Parsons, who attributed some significance to the cognitive functions of norms and expectations of others in social situations (s. Langenohl 2010).

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