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Imagined Futures

Fictionality in Economic Action

Jens Beckert

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Imagined Futures: Fictionality in Economic Action

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Abstract

Starting from the assumption that decision situations in economic contexts are characterized by fundamental uncertainty, the paper argues that the decision-making of intentionally rational actors is anchored in fictions. "Fictionality" in economic action is the inhabitation in the mind of an imagined future state of the world and the beliefs in causal mechanisms leading to this future state. Actors are motivated in their actions by the imagined future and organize their activities based on these mental representations. Since these representations are not confined to empirical reality, fictionality is also a source of creativity in the economy. Fictionality opens up a way to an understanding of the microfoundations of the dynamics of the economy. The paper develops the notion of fictional expectations and applies it to investments, consumption and money. The last part relates the notion of fiction to calculation and social macrostructures as two other devices of decision-making and hints at the relevance of fictionality for the macrodynamics of capitalism.

Zusammenfassung

Entscheidungshandeln in wirtschaftlichen Kontexten findet unter Bedingungen fundamentaler Ungewissheit statt. Ausgehend von dieser Annahme argumentiert das Papier, dass Entscheidungen intentional rationaler Akteure in Fiktionen verankert sind. „Fiktionalität" umfasst die Vorstellungen des zukünftigen Zustands der Welt und der kausalen Mechanismen, die zu diesem Zustand führen. Akteure werden durch diese Imaginationen der Zukunft motiviert und organisieren ihre Handlungen auf ihrer Grundlage. Da die Vorstellungen nicht an die empirische Realität gebunden sind, ist Fiktionalität auch eine Quelle der Kreativität. Fiktionalität eröffnet so einen Weg zum Verständnis der Mikrofundierung wirtschaftlicher Dynamik. Das Papier entwickelt das Konzept der fiktionalen Erwartungen und wendet es auf Investitionen, Konsum und Geld an. Im letzten Teil wird das Verhältnis von Fiktionen zur Rolle von Kalkulation und sozialen Makrostrukturen in der Entscheidungsfindung erörtert und die Relevanz von Fiktionalität für die Makrodynamik des Kapitalismus angedeutet.

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Imagined Futures: Fictionality in Economic Action

> [There are matters about which] there is no scientific basis on which to form any calculable probability whatever. We simply do not know. Nevertheless, the necessity for action and for decision compels us as practical men to do our best to overlook this awkward fact … (Keynes 1973[1937]: 213)

On what basis do actors make decisions in economic contexts? According to economic theory, decisions are based on rational calculations of the outcomes associated with the various possible choices. Following sociological approaches to the economy, decisions are anchored in social structures, especially institutions, networks, and cultural frames.

In this paper, I want to add a different perspective on the question of the micro-foundations of economic action, giving weight to a much underemphasized aspect of it. Starting from the assumption that decision situations in economic contexts are characterized by fundamental uncertainty, I argue that the decision-making of intentionally rational actors is anchored in fictions. By "fictions" I refer to images of some future state of the world or course of events which are cognitively accessible in the present through mental representation. "Fictionality" in economic action is the inhabitation in the mind of an imagined future state of the world. Actors are motivated in their actions by the imagined future state and organize their activities based on these mental representations. Since these representations are not confined to empirical reality, fictionality is also a source of creativity in the economy. Fictional expectations in the economy take narrative form as stories, theories, and discourses. Including fictionality in a theory of decision-making opens up a way to an understanding of the microfoundations of the dynamics of the economy.

I first provide a brief overview of various approaches in economics and economic sociology to the explanation of economic decision-making. This will sharpen the point of departure advanced in the article. Second, I develop the notion of fictional expectations to be applied here and its role in the constitution of action in economic contexts and especially the creativity of action. In the third part, I illustrate the role of fiction in the contexts of investments, consumption, and money. In the last section, I relate the notion of fiction to the role of calculation and social macrostructures in economic decision-making. Finally, in the conclusion I hint at the relevance of fictional expectations for the macrodevelopment of the economy.

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1 Decision-making in economics and sociology

Economics

Economic theory assumes that actors make choices based on rational calculations (Williamson 1993). Assuming a fixed set of preferences, given factor endowments and restrictions, actors calculate the choice which maximizes their expected utility. To do so, actors systematically scrutinize all possible alternative combinations and calculate the consequences of all options. This makes it possible to arrange the various options in a rank order of utility and to construct complete indifference maps across all feasible trade-offs. The macroeconomic result is an equilibrium which can be deduced mathematically based on the starting conditions and the assumptions made in the theory.

The future enters into the decision models of economics in the form of rational expectations (Muth 1961; Lucas 1972). Assuming market pressures and the systematic use of all available information, rational expectations theory states that the predictions actors form with regard to economically relevant variables in the future are correct, in the aggregate, because all individual errors are random. Hence, the predicted outcomes do not differ systematically from the resulting market equilibrium. As a consequence, the uncertainty entailed in the future is transformed into a state predictable by forecast, allowing for the rational calculation of optimal choices. "One of the rituals of economic theorizing is to assume optimizing behaviour and rational expectations based on a full understanding of one's environment" (Hellwig 1998: 721).

The assumption that decisions in economic contexts can be optimal choices based on rational expectations has been criticized within economics. One of the most prominent critiques stems from John Maynard Keynes. According to Keynes, expectations "cannot be uniquely correct, since our existing knowledge does not provide a sufficient basis for a calculated mathematical expectation" (Keynes 1964[1936]: 152). In consequence, "all sorts of considerations enter into the market valuation which are in no way relevant to the prospective yield" (Keynes 1964[1936]: 152). Similarly, economists working in the tradition of the Austrian School see the limits of rational expectations theory in the unknowability of the future due to novelty that cannot be anticipated in the present (Buchanan/Vanberg 2008[1984]: 380f.). Expectations, and the decisions based on them, are shaped by the ability of humans "to see and do things in a novel way" (Dequech 1999: 422).

The possibility of rational calculation has also been questioned by theories of bounded rationality.[1] Actors lack the necessary information to calculate the optimal choice or they might not have the cognitive capabilities to do so (Simon 1957). Moreover, actors have different aspirational levels, assume different random events, and cannot predict

1 A further critique of the economic model refers to its consequences with regard to the determinacy of choices (Parsons 1949[1937]; Bronk 2009: 216). Spiro Latsis (1972) has summarized this point in the statement that general equilibrium theory confronts actors with "single-exit" situations: that is, a situational determinism which reduces choice to the execution of the optimizing decision.

precisely the behavior of their interaction partners (Güth/Kliemt 2010), making it impossible to predict equilibrium outcomes. This implies that decision-making cannot be understood as the mechanical, rational processing of information, leading to unequivocal equilibria based on optimizing decisions. Economic theories of rational expectation are wrong in ignoring the real cognitive capacities of actors: "How can one impute to the social agents the capacity to make the calculations that occupy many pages of mathematical appendixes in the leading journals and that can be acquired only through years of professional training?" (Elster 2009: 7).

Behavioral economics goes beyond the concept of satisficing by attempting to understand systematically the different types of cognitive biases in decision processes.[2] It refers to cognitive mechanisms, such as stereotypes, overconfidence, limited attention, the sunk-cost fallacy, or projection biases as relevant aspects in decision-making, potentially diverting actors from the optimal choice. The hope of behavioral economists is that, once one understands precisely *how* these cognitive mechanisms influence the decision-making process, it becomes possible to develop a predictive theory of decision-making that is more realistic than expected utility theory.

Economic sociology

Economic sociology has paid little attention to the micro-foundations of the economy (Beckert 2003). This is attributable largely to the structuralist premises of most work in economic sociology. In structural theories, the question of how actors make choices is answered only indirectly: decisions are anchored in social macrostructures, such as networks, institutions, and cultural scripts which direct choices (Callon 1998: 11ff.; Granovetter 1985; Dobbin 2004). Even when explaining the dynamics of economic formations, structuralist theories do not necessarily need a behavioral basis. Change can be explained also in terms of the internal contradictions of institutional configurations (DiMaggio 1988; Streeck/Thelen 2005), the reconfiguration of network structures (Burt 1992), or exogenous cultural shifts. To the extent that theories in economic sociology address the issue of micro-foundations, they usually make pragmatic use of rational actor models, assuming, for instance, that behavior changes with different institutional incentives (Hall/Soskice 2001) or a change in position in the network structure (Burt 1992; Granovetter 1985). Structuralist theories in economic sociology are closely related to economics if they consider networks and technologies to be the basis for the possibility of rational calculation (Callon 1998; Callon/Muniesa 2005).

2 An important vantage point for behavioral economics has been the work of Maurice Allais (1953), who showed that, in certain betting experiments, agents violate the principle of maximum expected utility.

Although structuralist approaches dominate in economic sociology, this is not to say that there have been no advances which deal with questions of the micro-foundations of economic action (Barbalet 2010; Beckert 2003; Storper/Salais 1997). These theories usually make the uncertainty and indeterminacy of decision situations the starting point of their reasoning and bring to the fore the need for actors to *interpret* the social macrostructures in the action process. According to Neil Fligstein (2001: 112) the identities of actors – that is, their interpretation of the structures of the world – are not fixed but emerge in the process of social interaction. Charles Sabel and Jonathan Zeitlin (1997: 15) argue that actors define "themselves strategically in the very act of constituting their context" because context is not objectively given but established through the definition of the situation carried out by the actors who are acting in these structures. The economics of conventions (Favereau/Lazega 2002) assumes the simultaneous presence of different conventions, making it necessary for actors to decide which convention holds in a specific situation, a process that takes place in the action process and is potentially conflictual.

2 From rational expectations to fictional expectations

Action takes place in the present but is directed towards the future. Making a choice means to evaluate possible courses of action in light of a future desired state.[3] To make decisions in the economy, actors must form expectations, among other things, with regard to technological development, consumer preferences, prices, availability of raw materials, the strategies of competitors, the demand for labor, the trustworthiness of promises, the state of the natural environment, political regulations, and the interdependencies between these factors.

The complexity of decision situations, cognitive biases, unforeseeable interaction effects, and genuine novelty through unpredictable innovations and the choices of other actors make it impossible to predict the future as already implied in the present. The future holds "novelty and genuinely unpredictable outcomes" (Buchanan/Vanberg 2008[1984]: 380). Hence "choices represent a gamble in an unanalyzable world. It is a gamble on being intelligent in the long run" (Augier/Kreiner 2000: 677).[4]

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3 In this article, I assume that actors in economic contexts are intentionally rational: they intend to maximize their utility. This is not to deny the crucial role of routine behavior also in economic contexts (Camic 1986; Tappenbeck 1999: 48). The discussion here, however, refers only to a type of action in which actors are reflexive in the sense that they make decisions based on a deliberate consideration of alternatives, weighted against each other with regard to their expected outcomes.

4 In part, this is a problem of lack of thoroughness of economic analysis (Hellwig 1998: 719ff.). However, the problem cannot be reduced to superficiality of analysis. In practical terms, actors are simply overburdened and therefore cannot take all relevant information into account (Elster

However, despite its unknowability, actors form expectations with regard to the future state of the world, the relevant parameters for their decisions, and the likely decisions of relevant other actors. On what basis are expectations formed if they are not rational calculations of what will indeed be the case? What are expectations under conditions of uncertainty?

I suggest that expectations with regard to uncertain future events are "fictions." These "fictions" provide parameters for decision-making and thereby provide orientation *despite* the uncertainty inherent in the situation. At the same time, such fictions are themselves also a source of the uncertainty they are responding to because decisions based on counterfactual imaginings can bring about novelty. Table 1 juxtaposes different modes of decision-making.

Table 1 Rational and fictional expectations

Mode of operation	Situation	Basis for decisions
Calculation	Certainty and risk	Rational expectations
Script following	Uncertainty (certainty and risk)	Social macrostructures
Imagination	Uncertainty	Fictional expectations

Fictionality

The term "fiction" is alien to economic discourse. It stems from literary theory. Fiction as a term derives from the Latin "fictio," which means "forming," which is itself derived from the term "fingere" (to shape, to form, to make up) (Bunia 2009: 47; Vaihinger 2007[1911]: 129). The main characteristic of fiction is not that it is not real – hence the mistaken opposition between fiction and reality – but that it creates a world of its own. Fiction "creates a space, in which one can in thought and imagination experience a different reality which can differ from real reality to any extent" (Bunia 2009: 47).

In this sense, John Searle (1975: 320) has characterized fiction as "non-serious." By this Searle does not mean that writing fiction is not a serious activity but that the author of fiction "isn't seriously committed" to believing that the statements he makes are indeed true propositions about the world. The worlds created through fiction are based not on an empirically observable truth but on the author's imaginings. This does not imply that there is no correspondence to reality. On the contrary, the assertions made in fictional texts achieve their credibility often because they could very well be true or because they are closely interwoven with elements that are indeed nonfictional.[5]

2009). And with regard to novelty the necessary information for optimizing decisions is simply not available at the time of decision making (Dequech 2003).

5 Another element of the credibility of fictional texts is their coherence (Searle 1975: 331).

The parallel with representations of the future finding expression in the expectations of *economic actors* is evident. Such depictions can also be "non-serious" only in the sense that they refer to non-observable states that may or may not take place.

This brings up the question of why neither fictional texts nor expectations regarding future events are simply disregarded as uninteresting or even as lies. Why is the reader or the holder of expectations willing to assume an attitude described by the British Romantic poet Samuel Taylor Coleridge as "the willing suspension of disbelief" (Coleridge 1817)?

Searle shows that the willingness to suspend disbelief is based on specific rules applied in the writing and reception of fictional texts but not in the writing and reception of non-fictional texts. What makes fiction possible "is a set of extralinguistic, nonsemantic conventions … [that] enable the speaker to use words with their literal meanings without undertaking the commitments that are normally required by those meanings" (Searle 1975: 326). The author of fiction is "pretending" to make an assertion "or acting as if she were making an assertion" (ibid.: 324). Pretending here does not mean that the author intends to deceive the reader, but rather that she *pretends* in the sense of acting "as if." The conventions are shared by readers who are willing to go along with the pretended assertions made by the author. Searle summarizes his analysis of the characteristics of fiction in the definition: "A fictional story is a pretended representation of a state of affairs" (ibid.: 328).

The analysis of the characteristics of fictional texts is relevant beyond literary theory because of "the crucial role, usually underestimated, that imagination plays in human life, and the equally crucial role that shared products of imagination play in human social life" (Searle 1975: 332). Hence the fictional is not confined to the literary world: "Fictions also play vital roles in the activities of cognition and behavior, as in the founding of institutions, societies, and world pictures" (Iser 1993: 12).

It is this intuition which is taken up here. I suggest that, under conditions of uncertainty in which future states of the world cannot be calculated, fictions, created by the actors in the field, substitute for the unachievable calculation-based anticipation of future states and of future events.[6] Fictional expectations allow actors to create a representation of future events, making them capable of acting purposefully with reference to this pretended future, even though this future is indeed unknown and therefore unpredictable. Fictionality, moreover, allows the attribution of qualities to goods that exist only as imaginaries. By analogy to the definition of fictional texts provided by John Searle

6 Although imaginings form the basis for fiction – its production and its reception – and the notion of imagination plays a greater role in economic thought (Bronk 2009; Shackle 1979) than the concept of fictionality, fiction seems to be the more suitable conception. As Volkmann (2001: 15) elaborates with reference to Wolfgang Iser, the act of fictionalizing converts the diffuseness of the imaginary into a gestalt. Fictionalizing "provides the imaginary with a determinacy that it would otherwise not possess" (ibid.).

I argue that expectations are, under conditions of uncertainty, "pretended representations of a state of affairs."

The argument relates to Hans Vaihinger's (2007[1911]) epistemological analysis of the role of fiction in science. Vaihinger describes scientific categories and theories as "consciously false assumptions" (ibid.: XII) in the sense that the objects characterized do not actually possess the characteristics ascribed to them but are treated *as if* they would hold these characteristics (ibid.: 163). The use of such fictions is necessary since humans can never know the underlying reality of the world itself.[7] A similar problematic holds for decision-making under conditions of uncertainty. Since the future cannot be known, expectations are images of future states of the world which are taken by actors *as if* they were true. They are "placeholders" (Riles 2010) in the decision-making process through which the unknowability of future states of the world and courses of events is *overlooked* for the moment.

Fictions as stories

The use of the notions "imagination" and "fictionality" warrants further clarification. In a way, all action is based on imaginings of future states. Alfred Schütz (2004: 152ff.) defines action as behavior that has been designed in advance. The actor, in order to choose a course of action, must put himself imaginatively in the situation in which the goal is already achieved. While this holds true for all action, it is not a necessary condition for action that the actor can *rationally calculate* how the future will look. Under conditions of uncertainty this is exactly what he cannot do. Instead of leading to paralysis, uncertainty is "overcome" by suspending the disbelief in the calculability of future states, and by acting based on fictional depictions which are handled by the actors *as if* they were true representations of the future.

These fictional depictions take narrative form. It is through their story-structure that imaginings of future states become determinate (Iser 1993). Stories have become a topic in economic sociology (Diaz-Bone/Krell 2009; Mützel 2010; White 1992), organization studies (Brown et al. 2005; Czarniawska 2004), economic anthropology (Holmes 2009), and political science (Salmon 2007), but also in economics (Akerlof/Shiller 2009; McCloskey 1990). One strand of this research focuses on narrative representations of past occurrences that take the form of organizational, economic, or societal myths (Anderson 1983). Stories, however, are also used to depict *future* events imaginatively.

7 Vaihinger's argument is closely related to John Dewey's (1988[1929]) analysis of the knowledge process. According to Dewey, scientific progress develops in the action process based on "beliefs" which provide orientation. Beliefs are tentative knowledge that must be verified in practical activity. The underlying uncertainty cannot be dissolved but is the basis for continuous inquiry into the characteristics of the objective world.

Financial markets are especially prone to giving rise to such stories about events in the future, as can be seen from the dotcom euphoria, the enthusiasm for the biotechnology industry in the late 1990s, or the BRIC concept a few years later. Moreover, influential economic actors such as central banks shape expectations through narratives giving an account of the current economic situation and its future development. Such narratives serve as "analytical bridges to the near future" (Holmes 2009: 386). Instead of just reporting the facts, stories create "the economy itself as a communicative field and as an empirical fact" (ibid.: 384).

The stories circulating move markets by influencing demand and prices: "Stories impart meaning, which is to say worth" (McCloskey 1990: 68). The expectation that gold will rise to two thousand dollars, put forward by commodities investor Jim Rogers in October 2010 (see the Frankfurter Allgemeine Zeitung of October 20, 2010), is a story providing a justification for investing money in the precious metal. Rogers can foresee future events in the commodity markets as little as anybody else, but his story may nevertheless shape expectations and thereby motivate investment decisions. "High confidence tends to be associated with inspirational stories, stories about new business initiatives, tales of how others are getting rich" (Akerlof/Shiller 2009: 55).

Fictional depictions, however, not only create worth, but can also destroy it: the "Asian crisis" in 1997 started out as a "Thai crisis." Investors took the crisis in Thailand as evidence of potential difficulties in other Asian countries (Hellwig 1998: 715). This opinion formed in the financial markets despite very different situations in these countries in terms of economic fundamentals. By withdrawing funds also from countries like Korea investors created the difficulties that were predicted by the story.

If a sufficient number of investors believe in the fictional depiction it becomes a self-fulfilling prophecy. If the fictional story is disappointed, expectations will eventually be revised. This points to an experimental process in which stories are open to "revision and modification as new data and new interpretative insights become available" (Holmes 2009: 401). Stories, however, can also prevail despite known flaws and incoherencies due to organizational inertia, group pressures, and powerful particular interests.

> Language and reasoning are not necessarily employed for the benefit of the institution for which one works; most importantly they serve the purposes of the speaker within the institution. For these purposes, it is important that one uses formulations that are effective – without necessarily being right. (Hellwig 1998: 721)

Fictions and economic dynamics

By not being bound to rational calculation, action has a much higher degree of freedom than assumed by rational actor theory (Schütz 2003: 148f.). The images themselves are not determined by the situation and are therefore not predictable (Tappenbeck 1999: 89).[8] The images of the future may be untamed speculations or, at the other extreme, pretend to be a determinate representation of a future state.[9]

Due to their unlimited freedom, non-literary fictions are of particular importance for understanding innovative processes and hence the dynamics of the economy. Imagination makes possible "conceptual jumps which allow us to generate new hypotheses and see things differently" (Bronk 2009: 203). They allow actors to move beyond inherited thought-patterns and categories by bringing them into an as-if world in which given reality is surpassed and a different one considered (Bronk 2009: 201; Tappenbeck 1999: 53). The creative re-thinking of the parameters of a decision situation based on imaginaries makes it possible to reorganize links in a "new narrative texture" (Patalano 2003: 4). In this sense, the fictional can be "subversive of established order" (Bronk 2009). The indeterminacy of fictional expectations is also an indispensable basis for what David Stark (2009) has called the "sense of dissonance." Different fictional expectations can be operational at the same time. Entrepreneurship exploits the opportunities opened up by this indeterminacy in the interpretation of the situation.

The connection between imagination and innovativeness has been supported in particular by the work of economists working in the Keynesian and Austrian traditions and in the Carnegie School. George Shackle (1979) sees the uncertain basis of expectations as allowing for the freedom to create hitherto unexplored visions of the future. Choice

8 Psychological theories (Beach/Mitchell 1987) distinguish between several mental images through which knowledge is represented. The *self-image*, consisting of personal beliefs and values; the *trajectory-image* depicting a desirable future; the *action-image*, portraying the sequences of actions needed to achieve the desirable future; and the *projected-image* which depicts the anticipated results of the action.

9 An example of the latter type of fiction is forecasts of economic growth provided by economic research institutes. Based on the theoretical considerations developed here it would be a categorical mistake to blame such forecasts with hindsight for being wrong. They are *necessarily wrong* because the future cannot be foreseen. They may nevertheless serve an important function in the action process by providing reasons for decisions. Actors act *as if* the forecasts were right. Ironically, they can become true precisely because actors act *as if* they were true. In this sense, fictions can be self-fulfilling prophecies.

is choice "amongst imagined experiences" (Shackle 1964: 12). James Buchanan and Viktor Vanberg (2008[1984]) argue that, given that the future state of the world depends on choices yet to be made, any knowledge of this future "can be a matter of speculation, but not of foreknowledge" (ibid.: 385). In a market economy, this lack of foreknowledge is at the same time a source of innovativeness. Markets institutionalize the "creative-inventive-imaginative element in choice" (ibid.: 389). From an organizational perspective, James March sees fictionality as a non-rational decision device contributing to actors' willingness to engage in innovations: "Soothsayers create sheltered worlds of ignorance, ideology and faith. Within the shell that they provide, craziness is protected long enough to elaborate its challenge to orthodoxy (March 1995: 437).[10]

Fictions as a basis for action

Although non-literary fictions are "non-serious" in the sense that they pretend facts, they can be sources of action and thereby constitutive of reality. By motivating action, the *fiction-ability* of humans (Wolfgang Iser) is not simply an illusion.

That "imagined experiences" (Shackle 1964: 12) of future states can in fact motivate decisions seems to be connected to the emotions these images evoke. George Shackle has argued that the imagined outcomes of choices evoke emotions of an "enjoyment by anticipation" (Shackle 1979: 45) that are instant rewards for the personal commitment to a particular action. "Imagination can perceive an attainable state of thought and realize it as an attained satisfaction" (ibid.: 47). It is these pleasurable sensations experienced by actors exposing themselves to (uncertain) endeavors which help explain their willingness to commit themselves and to overcome environmental pressures towards conformity. "The attachment to a fantasy converts the ambiguities of history into confirmations of belief and a willingness to persist in a course of action" (March 1995: 437).[11] In psychological terms, "high-risk behavior, like play and exploration in organizations that insist on rationality, may heighten the intensity of feelings, and may motivate a commitment to, for example, projects that are at the same time imagined with a substantial amount of disbelief" (Augier/Kreiner 2000: 678).

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10 For the relationship between imaginaries and social order and change, see especially the work of Cornelius Castoriadis (1998).

11 This is a process not limited to imaginings in the economy. With regard to religious beliefs, Pascal asserted that the "hope which Christians have of possessing an infinite good is mingled with real enjoyment, … they hope for holiness, for freedom from injustice, and they have something of this" (Pascal 1958[1672]: 145). Albert Hirschman (1986: 150) applied this thought to political activities: the members of a group fighting for a revolutionary goal experience a sensation of the utopian state while they are engaged in the struggle, although they indeed live in the present under the most oppressive conditions. To experience this sensation, the actor must have committed himself to the struggle for the goal.

Literary and non-literary fictions

The analogy between literary and non-literary fictions warrants two qualifications, pointing to differences between the two. Firstly, while literary texts wear their fictionality on their sleeve, non-literary fictions hide it.

> In the self-disclosure of its fictionality, an important feature of the fictional text comes to the fore: it turns the whole of the world organized in the text into an "as-if" construction. In light of this qualification (implicitly accepted the moment we embark on our reading), it is clear that we must and do suspend all natural attitudes adopted toward the "real" world once we are confronted with the represented world … Just as the incorporated "real" world is bracketed off, so too are our natural attitudes. (Iser 1993: 12–13)

By contrast, in the non-literary narrative of future states of the world, the "natural attitude" remains in place. Although actors (should) know that the imaginaries of the future are, as such, "non-serious," they act as if they were serious – in other words, factual. This is a crucial condition for fictions to motivate action, because only if they are perceived as factual anticipations of future states will economic actors base their choices on them.[12]

The second difference is that fictions in economic contexts actually do motivate actions in the real world, while literary fiction does not (at least, it is not intended to do so[13]). In the terminology of Alfred Schütz (2003: 148), this reflects the difference between "mere fantasies," with regard to which there is no intention of realization, and "design fantasies" *(Entwurfsphantasien),* in respect of which there are plans to put them into practice. This also indicates a difference in the status of non-seriousness and seriousness between non-literary fictions and literary fictions.

Because the non-literary fiction that motivates economic action is based on the assumption that what is currently an imaginary will be turned into something existent at a later point in time, fiction in economic contexts is vulnerable to contradictory experiences in the real world and at least potentially open to adaptation. "The rationality badge of the As If is by definition only for the present, subject to further reevaluation" (Riles 2010: 9).

John Dewey (1957) analyzed this process in terms of the notion of "ends-in-view." Such ends-in-view are plans for action which structure current decisions but change in the course of action based on new experiences. This connection between cognition and experience leads to a concept of situated rationality in which goals are revised continu-

12 For their effectiveness it does not matter whether actors themselves believe in the fictions or they only believe that others believe in them and therefore base their actions on them.

13 This does not exclude the fact that fiction has educational purposes: one might mention here the *Bildungsroman.* It also does not exclude the fact that readers take the characters of novels as heroes whose actions they sometimes imitate, as was the case, for instance, after the publication of Goethe's *Werther* and Salinger's *Catcher in the Rye:* both books led to suicides among their readers.

ously. Contrary to the assumptions of teleological theories of action, goals and preferences are not conceptualized as external to the action situation but rather discovered in the situation itself. Ends-in-view are "foreseen consequences which influence present deliberation" (Dewey 1957: 223). Fictional depictions are only preliminary and change in the situation (Barbalet 2010: 6; Joas 1996; Putnam 2006: 282; Whitford 2002: 339). While with regard to economic fictions real world experiences have feedback effects, a novel will not be rewritten because it turns out that it does not stand the test of reality. Text and reality are dissociated.

3 Fictionality in economic action

How do fictions enter into economic decision-making? All economic decision-making is oriented towards the future. In this section I illustrate the relevance of fictional expectations by discussing investment decisions, consumption, and money as central realms of decision-making in the economy.

Investment decisions

Innovation

Capitalist economies are characterized by their dynamic character, stemming from constant innovation. To a large degree, competition in capitalist economies takes place through the introduction of new products, new manufacturing processes, or product differentiation.

The central role of fictional expectations for innovations was already recognized by Joseph Schumpeter (1912). Schumpeter's analysis sets out from the observation that new combinations exist at the beginning only in the consciousness of the actor. While most actors are caught in routines, some actors "with more acute intelligence and a more active imagination envisage countless new combinations" (ibid.: 163). As soon as the entrepreneur considers possible new combinations, he will "adapt his economic activities accordingly" (ibid.: 165). This has direct consequences for the economy because the entrepreneur will, based on the imaginary of the possible new combination, change the value assessment of the goods offered in the market – in other words, change product demand. This leads to changes in relative prices. Using the terminology introduced above, the entrepreneur "pretends" the existence of the imagined new combinations in the future and structures his present behavior on the basis of these pretensions.

Schumpeter insists that entrepreneurial innovation in the economy is incompatible with the calculative behavior assumed by economic theory. Innovations cannot be rationally deduced from existing knowledge. Instead, the imaginaries of economic actors motivate and guide inherently incalculable innovative activity. This point is also supported by James Buchanan and Victor Vanberg (2008[1984]) who emphasize that the choices of entrepreneurs are not between possibilities which are already "out there," but "that the reality of the future must be made by choices yet to be made, and this reality has no existence independent of these choices" (ibid.: 386). Innovation "requires the imaginative injection of inherently unpredictable novelty" (Bronk 2009: 209).

The role of fictions in technological innovation has come to the fore in many studies. According to Harro van Lente and Arie Rip (1998: 222) innovation processes start with the "voicing of promises" which show the way to collective projections of the future. This leads in a second step to agenda setting. The voicing of promises has not only the function of shaping a collective mind-set but also of protecting new ideas from disbelief so they can be cultivated. Hence it is a utopian vision which stands at the outset, which shows a pretended future reality that comes into existence (or doesn't) as a result of the fiction standing at the outset. Marita Sturken and Douglas Thomas (2004: 7) argue that technological vision is "not simply a means to characterize new technology, rather it serves both to define new technologies and to construct them." According to David Nye (2004) technological predictions are narratives about our desires for the future, rather than accurate reflections of technological capabilities.

Investment

Investments are costly commitments to anticipated future states of the world, associated with the uncertainty of whether this state will indeed prevail. Based on the expectation that a certain situation will duly transpire, investors commit money (or time) to a specific venture – either engaging in the production of a product or investing in a financial asset – expecting a gain in utility from it. Although investors undoubtedly take great pains in trying to calculate which investments will maximize their gains (given their respective tolerance for risk) many economists have been critical of the possibility of doing so. Frank Knight (1985[1921]) saw the very possibility of profit as depending on the *incalculability* of outcomes of investments. John Maynard Keynes (1964[1936]) argued that under conditions of genuine uncertainty, investments are based on conventions, fluctuate with rapid waves of optimistic and pessimistic sentiment, and reflect a "spontaneous urge to action rather than inaction" (ibid.: 161).

Despite the incalculability of the outcome of investments actors must form expectations with regard to pay-offs. What is the basis of expectations of investors? Calculation plays an important role. But rather than leading to the recognition of the optimal choice in an objective sense, calculations should – under conditions of uncertainty – be considered to be fictions themselves (Dobbin 2001); because they *appear* rational they provide legitimated justifications for decisions *despite* the incalculability of outcomes. Hence, calculations in situations characterized by fundamental uncertainty have an entirely different role than the one assumed by the actors themselves: they are not instruments which allow us to anticipate the future, but tranquilizers against the paralyzing effects of having to act in unpredictable environments.

One field in which this can be observed especially well is financial investment. The unpredictability of financial markets has its chief cause in their self-referentiality (Orléan 2005; Soros 1998; Shiller 2000). This means that the calculative efforts of financial investors must anticipate the expectations of other investors in the market with regard to the development of market opinion (Keynes 1964[1936]).

The decisions of market actors regarding market opinion *can* follow convention (Orléan 2008; Keynes 1973[1937]: 114), but can also mirror peer pressure ensuing from the style of discourse (Hellwig 2009: 161) or reflect imaginaries. Kraemer (2010) has argued that a shared belief in certain market developments can either be an expression of isomorphism *or* be produced by charismatic financial entrepreneurs who succeed in influencing the beliefs of other market participants with their stories. Market influencing beliefs stem from powerful investors, bank analysts, economists, or central banks and high-ranking treasury officials.

Based on research by Douglas Holmes (2009), Stephen Nelson and Peter Katzenstein (2010) argue that central banks manage the expectations of investors by "talking to the markets" through public statements and carefully worded interviews:

> Prices become anchored in the expectations of market participants who take these allegories seriously and adjust their practices and expectations … Together with open market operations, the economic narratives of central banks thus become the second main determinant for price developments. Put differently, uncertainty is being reduced by discursive practices that rely on strategic rhetorical action with essentially pedagogical aims. (Nelson/Katzenstein 2010: 31f.)

Expectations of financial investors might be connected to charismatic ideas which "point beyond exclusively economic profit calculation" (Kraemer 2010: 14). Investment strategies are loaded, for instance, with a "growth story" which entails elements of prophecy. Such charismatic fictions provide motivation for investment decisions despite the incalculability of future yields.

The proliferation of such fictions – that is, their influence on investors – often depends on their connections to normative ideas of a "better society." Examples of this include influential fictions, such as investments in renewable energies or investments in the housing market which are anchored in a cultural discourse of hopes for a better society (Sturken/Thomas 2004).

In a similar vein, Hirokazu Miyazaki (2003) has argued in a study on arbitrage trading on the Tokyo stock exchange that this trading strategy is based on an underlying "faith" on the part of the traders in the efficient market hypothesis. Arbitrage trading seeks to identify financial assets which are "mispriced relative to their theoretical value" (ibid.: 258). Rather than "being true," traders act as if the efficient market hypothesis were true. The theory is akin to utopian thought, emphasizing a gap between reality and the ideal.

"Economic myths" (Deutschmann 2009) contributing to the shared assumptions of investors with regard to the future yield of an investment can become a self-fulfilling prophecy, causing the success of the investment anticipated in the fictional depiction. This holds true if the shared expectations create widespread demand for the asset, leading to higher prices, stronger sales and profits that were anticipated at the beginning of the process as a pretension. In this case, the fictionality of economic decision-making is performative. Actors might interpret the outcome as confirmation of the accuracy of their "calculation," although the outcome is the result of the joint belief in a fictional expectation.[14]

Strategy

Closely related to investments is the formation of business strategies. Strategies are heuristics in decision situations through which firms define their identity in the market. They give a general direction in decision-making by proclaiming general goals, products on which the firm focuses, technologies seen as promising, or market developments identified as relevant. All these guideposts for decision-making are produced under conditions of the unknowability of the future; in other words, conditions of uncertainty. Charles Sabel and Jonathan Zeitlin (1997: 15) have argued that strategic business choices cannot be understood as optimization because the contexts of action are not objectively given but constituted by the actors' interpretation of the situation. Actors' choices "depend on their articulation of stories about possible developments" (ibid.). The formation of strategies is based on pretended facts, articulated as fictional expectations of the future.

One realm in which the role of fictionality in strategy development comes to the fore is the constitution of new markets. Sophie Mützel (2010) has investigated the process of strategy formation at biotechnology firms aiming to develop genetically engineered medication for treating breast cancer. This is a highly uncertain environment in which the success of firms' research strategies cannot be foreseen and hopes of successful prod-

14 The influence of fictional depictions of future states on investments is not limited to financial markets; it is a much wider phenomenon. It shows itself, for instance, in the bequest of wealth (Beckert 2008), the buying of life insurance (Zelizer 1979: 595f.), the purchase of lottery tickets, or investments in education motivated by imaginaries of intergenerational upward mobility, supported by collective narratives such as the "American dream."

uct development are often disappointed. Actors' expectations take the form of narratives, which are communicated in the market field. Such narratives consist of stories of how the goal of development of a certain medical therapy can be pursued successfully.

The fictional depictions have several functions. They are signals to competitors, informing them of the convictions of other players with regard to promising strategies. Moreover, the stories establish reciprocal perspectives on the position of each firm within the market field and "thereby have stabilizing effects within the network structure" (Mützel 2010: 93). The narratives have the further consequence of generating expectations in the financial community. They serve as a basis for investment decisions. The narratives can thus contribute to raising share prices by influencing investors' expectations positively, or – in case of disappointing stories regarding the outlook for a firm's strategy – to their decline. The empirical case investigated by Mützel (2010) provides insights into the role of fictionality in the constitution of market structures. It also shows how fictional expectations come to be revised based on their "testing" in reality.

A second example of the role of fictionality in strategy construction is provided by Guido Möllering's (2010) investigation of decision-making processes in technology development in the semiconductor industry. Möllering's focus is an industry workshop called the *Next Generation Lithography Workshop*, where competing firms from the semiconductor industry come together to debate their expectations with regard to industry development and their intended strategies for creating new technologies. Again, this is a field characterized by high uncertainty with regard to technological development and only tentative prospects. The industry workshop aims at providing orientation for firms by identifying the most important issues to be resolved, information about opinions on the most promising technologies, and an understanding of the timeframes involved before certain steps in technological development are likely to be completed. What is presented at the workshop are fictional representations of future states which show the convictions of participants, shape the expectations of industry actors, and provide rationales for the decisions to be taken in the present. The narratives contribute to the constitution of the market by shaping the technological strategies pursued.

A last example of the role of fictional depictions in strategy development refers to the outsourcing of production. Geny Piotti (2009) has investigated the decision-making processes of German firms outsourcing parts of their production to China in the mid-2000s. She shows that these decisions were often ill-informed and in many cases led to disappointment of the hopes associated with the strategic move. What motivated firms to go to China? Piotti shows from the interviews conducted with managers involved in these decisions that the choice was not so much rooted in economic calculation as motivated by a general euphoria with regard to investment in China created by the media and industry organizations, such as chambers of commerce. The depictions of the opportunities presented through narratives by firms already operating in China triggered overly optimistic assessments, motivating decisions which often led to losses.

Some managers interviewed by Piotti compared the decision to outsource to China explicitly "to the Gold Rush in America" (Piotti 2009: 23). Narratives of the great opportunities opening up in China, strong normative pressures in the field, and sentiments of euphoria were major ingredients in the decision to relocate. The reference to the Gold Rush reveals again the role overarching "economic myths" may play in decision-making in conditions of uncertainty.

Consumption

While the realms of fictional expectations discussed so far all refer to investment decisions, fictional depictions of a future state also play an important role when it comes to explaining the desire to purchase goods. In his *Philosophy of Money* Georg Simmel (2004[1978]) analyzed value as emerging from a distance between a desired object and its mental accessibility. The desired products are already present as images to the consumer before they are purchased and it is the emotions created by the idea of possessing them that motivate purchasing decisions (Campbell 1987; McCracken 1988). Satisfaction is experienced in anticipation of the possession of the good. This confirms the observation developed in the previous section that imaginaries can bring about a state of mind in which the situation, which so far exists only as a mental representation, is already felt as real.

The desirability of goods depends on imaginaries of how they will satisfy a need. In contemporary economies the utility of goods often consists of symbolic meanings. Certain goods become representations of the identities of social groups or more generally of social status and hence position their owners within a differentiated social world. It is this power of goods which becomes a source of their desirability (Bourdieu 1984; Veblen 1973[1899]; Simmel 2004[1978]). Other goods assume symbolic value by becoming representations of espoused values and aspired-to ideals which are intangible. The values become symbolically embodied in specific goods and thereby accessible (Beckert 2011). Objects may evoke fantasies based on symbolic associations with desired events, people, places or values and thereby create the desire for the product (McCracken 1988: 104ff.; Campbell 1987). Here the good performs as an arbitrator or bridge between the subject and a desired but intangible ideal.

An example of this is the role of provenance in antique markets. The value of an item of antique furniture depends not only on its physical properties but also on its former possessors ("a chair owned by Napoleon") and stories of past uses of the object ("the chair on which Napoleon sat when he …"). Value in the market for antiques is created by either finding out about such associations of objects with prominent people or historically significant situations or simply by making such stories up (Bogdanova 2010). The narrative is a piece of fiction which constitutes imaginaries, connecting the object with adored former owners or important historical situations and allowing the owner of the piece to achieve "closeness" to them. In both cases the value of goods is anchored in their symbolic meaning, which is fictional in the sense that the asserted connection between the materiality of the good and its symbolic meaning is based on the suspension of disbelief that the good is more than what is embodied in its materiality.

Georg Simmel observes the paradoxical fact that the attraction of goods is stronger in anticipation than when the distance from the imagined qualities is overcome through the act of purchase. "The moment of enjoyment itself, when the separation of subject and object is effaced, consumes the value" (Simmel 2004[1978]: 66). While the desire to "realize" imaginaries may motivate the purchase of symbolically charged consumption goods, its actual realization destroys the fiction and with it the desire.

The fictional character of the value of consumer goods and the risk that this value will vanish through the very act of appropriation is a crucial ingredient in the explanation of the dynamics of consumption. Goods become symbolic representations of "pretended" future states that motivate purchasers to buy them. The faltering of the imaginary as a consequence of the appropriation or because of a shift in symbolic meaning is compensated by the projection of desires on new objects: a process that can be reproduced endlessly, as long as consumers project symbolic qualities onto objects, and provides a basis for explaining the dynamics of capitalism from the demand side.

Trust and money

Trust differs systematically from the other realms discussed because it does not refer to the purchase of objects or property rights but to social relationships. The centrality of trust in the economy has recently come to the fore in the financial crisis. In 2008, the interbank lending market collapsed because private banks no longer trusted the counterparty to repay the loan. Liquidity could be kept in the market only through the infusion of money by central banks. Hence, trust was shifted from the economic system to the political system.

Generating trust can be seen as a major problem confronting modern economies and as a principal objective of the regulatory activities of the state. Trust is the precondition for actors to engage in cooperative relations where they expose themselves to the risk that the contracts they make may not be fulfilled by the counter-party (Arrow 1974; Gambetta 1988; Luhmann 1979; Möllering 2006; Kreps 1990). Trust is also the foundation of the modern money economy in which the value of money is not guaranteed through a fixed exchange rate with a valuable commodity but hinges on people's expectation that the materially worthless pieces of paper will be accepted by others in exchange for valuable goods and their confidence in the monetary system itself. Without trust, no functionally differentiated economy and no modern monetary system could exist. At the same time, the collapse of trust is an ever present threat to the economy which must be "suspended."

Once uncertainty with regard to the fulfillment of contractual obligations and monetary stability is acknowledged, trust can be recognized as a key example of the role of fictionality in economic action. The incalculability of the decision of the trust-taker – will he honor the trust or will he defect? – leads to a profound sense of insecurity on the side of the trust-giver (Goffman 1969: 69). If this situation is not to lead to paralysis, in which every advantage of cooperative action is lost in advance, then the "judgment" (Karpik 2010: 36) must prevail on the side of the trust-giver that the trust-taker will fulfill his contractual obligations. The expectation that the trust conferred upon the trust-giver will be honored is *the fiction* making the cooperative relationship possible. William James summarized this attitude of the trust-giver as the "will to believe":

> Wherever a desired result is achieved by the co-operation of many independent persons, its existence as a fact is a pure consequence of the precursive faith in one another of those immediately concerned. A government, an army, a commercial system, a ship, a college, an athletic team, all exist on this condition, without which not only is nothing achieved, but nothing is even attempted. (James 2006: 22)

The imagination of the trustworthiness of the trust-taker works as a tranquilizer enabling the trust-giver to remain calm despite the ever present possibility of non-fulfillment (Beckert 2005).

Harald Wenzel (2001) has explored the mechanisms through which imaginaries of trusting behavior influence the definition of the situation and the behavior of the trust-taker. Wenzel analyzes trust as a form of *para-social interaction*, in which, through the advance concession of the trust-giver, a successful game of trust is *pretended*, but is in fact produced only with the subsequent action of the trust-taker – that is, through the actual fulfillment of the contractual obligation. But it is the decision of the trust-giver – based on the pretension that his trust will be honored – that makes the cooperation possible. The move by the trust-giver, Wenzel argues, influences the interaction outcome itself by exercising influence over the behavior of the trust-taker in the same sense a gambit does in chess: the move by one player provokes a specific counter-move. The same idea is expressed by William James: "There are, then, cases where a fact cannot come at all unless a preliminary faith exists in its coming. And where faith in a fact can help create the fact" (James 2006: 25). It is in the attitude of an "as if" in which the constitutive force of trust is anchored. The "suspension of uncertainty" (Möllering 2006) operative in decisions involving trust is the phenomenon Samuel Coleridge identified as the "willing suspension of disbelief."

The centrality of trust for the operation of modern capitalist economies becomes most obvious in the monetary system. The operation of money involves fictions in the sense of as-if assumptions. The first fiction in the operation of money as medium of exchange is that actors actually value the, in themselves, "worthless" pieces of paper that they accept in return for giving up property rights in valuable goods. Although money is not valuable, actors act *as if* it were. For this to take place, actors must assume that they can change the worthless notes back into valuable goods. Hence they must have trust in monetary stability. The fiction consists in the belief that the value of money will not have deteriorated at the point in time when the holder wants to use it for the purchase of goods. Philip Mirowski has called this assumption a "working fiction of a monetary invariant" (Mirowski 1991: 581). The fiction is "working" as long as actors believe in monetary stability; it is a fiction because monetary stability depends on the commitment of central banks to low inflation (Ingham 2004: 31) and on macroeconomic development in the future (Ganßmann 2010: 14f.), both of which are uncertain. As the history of monetary crises shows, the devaluation of money is a recurrent phenomenon. Nevertheless, in a money economy actors must act as if the value of money were invariant in order to accept the money as means of payment and abstain from inflationary wage and price increases in anticipation of a rise in prices. Because there can never be enough information the belief in the stability of money requires an element of "supra-theoretical belief" or "social-psychological quasi-religious faith" (Simmel 2004[1978]: 179, quoted from Ingham 2004: 65).

The stability of money and the monetary system depend on monetary policies but also on the actual fulfillment of the promises underlying credit relations. All emerging credit relationships necessarily involve trust in the ability of the debtor to repay his loan and in the issuer's viability. The promise to repay, however, is confronted with uncertainty about whether the debtor will actually be able to repay the loan. If the debtor is a state the ability to repay the loan depends on tax revenues. If the debtor is a company its ability to repay the loan depends on the company's success on the market and ultimately on macroeconomic developments. This must be assumed by the creditor but cannot be foreseen. Although the investor can ask private debtors for collateral or insure against loan default, financial crises show that such assurances easily become worthless, either because the collateral loses its value or because the insurer himself becomes insolvent. "If the expectations are not sufficiently fulfilled the whole system becomes destabilized" (Ganßmann 2010: 14). Monetary policy attempts to regulate the supply of credit in a way that trust in monetary stability is maintained but at the same time there is sufficient money supply in the economy to allow economic growth, which is itself a condition of monetary stability.

Such a balance, however, is difficult to achieve, not only because of the unpredictability of future economic development but also because of the incentive structure of financial investors. Investors increase their profits through the extension of credit relations. Since the risks involved in credit relations are ultimately uncertain, their assessment is open to fictional expectations or can be biased through ignorance. This may lead to poor assessments of risks and hence to speculative bubbles that undermine the stability of the monetary system. The overevaluation of assets can lead to profitable investments as long as market opinion does not consider them unrealistic, in which case a run may start (Minsky 1986). The fact that investors are overconfident is the outcome of fictions that provide rhetorical justification for participating in investments that later turn out to be speculative bubbles. Even if investors are aware of the overevaluation of an asset, the individual investor overestimates "the chances that he will be first in line when the borrower gets into difficulties and a run takes place" (Hellwig 1998: 718).

4 The role of calculation and social macrostructures

So far, I have developed the concept of fictionality and applied the concept to several fields of economic decision-making. This has been done in juxtaposition to the concepts of calculation and social macrostructures as the two devices identified in economics and sociology as forming the basis for decisions. To introduce the concept of fictional expectations, however, does not mean that calculation and social macrostructures do not play a role in decision-making processes. How exactly does fictionality relate to calculation and social macrostructures?

Calculation and fictionality

Approaches stressing the role of imaginaries in economic decision-making emphasize that actors attempt to make decisions which maximize their utility and therefore must combine imagination with reason (Bronk 2009; Buchanan/Vanberg 2008[1984]; Shackle 1961). Hence it would be a grave misunderstanding to see the introduction of the concept of fictionality as promoting a theory of naïveté. Creative moments solidify

> into an action-guiding vision of a possible future … only if we judge them rationally as likely to be feasible and pertinent in the light of experience. Imagined futures and creative solutions often go way beyond what can be rationally deduced from today's facts and hypotheses; but these potential futures and creative solutions must be stress-tested (so far as possible) by a rational and ethical audit, if they are not to lead us unnecessarily astray. (Bronk 2009: 206)

George Shackle underlined that "imagination must be constrained to be congruous with what the decision-maker knows of things in general and of human nature" (Shackle 1961: 11).

This oscillation between unbound imaginaries and calculation can be seen, for instance, in relationships involving trust: actors attempt to obtain information on the cooperation partner and interpret carefully the signals that are available regarding the person's trustworthiness (Bacharach/Gambetta 2001; Beckert 2005). Ultimately, however, the freedom of the trust-taker to defect cannot be eliminated and the decision to trust resembles a "leap" not justified by calculation, but based on faith, anchored in the *as-if* portrayal of the behavior of the trust-taker that she will honor the trust.

Investors also engage in meticulous calculative practices to find out about the likely prospects of an investment. However, the impossibility of including genuine novelty in such a calculation and the complexity of the decision situation due to its self-referentiality makes the representation of future development always a fictional expectation. The imaginary makes it possible to overcome the profound sense of insecurity. Calculation plays a role in this, not only by providing reasons for the revision of prevailing fictional depictions but also as a practice through which disbelief in fictional representations is reduced.[15] To demonstrate by means of mathematical models that certain events will take place tranquilizes actors and thereby reinforces their beliefs, *despite* the incalculability of outcomes.

The relationship between fictionality and calculation differs between consumption goods and investments. In the case of investments, fictional depictions of future states motivate investors to make monetary commitments despite the uncertainty of the profit generated by them. The goal of the investment, however, is to maximize profits, the imaginaries being only a means through which situations are judged. Investors will attempt to find inferences for the soundness of the investment by trying to calculatively assess the factors bearing upon the success of the investment and react accordingly.[16]

For consumption goods, the relationship between imaginaries and calculation is different. The value of consumption goods desired for their symbolic qualities depends on the creation and maintenance of narratives constituting the symbolic value. The symbolic meaning itself is non-calculative; it is based on the belief in the symbolically ascribed qualities of the good. Calculative struggles emerge around the question of which goods actually possess the symbolic value. This can be a struggle between competing firms (Callon/Méadel/Rabeharisoa 2002) or a struggle between status groups in society (Simmel 2004[1978]). Fashion is a constant struggle about which style is "in" or "out." In the art market the actors in the field struggle over the artistic value of an artist and thereby constitute and shift value. In all these cases, however, calculation is not a means of calculating the "true" value of these goods. Calculation rather refers to strategies of firms attempting to position their products in ways that maximize symbolic value to increase market price or market share.[17]

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15 See, for instance, Zbaracki (2004: 17) who shows, based on ethnographic work in a large industrial firm, that price-setting practices rely on economic price theory. But rather than determining prices, the theory has influence because it is used to legitimate the position advocated by a group of managers in the negotiations. "Price theory may serve as a rational myth" used by actors to orient themselves in a complex situation.

16 In financial markets, what is relevant in these calculative processes, however, is not the personal opinion of the investor, but rather her assessment of the market opinion (Orléan 2005). Certain fictional depictions of the future can remain the basis of intentionally rational decision-making, if the actor is convinced that market opinion believes in them, even if she, in her personal opinion, is convinced of the opposite.

17 This can be seen from lottery tickets. Lottery tickets are an investment under risk where the players lose, statistically, about half of their money. Knowing this, demand for lottery tickets should drop to zero. If interpreted as a consumption good, the value of the lottery ticket con-

Macrostructures and fictionality

Social macrostructures – that is, institutions, networks, and cultural frameworks – are connected to the emergence and stability of fictional expectations:

1. *Institutional structures and networks* can reduce uncertainty in the action situation and thereby support specific fictions. The imagination that the trust conferred in a business partner will not be exploited is facilitated by social networks (Granovetter 2005) and an effective legal system (Coleman 1990). Likewise, entrepreneurial ideas depend "to a significant degree on the institutional framework in which innovators operate; and the ability of new ideas to take root likewise depends on the institutional environment" (Bronk 2009: 299). The channeling of contingencies through rules and social networks does not imply a deterministic force on the part of these rules with regard to the imaginaries: the creativity of actors exercised in the imagining of future states of the world remains and actors must always reckon with opportunistic behavior.

2. *Cognitive frames* shape the direction of imaginaries. One example of this is the prevalence of a social norm to trust (or to distrust) in specific situations which feeds the imaginaries of outcomes of situations involving trust and ultimately the decision to trust (Karpik 2010). Another example is cultural expectations of economic accomplishment. Innovation as a form of deviant behavior is also anchored in the normative structure of modern capitalist societies, which values inner-worldly transcendence through industriousness and success-seeking by risk taking (Merton 1957), and thereby encourages deviant imaginaries and the associated actions. The cultural frame is a powerful ingredient in imaginaries of a life in which these cultural expectations are fulfilled. The imaginaries take on concrete forms as depictions of a life in wealth. The experience of actors of being unable to achieve these imaginaries by socially sanctioned means does not necessarily lead to an adaptation of the imaginaries. Merton analyses as the source of superstitious beliefs and of deviant behavior a conflicting situation in which the "incentives for success are provided by the established values of the culture and second, the avenues available for moving toward this goal are largely limited by the class structure" (Merton 1957: 145).

Hence, including fictional representations in a theory of economic decision-making does not deny the relevance of social structures. Seen from the perspective of the actor these macrostructures are typifications which guide imaginaries in culturally and institutionally rooted ways.

sists of the daydreams it makes possible for the players. No rational calculation of the odds will deter the gambler from playing. Demand would decline if the tickets no longer generated daydreams. These correlations can be shown empirically (Beckert/Lutter 2009).

5 Conclusion

This paper set out from the proposition that decision-making in the economy cannot be understood as the result of rational calculation of the factors relevant for the outcome. Fundamental uncertainty due to "unknown and unknowable" future events (Dequech 2003) prevents such calculations. This implies that the expectations that intentionally rational actors hold are not of the kind assumed by rational expectations theory. The proposition developed in the paper states instead that expectations are fictional in the sense that they are based on *pretensions* of future states of the world. Decisions are built upon "fictional expectations."

Understanding decision processes based on the concept of fictionality points to a non-teleological theory of action which brings the creativity of actors and the contingency of the future into the foreground (Joas 1996). The goal is not to develop a more accurate theory of prediction but rather a theory of the unpredictability of the world and of how intentionality unfolds despite this unpredictability of outcomes. The "fiction-ability" (Iser 1993) of humans allows for the imaginative representation of future states of the world in the mind and the imagination of decisions of other actors. The fictional representations of future states shape expectations and provide justifications for decisions, reducing the ever possible disorientation of decision-makers due to the openness of the future. The concept of fictionality suggests an alternative not only to calculation-based models in economics but also to the focus on social macrostructures prevailing in sociological approaches to the economy.

The fiction-ability of humans is a source of innovation and novelty. Humans can imagine a world different from the existing one, and "inhabit" this world through mental representations. Imaginaries can include depictions of genuine novelty. They can transcend the known and thereby motivate decisions which create newness. Humans' ability to imagine things that never were can contribute to actual future states by motivating actions. The future state fictionally claimed at the outset might be realized based on corresponding decisions. To include fictionality in a theory of decision-making provides a tool for understanding the dynamics of economic systems from a micro perspective.

Fictional expectations, however, are not teleological in the sense that actors fix a future state in their mind and all steps to be taken derive from this representation of a goal. Instead, imaginaries and courses of action emerge in a reciprocal process in which goals and means inform each other, based on experiences of the situation and their interpretation (Dewey 1998[1938]; Holmes 2009), as well as the power structures in the field (Hellwig 1999, 2009). Calculation enters this dialogical process continuously when actors attempt to find "proof" for the soundness of the imaginaries constituting their decisions. Social macrostructures enter the process by shaping the imaginaries themselves through cognitive frames and by supporting actors in realizing specific imaginaries. In this sense, imaginaries are socially anchored and not purely individual.

If action is not determined by rational calculation or social structures, but also based on contingent imaginaries of future states it follows also that the imaginaries become contested. Although fictional representations do not anticipate actual future states they influence decisions in the present. These decisions have distributional consequences in the market, consequences for macroeconomic development and consequences for the institutionalization of regulatory rules. For example, the fictional expectations produced with regard to the technologies that will be used for the production of semiconductors (Möllering 2010) or the identification of approaches seen as promising for innovative cancer treatments (Mützel 2010) are part of a competitive struggle between firms, determining investments and equity prices. Financial markets are especially obvious targets for the strategic spread of fictional expectations – if other investors can be convinced of the future state these fictions depict, they are a source of profit opportunities.

The management of expectations of actors in the economy through fictions is not just relevant to understanding the intentionality of action but also for macroeconomic development. In the aggregate, expectations shape the development of economic processes. "The great over-all processes of economic life – inflation, deflation, depression, recovery, and economic development are governed largely by the process of reorganization of economic images through the transmission of messages" (Boulding 1956: 90). Making fictionality an essential element of a theory of intentionally rational decision-making provides a vantage point for the understanding of the micro-foundations of the dynamics of capitalism.

References

Akerlof, George A./Robert Shiller, 2009: *Animal Spirits: How Human Psychology Drives the Economy, and Why It Matters for Global Capitalism*. Princeton: Princeton University Press.

Allais, Maurice, 1953: Le comportement de l'homme rationnel devant le risque: critique des postulats et axiomes de l'école américaine. In: *Econometrica* 21, 503–546.

Anderson, Benedict, 1983: *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. London: Verso.

Arrow, Kenneth J., 1974: *The Limits of Organization*. New York: Norton.

Augier, Mie/Kristian Kreiner, 2000: Rationality, Imagination and Intelligence: Some Boundaries in Human Decision-Making. In: *Industrial and Corporate Change* 9, 659–681.

Bacharach, Michael/Diego Gambetta, 2001: Trust in Society. In: Karen S. Cook (ed.), *Trust in Society*. New York: Russell Sage, 148–184.

Barbalet, Jack, 2010: Action Theoretic Foundations of Economic Sociology. In: Jens Beckert/Christoph Deutschmann (eds.), *Wirtschaftssoziologie*. Kölner Zeitschrift für Soziologie und Sozialpsychologie, Sonderheft 49 . Wiesbaden: VS Verlag, 143–157.

Beach, Lee Roy/Terence R. Mitchell, 1987: Image Theory: Principles, Goals, and Plans in Decision Making. In: *Acta Psychologica* 66, 201–220.

Beckert, Jens, 2003: Economic Sociology and Embeddedness: How Shall We Conceptualize Economic Action? In: *Journal of Economic Issues* 37, 769–787.

——, 2005: *Trust and the Performative Construction of Markets*. MPIfG Discussion Paper 05/8. Cologne: Max Planck Institute for the Study of Societies. <www.mpifg.de/pu/mpifg_dp/dp05-8.pdf>

——, 2008: *Inherited Wealth*. Princeton: Princeton University Press.

——, 2011: The Transcending Power of Goods. In: Jens Beckert/Patrik Aspers (eds.), *The Worth of Goods*. Oxford: Oxford University Press, 106–128 (forthcoming).

Beckert, Jens/Mark Lutter, 2009: The Inequality of Fair Play: Lottery Gambling and Social Stratification in Germany. In: *European Sociological Review* 25, 475–488.

Bogdanova, Elena, 2010: *The Mechanisms of Value Creation in the Market for Antiques*. Unpublished manuscript. Cologne: Max Planck Institute for the Study of Societies.

Boulding, Kenneth E., 1956: *The Image: Knowledge in Life and Society*. Ann Arbor, MI: The University of Michigan Press.

Bourdieu, Pierre, 1984: *Distinction: A Social Critique of the Judgement of Taste*. Cambridge, MA: Harvard University Press.

Bronk, Richard, 2009: *The Romantic Economist: Imagination in Economics*. Cambridge: Cambridge University Press.

Brown, John Seely, et al., 2005: *Storytelling in Organizations*. Burlington, MA: Elsevier Butterworth-Heinemann.

Buchanan, James/Victor Vanberg, 2008[1984]: The Market as a Creative Process. In: Daniel Hausmann (ed.), *The Philosophy of Economics*. Cambridge: Cambridge University Press, 379–398.

Bunia, Remigius, 2009: Was ist Fiktion? In: *Kunstforum* 202, 46–52.

Burt, Ronald S., 1992: *Structural Holes: The Social Structure of Competition*. Cambridge, MA: Harvard University Press.

Callon, Michel (ed.), 1998: *The Laws of the Markets*. Oxford: Blackwell.

Callon, Michel/Cécile Méadel/Vololona Rabeharisoa, 2002: The Economy of Qualities. In: *Economy and Society* 31, 194–217.

Callon, Michel/Fabian Muniesa, 2005: Economic Markets as Calculative Collective Devices. In: *Organization Studies* 26, 229–1250.

Camic, Charles, 1986: The Matter of Habit. In: *American Journal of Sociology* 91, 1039–1087.

Campbell, Colin, 1987: *The Romantic Ethic and the Spirit of Modern Consumerism*. Oxford: Blackwell.

Castoriadis, Cornelius, 1998: *The Imaginary Institution of Society*. Cambridge, MA: MIT Press.

Coleman, James S., 1990: *Foundations of Social Theory*. Cambridge, MA: Harvard University Press.

Coleridge, Samuel Taylor, 1817: *Biographia Literaria*. <www.gutenberg.org/ebooks/6081>

Czarniawska, Barbara, 2004: Gabriel Tarde and Big City Management. In: *Distinktion* 9, 119–133.
Dequech, David, 1999: Expectations and Confidence. In: *Journal of Post Keynesian Economics* 21, 415–430.
——, 2003: Conventional and Unconventional Behavior under Uncertainty. In: *Journal of Post Keynesian Economics* 26, 145–168.
Deutschmann, Christoph, 2009: *Soziologie kapitalistischer Dynamik*. MPIfG Working Paper 09/5. Cologne: Max Planck Institute for the Study of Societies. <www.mpifg.de/pu/workpap/wp09-5.pdf>
Dewey, John, 1957: *Human Nature and Conduct: An Introduction to Social Psychology.* New York: The Modern Library.
——, 1988[1929]: *The Later Works, 1925–1953, Volume 4, 1929: The Quest for Certainty.* Carbondale, IL: Southern Illinois University Press.
——, 1998[1938]: *The Pattern of Inquiry: The Essential John Dewey.* Bloomington, IN: Indiana University Press, 169–179.
Diaz-Bone, Rainer/Gertraude Krell (eds.), 2009: *Diskurs und Ökonomie: Diskursanalytische Perspektiven auf Märkte und Organisationen.* Wiesbaden: VS Verlag.
DiMaggio, Paul J., 1988: Interest and Agency in Institutional Theory. In: Lynne Zucker (ed.), *Institutional Patterns and Organizations.* Cambridge, MA: Ballinger, 3–22.
Dobbin, Frank, 2001: How Institutional Economics Is Killing Micro-Economics. *ECONSOC Editorial.* <www.wjh.harvard.edu/~dobbin/cv/other/2001_ASA_editorial.pdf>
——, 2004: The Sociological View of the Economy. In: Frank Dobbin (ed.), *The New Economic Sociology: A Reader.* Princeton: Princeton University Press, 1–46.
Elster, Jon, 2009: Excessive Ambitions. In: *Capitalism and Society* 4, 1–30.
Favereau, Olivier/Emmanuel Lazega, 2002: *Conventions and Structures in Economic Organization.* Cheltenham: Edward Elgar.
Fligstein, Neil, 2001: Social Skill and the Theory of Fields. In: *Sociological Theory* 19, 105–125.
Gambetta, Diego 1988: Can We Trust Trust? In: Diego Gambetta (ed.), *Trust: Making and Breaking Cooperative Relations.* New York: Blackwell, 213–238.
Ganßmann, Heiner, 2010: *Geld und die Rationalität wirtschaftlichen Handelns.* Unpublished manuscript. Berlin: Freie Universität Berlin.
Goffman, Erving, 1969: *Strategic Interaction.* Philadelphia, PA: University of Pennsylvania Press.
Granovetter, Mark, 1985: Economic Action and Social Structure: The Problem of Embeddedness. In: *American Journal of Sociology* 91, 481–510.
——, 2005: The Impact of Social Structure on Economic Outcomes. In: *Journal of Economic Perspectives* 19, 33–50.
Güth, Werner/Hartmut Kliemt, 2010: (Un)Eingeschränkt rational entscheiden in Geschäft und Moral. In: Berlin-Brandenburgische Akademie der Wissenschaften (ed.), *Preis der Berlin-Brandenburgischen Akademie der Wissenschaften: 2009 Weyma Lübbe.* Berlin: BBAW, 17–28.
Hall, Peter/David Soskice, 2001: *Varieties of Capitalism.* Oxford: Oxford University Press.
Hellwig, Martin, 1998: Discussion on International Contagion: What Is It and What Can Be Done Against It? In: *Swiss Journal of Economics and Statistics* 134, 715–739.
——, 1999: Zur "volkswirtschaftlichen Verantwortung" der Banken. In: Franz Jaeger (ed.), *Die volkswirtschaftliche Verantwortung der Banken.* Chur: Rüegger.
Hellwig, Martin, 2009: Systemic Risk in the Financial Sector: An Analysis of the Subprime-Mortgage Financial Crisis. In: *De Economist* 157, 129–207.
Hirschman, Albert, 1986: *Rival Views of Market Society.* New York: Viking.
Holmes, Douglas R., 2009: Economy of Words. In: *Cultural Anthropology* 24, 381–419.
Ingham, Geoffrey, 2004: *The Nature of Money.* Cambridge: Polity Press.
Iser, Wolfgang, 1993: *The Fictive and the Imaginary: Charting Literary Anthropology.* Baltimore, MD: Johns Hopkins University Press.
James, William, 2006[1897]: *The Will to Believe and Other Essays in Popular Philosophy.* New York: Cosimo.
Joas, Hans, 1996: *The Creativity of Action.* Chicago, IL: The University of Chicago Press.

Karpik, Lucien, 2010: *Valuing the Unique: The Economics of Singularities*. Princeton: Princeton University Press.

Keynes, John Maynard, 1964[1936]: *The General Theory of Employment, Interest, and Money*. London: Macmillan.

——, 1973[1937], The General Theory of Employment. In: John Maynard Keynes, *The Collected Writings, Vol. XIV, Part II*. London: Macmillan, 109–123.

Knight, Frank H., 1985[1921]: *Risk, Uncertainty, and Profit*. Chicago, IL: University of Chicago Press.

Kraemer, Klaus, 2010: Propheten der Finanzmärkte: Zur Rolle charismatischer Ideen im Börsengeschehen. In: *Berliner Journal für Soziologie* 20, 179–201.

Kreps, David, 1990: Corporate Culture and Economic Theory. In: James E. Alt/Kenneth A. Shepsle (eds.), *Perspectives on Positive Political Economy*. Cambridge: Cambridge University Press, 90–143.

Latsis, Spiro, 1972: Situational Determinism in Economics. In: *British Journal of Philosophy of Science* 23, 207–245.

Lucas, Robert, 1972: Expectations and the Neutrality of Money. In: *Journal of Economic Theory* 4, 103–124.

Luhmann, Niklas, 1979: *Trust and Power*. Chichester: Wiley.

March, James G., 1995: The Future, Disposable Organizations and the Rigidities of Imagination. In: *Organization* 2, 427–440.

McCloskey, Donald, 1990: Storytelling in Economics. In: Don Lavoie (ed.), *Economics and Hermeneutics*. New York: Routledge, 61–75.

McCracken, Grant, 1988: *Culture and Consumption*. Bloomington, IN: Indiana University Press.

Merton, Robert, 1957: *Social Theory and Social Structure*. Glencoe, IL: The Free Press.

Minsky, Hyman 1986 *Stabilizing an Unstable Economy*. New York: Mc Graw Hill.

Mirowski, Philip, 1991: Postmodernism and the Social Theory of Value. In: *Journal of Post Keynesian Economics* 13, 565–582.

Miyazaki, Hirokazu, 2003: The Temporalities of the Market. In: *American Anthropologist* 105, 255–265.

Möllering, Guido, 2006: *Trust: Reason, Routine, Reflexivity*. Oxford: Elsevier.

——, 2010: *Collective Market-Making Efforts at an Engineering Conference*. MPIfG Discussion Paper 10/2. Cologne: Max Planck Institute for the Study of Societies.
<www.mpifg.de/pu/mpifg_dp/dp10-2.pdf>

Muth, John F., 1961: Rational Expectations and the Theory of Price Movements. In: *Econometrica* 29, 315–335.

Mützel, Sophie, 2010: Koordinierung von Märkten durch narrativen Wettbewerb. In: Jens Beckert/Christoph Deutschmann (eds.), *Wirtschaftssoziologie*. Kölner Zeitschrift für Soziologie und Sozialpsychologie, Sonderheft 49. Wiesbaden: VS Verlag, 87–106.

Nelson, Stephen/Peter J. Katzenstein, 2010: *Uncertainty and Risk and the Crisis of 2008*. Paper prepared for the "Politics in the New Hard Times" workshop honoring Peter Gourevitch, University of California-San Diego, April 23–24, 2010.

Nye, David E., 2004: Technological Prediction. In: Marita Sturken/Douglas Thomas/Sandra J. Ball-Rokeach (eds.), *Technological Visions*. Philadelphia, PA: Temple University Press, 159–185.

Orléan, André, 2005: *The Self-Referential Hypothesis in Finance*. Unpublished manuscript. Paris: Paris-Jourdan sciences économiques.
<www.pse.ens.fr/orlean/depot/publi/CHA2005tSELF.pdf>

——, 2008: *Knowledge in Finance: Objective Value versus Convention*. Unpublished manuscript. Paris: Paris-Jourdan sciences économiques.
<www.pse.ens.fr/orlean/depot/publi/knowledge0606.pdf>

Parsons, Talcott, 1949[1937]: *The Structure of Social Action: A Study in Social Theory with Special Reference to a Group of Recent European Writers*. Glencoe, IL: Free Press.

Pascal, Blaise, 1958[1672]: *Pensées*. New York: E. P. Dutton & Co.

Patalano, Roberta, 2003: *Beyond Rationality: Images as Guide-Lines to Choice*. Working Paper 05/2003. Turin: University of Torino, Department of Economics.

Piotti, Geny, 2009: *German Companies Engaging in China: Decision-Making Processes at Home and Management Practices in Chinese Subsidiaries.* MPIfG Working Paper 09/14. Cologne: Max Planck Institute for the Study of Societies. <www.mpifg.de/pu/workpap/wp09-14.pdf>

Putnam, Ruth Anna, 2006: Democracy and Value Inquiry. In: John R. Shook/Joseph Margolis (eds.), *A Companion to Pragmatism.* Malden, MA: Blackwell, 278–289.

Riles, Annelise, 2010: Collateral Expertise. In: *Current Anthropology* 51, 1–25.

Sabel, Charles F./Jonathan Zeitlin, 1997: Stories, Strategies, Structures: Rethinking Historical Alternatives to Mass Production. In: Charles F. Sabel/Jonathan Zeitlin (eds.), *World of Possibilities: Flexibility and Mass Production in Western Industrialization.* Cambridge: Cambridge University Press, 1–33.

Salmon, Christian, 2007: *Storytelling: la machine à fabriquer des histoires et à formater les esprits.* Paris: La Découverte.

Schumpeter, Joseph, 1912: *Theorie der wirtschaftlichen Entwicklung.* Berlin: Duncker & Humblot.

Schütz, Alfred, 2003: Das Problem der Personalität in der Sozialwelt: Bruchstücke. In: Martin Endreß/Ilja Srubar (eds.), *Theorie der Lebenswelt 1: Die pragmatische Schichtung der Lebenswelt.* Alfred Schütz Werkausgabe Band V.1. Constance: UVK Verlagsgesellschaft, 91–176.

——, 2004: *Der sinnhafte Aufbau der sozialen Welt: Eine Einleitung in die verstehende Soziologie.* Alfred Schütz Werkausgabe Band II, edited by Martin Endreß and Martin Remm. Constance: UVK Verlagsgesellschaft.

Searle, John, 1975: The Logical Status of Fictional Discourse. In: *New Literary History* 6, 319–332.

Shackle, George Lennox Sharman, 1961: *Decision, Order and Time in Human Affairs.* Cambridge: Cambridge University Press.

——, 1964: *General Thought-schemes and the Economist.* Woolwich Economic Paper 2. Woolwich, NJ: Woolwich Polycentric Press.

——, 1979: *Imagination and the Nature of Choice.* Edinburgh: Edinburgh University Press.

Shiller, Robert J., 2000: *Irrational Exuberance.* Princeton: Princeton University Press.

Simmel, Georg, 2004[1978]: The *Philosophy of Money.* Third enlarged edition. London: Routledge.

Simon, Herbert, 1957: *Models of Man.* New York: Wiley.

Soros, George, 1998: *The Crisis of Global Capitalism: Open Society Endangered.* New York: Public Affairs.

Storper, Michael/Robert Salais, 1997: *Worlds of Production.* Cambridge, MA: Harvard University Press.

Streeck, Wolfgang/Kathleen Thelen (eds.), 2005: *Beyond Continuity: Institutional Change in Advanced Political Economies.* Oxford: Oxford University Press.

Sturken, Marita/Douglas Thomas, 2004: Introduction: Technological Visions and the Rhetoric of the New. In: Marita Sturken/Douglas Thomas/Sandra J. Ball-Rokeach (eds.), *Technological Visions: The Hopes and Fears that Shape New Technologies.* Philadelphia, PA: Temple University Press, 3–18.

Tappenbeck, Inka, 1999: *Phantasie und Gesellschaft: Zur soziologischen Relevanz der Einbildungskraft.* Würzburg: Königshausen und Neumann.

Vaihinger, Hans, 2007[1911]: *Die Philosophie des Als Ob.* Saarbrücken: VDM.

van Lente, Harro/Arie Rip, 1998: Expectations in Technological Developments: An Example of Prospective Structures to be Filled in by Agency. In: Cornelius Disco/Barend van der Meulen (eds.), *Getting New Technologies Together: Studies in Making Sociotechnical Order.* Berlin: de Gruyter, 203–229.

Veblen, Thorstein, 1973[1899]: *The Theory of the Leisure Class.* Boston, MA: Houghton Mifflin.

Volkmann, Christina, 2001: *Organization Theory and Literary Theory: Strange Encounters.* Discussion Paper 03/01. Exeter: University of Exeter Business School. <http://business-school.exeter.ac.uk/documents/papers/management/2003/0301.pdf>

Wenzel, Harald, 2001: *Die Abenteuer der Kommunikation: Echtzeitmedien und der Handlungsraum der Hochmoderne.* Weilerswist: Velbrück.

White, Harrison, 1992: *Identity and Control: A Structural Theory of Social Action.* Princeton: Princeton University Press.

Whitford, Josh D., 2002: Pragmatism and the Untenable Dualism of Means and Ends: Why Rational Choice Theory Does Not Deserve Paradigmatic Privilege. In: *Theory and Society* 31, 325–363.

Williamson, Oliver, 1993: Calculativeness, Trust, and Economic Organization. In: *Journal of Law and Economics* 36, 453–486.

Zbaracki, Mark J., 2004: *Pricing Structure and Structuring Price*. Philadelphia, PA: University of Pennsylvania.

Zelizer, Viviana, 1979: Human Values and the Market: The Case of Life Insurance and Death in 19th Century America. In: *American Journal of Sociology* 84, 591–610.

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