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Abstract

Political economy and economic sociology have developed in relative isolation from each other. While political economy focuses largely on macro phenomena, economic sociology focuses on the embeddedness of economic action. The article argues that economic sociology can provide a microfoundation for political economy beyond rational actor theory and behavioral economics. At the same time political economy offers a unifying research framework for economic sociology with its focus on the explanation of capitalist dynamics. The sociological microfoundation for understanding of capitalist dynamics should focus on the expectations actors have regarding future states of the world. Based on a discussion of what I call the *four Cs of capitalism* (credit, commodification, creativity, and competition), I argue that under conditions of uncertainty, expectations are contingent and should be understood as “fictional expectations.” The capability of humans to imagine future states of the world that can be different from the present is the central basis for a sociological microfoundation of the dynamics of economic macro phenomena. Macroeconomic dynamics are anchored in these “fictional expectations,” which create motifs for engaging in potentially profitable but ultimately incalculable outcomes. This shifts attention to the “management of expectations” as a crucial element of economic activity and to the institutional, political, and cultural foundations of expectations. The reproduction of capitalism is precarious also because of the contingency of expectations conducive to its growth.

Keywords

capitalism, political economy, economic sociology, imaginaries, innovation, competition, consumption, economic dynamics, expectations, microfoundation

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The economy has long ceased to be the exclusive domain of economists. Political economy and economic sociology have both become important subfields in their respective academic disciplines over the past two decades, bringing the economy into the focus of political science and sociology.

Although both subfields share important premises, they have developed in relative isolation from each other. Research in political economy focuses on the varieties of capitalism and on the transformation of the institutional configurations of contemporary capitalism in the process of economic liberalization. Researchers are interested primarily in the explanation of macroeconomic outcomes, such as economic growth rates, inflation rates, aggregated demand, changes in the sector-composition of the economy, or accumulation crises.¹ Economic sociology, by contrast, focuses on the “embeddedness” of economic action, showing in often-meticulous case studies how economic outcomes depend on the structure of social networks, institutional configurations, and cultural frames.²

At first glance, this disconnection of the two subfields seems to become even more pronounced with the recent move in political economy to shift interest from the varieties of capitalism to the “commonalities of capitalism.”³ With this shift, political economy starts to abstract from historically specific institutional contexts and their complementarities and focuses interest on the general logics of capitalist reproduction.⁴

Contrary to the initial assumption of a further divide between political economy and economic sociology, I argue that the shift toward the investigation of the commonalities of capitalism opens up avenues for a closer alignment of the two subfields. This holds true because economic sociology, with its focus on the micro and meso levels of analysis, offers a complementary perspective to political economy by providing a sociological foundation for understanding economic phenomena from the actor perspective. At the same time, political economy offers a unifying research framework to economic sociology with its focus on the explanation of capitalist dynamics.

While the strength of political economy has been the focus of the institutionalist explanation of macroeconomic outcomes, including social structures such as inequality and skill distribution, its underdeveloped part has been the microfoundations explaining the concrete processes underlying the phenomena observed on the macro level.⁵ For the most part, political economists have either rejected the need for a microfoundation⁶ or have made use of rational actor theory.⁷ Although some accounts by political economists show interest in action theories beyond rational choice,⁸ these have not been systematically integrated into the analysis of the dynamics of capitalism.

I follow the work done in the field of economic sociology and pursue a micro perspective. By micro perspective I mean an analysis of the economy from the perspective of actors and their cultural, social, and political embeddedness, with a particular eye to the action process. However, in contrast to most work being done in the new economic sociology, I will apply this perspective to an analysis of the dynamics of capitalism. How do the dynamics of capitalism unfold, when considered from the perspective of the social interactions of the actors who are enacting, reproducing, and changing the economic system through their actions? What are the connections

between these social interactions and the macro phenomena that are the focus of political economy?

To comprehend the “expansive dynamism of capitalism”⁹ one needs an understanding of the micro processes underlying macro outcomes.¹⁰ Although social interaction is partly based on routines, the “reflexive” part of human agency can be described as decisions. It is this part of social interaction that I am focusing on. Decisions are based on expectations regarding outcomes. Thus it is expectations that establish which economic activities are pursued or abstained from. However, under conditions of fundamental uncertainty,¹¹ expectations cannot be understood as being determined through calculation of optimal choices taking into account all available information, but rather are based on contingent interpretations of the situation in the context of prevailing institutional structures, cultural templates, and social networks.

The suggestion brought forward is that the dynamics of capitalism looked at from the perspective of social interaction can be analyzed proceeding from the notion of *fictional expectations*. By the term “fictional expectations” I refer to present imaginaries of future situations that provide orientation in decision making *despite* the incalculability of outcomes.¹² “Fictionality” in economic action does not mean the “falsity” or “fantasy” that is also conveyed in the word fiction. Instead, it refers to the future being unforeseeable so that expectations, rather than being forecasts, must inhabit the mind as imagined future states of the world. Expectations under conditions of uncertainty should be understood as *pretending* future states of the world, allowing actors to act *as if* this imaginary would indeed become the “future present.”¹³ Actors are motivated in their actions by the imagined future state and organize their activities based on these mental representations. Fictional expectations in the economy take narrative form as stories, theories, and discourses. Because these representations are not confined to empirical reality, fictionality is also a base of creativity in the economy and thereby a source of the dynamics of capitalism. Including the notion of fictionality opens up a way to understanding the microfoundations of the economy’s dynamics and growth.

The notion of fictional expectations is directed against the concept of “rational expectations” constituting the microfoundation of much of modern macroeconomics. Assuming market pressures and the systematic use of all available information, rational expectations theory¹⁴ states that the predictions actors make 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.

Many have criticized the assumption that decisions in economic contexts can be understood as utility maximization based on rational expectations. The critiques doubt the assumptions that actors can gain a full understanding of their environment,¹⁵ and that they have the cognitive capabilities to process the available information.¹⁶ Behavioral economists emphasize the role of cognitive biases,¹⁷ Austrian economists point to the unknowability of the future due to novelty.¹⁸ The complexity of decision situations, unforeseeable interaction effects, and genuine novelty through

unpredictable innovations and the choices of other actors make it impossible to foreknow the future and to understand decisions as based on foreknowledge of future states. It is the “fundamental uncertainty” characterizing decisions in economic contexts that renders the model of rational expectations ineffective.

I follow economics in the importance it assigns to expectations regarding future states for current decision making, but depart from the idea that expectations are rational in the sense rational expectations theory claims them to be. This, however, opens the question on what basis expectations are formed if not on a full understanding of all available information. What are expectations under conditions of uncertainty? I pursue the idea that the notion of *fictional expectations* should be seen as the answer to this question. It entails that the “future is an ambiguous canvas capable of multiple interpretations.”¹⁹ Which interpretations prevail is seen as partly structurally and partly politically determined.

Structurally, expectations depend on cultural frames, dominant theories, the stratification structures of a society, social networks, and institutions. But the concept of fictional expectations gives the notion of expectations at the same time a political twist because expectations are seen as being open to the manipulation by powerful actors. Actors have different interests regarding prevailing expectations and will therefore try to influence them. Motivating the decisions of actors by shaping their expectations, including the shaping of the social and political structures underlying these expectations, becomes one of the main tasks of political regulators and a major goal of speech acts uttered in the field of the economy. I call this deliberate attempt to influence expectations the “management of expectations.”²⁰

Use of the concept of fictional expectations is based on a pragmatic understanding of action. Action is not seen teleologically as the realization of an end that itself stands outside the action process, but instead as a progression in which ends and strategies are formed and revised based on contingent and changing interpretations of the situation. Expectations and goals are the outcomes of a process unfolding in time, in which actors develop and enact projects, plans, and strategies. Fictional expectations stand close to Dewey’s notion of ends-in-view, in other words, “foreseen consequences which influence present deliberation.”²¹

This also means that structures only become relevant to the action process through the expectations formed by actors. This, however, does not imply a misleading voluntarism because expectations themselves emerge in social contexts. Although I refrain from a general discussion on the relationship of structure and agency, I do indicate how social structures influence the expectations of actors in the realms of activity investigated. A general discussion on how structures and expectations interact is one of the crucial tasks required to further develop an approach that attempts to understand the social impact of projections of the future.²² Such a task, however, is beyond the confines of this article.

I will start by briefly defining capitalism and identify four different elements that make up the main *activities* underlying the dynamics of capitalism: creativity (innovation), credit, commodification, and competition. I call these four elements the four Cs of capitalism. Following this, I will discuss each of the four elements separately,

showing the role of expectations in their operations. In their historical development, capitalist societies succeeded increasingly in the development of institutional and cultural capacities that allowed for the unfolding of expectational structures conducive to the expansion of the four Cs of capitalism. At the same time, the economy also became more fragile because of enlarged interdependencies in an increasingly global economic system and the associated expansion of cognitive demands. Crises can be understood as the sudden shift of prevailing expectations.²³ In the conclusion, I will argue that the perspective developed provides the basis for a microfoundation for understanding the dynamics of capitalist economies, which offers an alternative to rational actor theory and behavioral economics.

The Four Cs of Capitalism

What is capitalism? Capitalism can be defined as an endemically dynamic economic system in which the production of goods and services is motivated by expected profits, materializing in market exchange. What distinguishes capitalism from all other economic systems is its need to grow—it can stabilize itself only by continuously undermining its own historical forms in the relentless search for new profit opportunities. By growth, I refer to the increase of the value of goods exchanged in the market sphere. The need to grow emerges on the actor level from the goal of profit maximization, on the firm level from economies of scale, on the level of the economic system from the credit-based financing of investments, and on the societal level from order producing effects of wealth increases. Because of its inherent need to grow, the capitalist economy can never be in equilibrium, but remains always in a “dynamic disequilibrium.”²⁴ Explaining this restlessness is the key to understanding capitalism.

Historically, the dynamics of capitalist growth first became visible in the accelerated economic growth rates starting in the late eighteenth century. Karl Polanyi²⁵ has named this period the “great transformation.” While the dynamics of capitalism can be addressed in highly abstract form by analyzing the processes of capital accumulation, the sociologically more telling matters for examination are found on a less abstract level: Through what *practical processes* does capitalism produce its continuous dynamics, which led to unprecedented growth over the past 200 years but also recurrently to sharp economic crises? To address this question I take up—and amend—a categorization recently introduced by Wolfgang Streeck,²⁶ which distinguishes between four core activities underlying the expansiveness of capitalism: creativity (innovation), credit, commodification, and competition.²⁷ I call these elements the *four Cs of capitalism*.

The four Cs of capitalism are institutionally anchored practical processes constituting the dynamics of the capitalist system.²⁸ Bringing the four Cs to the forefront of an analysis of capitalism does not imply that they would appear only in capitalism or even only in contemporary capitalism. Rather we can understand capitalism as a system that unfolds through the expansion of the four elements.²⁹

Making the four Cs of capitalism the cornerstone of analysis mirrors approaches in political economy analyzing innovation systems, the financial system, processes of “land grabbing,” and competition regimes. However, unlike the macro-oriented

approaches of political economy, I focus on the level of social interaction. Understanding this process from the perspective of social interaction demands close attention to the expectations actors form with regard to the future. It is from expectations of the “future present”³⁰ that decisions are made. Hence, attention shifts to the creation (and destruction) of actors’ expectations, expectations that are necessary for the four Cs of capitalism to operate in a manner conducive to economic growth but occasionally also lead to profound crises. To understand actors’ expectations also requires attention to institutional, cultural, and social conditions *and* to the agency processes that I refer to as the “management of expectations.”

In the following sections, I will discuss each of the four Cs of capitalism, showing the role of fictional expectations and their precariousness.

Creativity (Innovation)

Innovations are the cornerstone of the uniqueness of capitalist dynamics.³¹ Growth in capitalist economies is based on the application of the creative potential of actors in the production of goods and services.³² Through innovation new factor combinations are introduced into the market, which—if successful—satisfy previously unattended needs, create new needs, or enhance efficiency in the production process. They provide profit opportunities through the competitive advantages they lead to. The dynamics of capitalist economies cannot be explained through the slow enlargement of productive capacities but only based on the introduction of genuine novelty.³³ The “‘high road’ to development passes through innovation.”³⁴

Looked at from the perspective of social interaction, innovations are based on a utopian vision at the outset, which shows a pretended future reality. I refer to such technological visions as *imaginaries of the future*. The imaginaries 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.³⁵ In this sense, imaginaries are fictional. They take the form of predictions, forecasts, and projections.³⁶ “Technological predictions and forecasts are in essence little narratives about the future. They are not full-scale narratives of utopia, but they are usually presented as stories about a better world to come. The most successful of these little narratives are those that present an innovation as not just desirable, but inevitable.”³⁷ As in the case of the other elements, the management of these expectations plays an important part in innovation processes and the market success of new products. It takes the form of a “management of imaginaries” (see table 1).

Joseph Schumpeter highlighted the central role of imaginaries in innovation.³⁸ Schumpeter’s analysis sets out from the observation that new combinations initially exist only in the consciousness of the actor. While most actors are caught up in routines, some actors “with more acute intelligence and a more active imagination envisage countless new combinations.”³⁹ Hence, innovations begin with imaginaries that lead the entrepreneur to “adapt his economic activities accordingly.”⁴⁰ The

Table 1. The four Cs of capitalism.

	Management of Expectations	Motivating Belief	Underlying Structures (Examples)
Creativity (Innovation)	Management of imaginaries	Belief in imaginary	<ul style="list-style-type: none"> • Social myths • Social inequality • Legitimation of success seeking through risk taking • Social networks
Credit	Management of confidence	Belief in promise	<ul style="list-style-type: none"> • Economic ethics • Calculation technologies (e.g., credit rating, scoring models) • Legal system • Social networks • Power
Commodification	Management of value	Belief in performance of good	<ul style="list-style-type: none"> • Private property rights • Legitimation of profit-oriented exchanges • Classification of goods
Competition	Management of strategic expectations	Belief in strategy outcome	<ul style="list-style-type: none"> • Position in market • Economic theories • Power • Entrance barriers

entrepreneur will, based on the imaginary of a new factor combination, change the value assessment of the goods offered in the market and change product demand. The late Steve Jobs is the exemplification par excellence of the creation of successful innovations through the communication of imaginaries, captivating the computer industry and large consumer groups.

Schumpeter insists that innovation is incompatible with the calculative behavior assumed by economic theory because innovations cannot be rationally deduced from existing knowledge. Instead, the expectations regarding the outcome of the innovation motivate and guide an inherently incalculable process⁴¹ based on the belief in the imagined new combination as a “future present.”⁴² The openness of the future implies that the expectations regarding innovations must necessarily be contingent and helps to explain why it is possible to predict the expansion of capitalism without being able “to predict the actual direction of future logics.”⁴³

Schumpeter has rightly been criticized for providing an overly individualistic account of the motivation to engage in innovative activity. Entrepreneurs’ expectations must be understood also as socially constituted. Studies of innovation processes have repeatedly shown that the “voicing of promises,” which show the way to the future, are in fact collective projections,⁴⁴ and are thus bound to cultural patterns and social structures.

Expectations regarding innovative activities have further social preconditions. “Capitalist entrepreneurs do not fall from heaven but can grow only in a particular structural, institutional, and cultural environment.”⁴⁵ Robert Merton⁴⁶ showed that innovative activities are anchored in the normative structure of modern societies that value inner-worldly transcendence through success seeking by risk taking. Another

element of this environment is social inequality, without which there cannot be a motive to engage in activities that lead to social rise. Moreover, social mobility through entrepreneurial effort must be possible. A motivation to engage in innovative activity can emerge only if the structural polarization of classes does not create expectations (at least not in a critical number of actors) that assume that the barriers to upward mobility are individually insurmountable.⁴⁷ Capitalism is historically unique also in being an economic formation that determines social status not by social origin but based on market success ascribed to effort. This holds true even if there are strong real barriers to social mobility and large social groups have historically been factually excluded from entrepreneurial activities and upward mobility.

Expectations regarding the opportunities emerging from entrepreneurial activities must not be held by all actors but by a critical number. Here institutional, network, and cultural factors are important: the education system must be open to meritocratic principles, networks in the family or the (ethnic) community must be conducive to individual success-seeking,⁴⁸ and cultural or religious traditions must support entrepreneurial orientations.⁴⁹ To create beliefs in the possibility of status enhancement at least in some parts of the population is a necessary condition of capitalist dynamics. Failure in that respect deprives capitalism of one of its central preconditions of growth on the level of actors.

The Management of Imaginaries

Expectations in innovative processes are subject to management of expectations, which takes the form of “management of imaginaries.” By this, I mean the deliberate influencing of expectations of third parties regarding the prospects of innovations. An example of this was provided by Sophie Mützel⁵⁰ in a study investigating the innovation process in biotechnology firms aiming to develop genetically engineered medication for treating breast cancer. In this highly uncertain environment, the success of firms’ research strategies cannot be foreseen and hopes of successful product development are often disappointed. Actors try to influence the expectations of others—and the decisions following from them—through the communication of stories providing accounts of which development strategy they expect to succeed. The stories are imaginaries that send signals to competitors and the financial community. Because decisions hinge on expectations, the manipulation of expectations becomes a means in the competitive struggle for resources for research and the strategies pursued. This is a power struggle to determine how the “present future,” i.e., the present image of the future, looks. Along with the different economic power of firms the regulative power of the state also plays a crucial role in explaining expectations and their shifts.

Credit

Credit is the second indispensable element of capitalist economic growth. The accumulation of capital and the growth of the economy depend on a higher level of demand than that which the owners of capital create through their own payments.⁵¹ The source

for this higher level of demand is *credit*. “Without the foundation of borrowing and lending, the economic history of our world would scarcely have got off the ground.”⁵² Credit needs to be explained based on the (speculative) expectations of future profits (investment credit) and the desire for a higher living standard in the present (consumer credit). Through credit, an investor obtains purchasing power in the present against a promise—the promise to repay the loan at a specified point in time, together with an additional sum called interest. While in the case of consumer credit, interest can be covered through the reduction of future consumption levels, credit for investment purposes must be utilized to produce a surplus. The value of the goods produced in t_1 must be larger than the value of factor inputs in t_0 to cover the costs of interest. Hence credit puts pressure on the economic system to expand. Profit maximizing actors will use credit to the extent they expect that their investments render higher profits than the costs for interest. Seen from the perspective of the creditors, the investment of wealth through credit provides the *opportunity* to gain additional wealth and is *necessary* to avoid the depreciation of money over time through inflation.

Credit as a form of social relationship can be traced back 5,000 years in history,⁵³ but in no other system did it have the scope it has in modern capitalism. Schumpeter⁵⁴ even defined capitalism as a system of indebtedness.⁵⁵ Credit relations, however, depend on expectations. For credit relations to come into existence, creditors must hold the expectation that they will be repaid the loan and the agreed-upon interest at the point in time stipulated in the contract. Hence credit relations are anchored in the *credibility* of the borrower’s promise to repay the loan, which has its basis in an assessment of the debtor’s trustworthiness.⁵⁶ The term “credit” stems from the Latin *credere*, meaning “to believe.” The “belief” is the expectation that the debtor will repay the loan. Credit is essentially a relationship of trust and confidence.⁵⁷

The central role of trust extends to the monetary system as such. “[T]he value of a unit of currency is not the measure of the value of an object, but the measure of one’s trust in other human beings.”⁵⁸ It is not incidental that banknotes were originally called “promissory notes.” The acceptance of money, which as such is worthless, is based on the contingent expectation that everybody else will accept the pieces of paper as payment.⁵⁹ Trust is conferred in the promise of the issuer of the money—today the state or its central bank—that the issuer will not increase monetary supply at a rate that leads to the devaluation of the money through inflation.⁶⁰

What makes credit and money so interesting from a sociological perspective is that the expectation that a debtor—whether a private person, an organization, or the state—will indeed live up to the promise to repay the loan can never be rationally calculated because the future cannot be foreseen. Since the ability and willingness of the debtor to repay the loan are ultimately uncertain, the expectations of creditors are fictional in the sense that they are based on beliefs (*credere!*) of the risks associated with the credit.⁶¹ Creditors must act *as if* they could anticipate the future outcome. Viewed from the macro perspective, the trust entailed in credit is justified only if the economy grows and repayment of the credit can be enforced. Viewed from the actor level, the promise to repay a loan depends on the debtor being able to utilize the production factors purchased with the loan in a way that enough revenue is generated from selling the

products at a later point in time to allow the repayment of the principal and interests. "If the expectations are not sufficiently fulfilled the whole system becomes destabilized."⁶² Whether the expectations associated with a credit are justified can only be known with hindsight.

The fictional character of the expectations regarding the risks involved in credit holds also for the operation of the monetary system. Philip Mirowski has called the assumption 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 a "working fiction of a monetary invariant."⁶³ It is a fiction because monetary stability depends on the actual commitment of central banks to low inflation,⁶⁴ on banking regulation, and on future macroeconomic development,⁶⁵ all 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 money as means of payment and abstain from wage and price increases in anticipation of inflation. Because the future is open, the expectation of the stability of money requires, as Georg Simmel argued, an element of "supra-theoretical belief" or "social-psychological quasi-religious faith."⁶⁶

Therefore, if capitalist expansion depends on credit, societies must succeed in creating the expectation in capital owners that the promise entailed in the credit relation will indeed be honored. On the side of debtors, the expansion of credit relations presupposes the willingness to become indebted in order to increase monetary wealth in the future. This can also not be taken for granted: borrowing money for investment has a social precondition in a life plan of individuals that is directed toward upward social mobility and entails the willingness to engage in risks and speculation to increase one's wealth.⁶⁷ Once a person is indebted—be it for investment or for consumption purposes—credit has a disciplinary effect by pressuring the debtor to act in ways conducive to his ability to repay the loan together with interest.⁶⁸ Through this pressure, credit itself has a motivational effect relevant for capitalist growth. If, however, incomes stagnate, consumer credit creates reduced purchasing power in the future, leading to austerity and lack of demand.

Viewed from a historical perspective, the ability to expand credit relations by expanding expectations of trustworthiness has been one of the most important—but often unnoticed—preconditions for the unfolding of capitalism. How was this unprecedented expansion of trust achieved? The foundations of trust in credit are social in character. They can be cultural as in, for instance, the prevalence of a shared universalistic ethic, a commitment to rules of conduct on the part of the "respectable merchant," or classification technologies that seek to guide expectations.⁶⁹ They can be based on social networks, as they are, for instance, in ethnic communities. For the most part, however, they are institutional: they are based on the existence of a legal system able to effectively enforce property rights, on accounting and bankruptcy laws, the risk regulation of banks, and on laws on the independence of the central bank. These are all institutional devices supporting the trust and trustworthiness of actors in the credit system. Without them, the expansion of credit relations over the past 200 years would have been impossible.

The development of modern credit and monetary systems depends on the emergence of institutional trust devices. However, the institutional safeguards have not led to the vanishing of uncertainty in credit relations. The vulnerability of creditors has two sources: fraud and unpredictability. Despite institutional safeguards, malfeasance remains a threat to creditors, as can be seen from spectacular instances of fraud, such as the bankruptcy of Enron or the Ponzi scheme run by Bernard Madoff. Institutional structures made possible new forms of risk taking associated with profit opportunities, but also increased the opportunities for fraud, so that the risk remains of expectations being disappointed regarding the repayment of credit.⁷⁰

The second source of vulnerability is the unpredictability of the debtor's economic success. Debtors may be fully committed to repaying their loan, but the market may turn against them with the consequence that they are *unable* to repay their debt. Future economic development cannot be foreseen, either by debtors or by investors. Credit decisions, like any other investment decision, are therefore based on what John Maynard Keynes called the state of confidence. This, however, is nothing but the expectations of creditors regarding the debtors' creditworthiness. If entrepreneurs have pessimistic expectations regarding the economic outlook they will reduce their borrowing. At the same time, the owners of financial wealth will develop a preference for liquidity and charge higher interest to debtors in precisely those situations in which firms or the state need additional liquidity.⁷¹ By withholding capital from its employment in the production process, economic output is reduced. Contingent expectations determine the level of investment and lie at the root of business cycles and financial bubbles.

The current financial and economic crisis provides ample evidence of the role of expectations in credit relations for macroeconomic development. The expansion of credit in the US housing market—as well as some European housing markets—was based on the “fictional expectation” of ever-increasing housing prices, which would have made it possible for home owners to repay their mortgages. Only based on this shared expectation did banks and borrowers see a benefit in the expansion of credit. However, even if investors and borrowers do not share the same expectation regarding market outlook, the contingency of expectations can still open up room for the extension of credit: An investor who holds the belief that an asset is overpriced may stay in the market assuming “that he will be first in line when the borrower gets into difficulties and a run takes place.”⁷² What is relevant for the investment decision is the right assessment of market opinion.⁷³ The overpricing of assets that may emerge—which is often recognized as such only with hindsight—lies at the root of market bubbles, which are also often identified as such only with hindsight. The overpricing, however, is not explained psychologically as the result of “overconfidence,” but rather as the outcome of collectively shared conventions.

The Management of Confidence

Since credit is not only risky but also a source of profit and because expectations concerning a debtor's ability to repay a loan are contingent, the *management of confidence*

must become a prime activity in debt relations (see table 1). Through “impression management,”⁷⁴ trust-takers try to signal their trustworthiness.⁷⁵ The debtor (trust-taker) will attempt to convince potential creditors of the prudence of investing in a business. Through signals, debtors will attempt to convince the trust-givers of their honesty and demonstrate the soundness of their businesses. In this sense, enterprise “depends on hopes.”⁷⁶ Seen from the side of the investor (trust-giver) in search of profitable investment opportunities, investors must convince themselves—or their principals—of the potential profitability of the deal. For this, investors need to interpret the signals provided by the debtor and the market. Rating agencies and credit scoring systems⁷⁷ are intermediaries in financial markets whose function it is to interpret the debtors’ signals to assess their creditworthiness. They thereby serve to stabilize investors’ expectations but at the same time exercise the power of influencing these expectations.

The management of confidence regarding creditworthiness can also proceed from the creditor. A creditor already holding debt from a debtor will attempt to downplay any problems of the debtor to avoid market depreciation of his assets by influencing the expectations of other investors while perhaps already looking for an exit strategy. When S&P downgraded US government debt in the summer of 2011, Warren Buffet went on TV to show his conviction that US debt is fully secure for investors. Incidentally, the holding firm Berkshire Hathaway, of which Warren Buffet is the CEO, owned \$40 billion in US government debt.

On the other hand, assessment of a debtor’s creditworthiness can be deliberately cast into doubt by investors speculating on his default. A prominent example is the statement made by former Deutsche Bank CEO Rolf Breuer who, in 2002, publicly spread doubt concerning the creditworthiness of German media mogul Leo Kirch. Kirch had to declare bankruptcy shortly afterward and sued Deutsche Bank for damage compensation. The court awarded compensation to the heirs of Leo Kirch. If expectations are themselves a source of profits or losses, the management of confidence becomes a crucial power game in capitalist markets.

Depending on a debtor’s need for credit, the contingency of confidence becomes a means through which capital owners force the debtors to comply with their conditions. Creditors exercise “voice” by threatening “exit.” This argument was made as early as the 1930s by Keynes: “[E]conomic prosperity is excessively dependent on a political and social atmosphere which is congenial to the average business man.”⁷⁸ A few years later, Polish economist Michal Kalecki took up this argument, giving it a much more political twist: if employment levels depend on the state of confidence, this “gives to the capitalists a powerful indirect control over Government policy: everything which may shake the state of confidence must be carefully avoided because it would cause economic crisis.”⁷⁹

The current sovereign debt crisis in the Eurozone provides ample evidence of this: in order not to lose the confidence of financial markets, the governments of Eurozone countries provided guarantees for the debt of those countries that have lost that confidence on the condition that these countries comply with fierce austerity measures, which are cutting living standards and causing recessions. These policies satisfy the

interest of financial investors in having their loans repaid. Financial investors communicate their interests by threatening to remove trust in the debtors—that is, to exit—effectively threatening them with unsustainable interest rates for further loans or even blocking their access to capital markets. This power struggle is illustrated when rating agencies downgrade sovereign debt. Acting essentially on behalf of financial investors, they communicate investors' demands to governments through the expectations they utter *and* influence.

Commodification

By *commodification* I refer to the transformation of goods and services into commodities, a process centrally connected to the development of modern capitalism. Precapitalist economies were dominated by householding and traditional forms of reciprocity within community networks.⁸⁰ With the unfolding of capitalism they were transformed into economies dominated by exchange relations. Commodification is an important precondition of economic growth because commodities provide the “raw material” for capitalist expansion by turning goods and services into tradable products from whose production and exchange profits can be generated. Privatization and the commodification of activities hitherto performed within the household (e.g., cooking, child rearing) or delivered as collective goods (e.g., water) are evidence of this expansive process of commodification.⁸¹ Of crucial importance in this process is the commodification of labor, bringing the livelihood of the largest part of the population in dependency to the market and making it into a potential source of profit.

To become commodities, goods must be exchangeable on markets. Exchangeability, however, does not yet explain the exchange itself. Only if the products offered on the market find demand can they become sources for profit. To be willing to “sacrifice” money to purchase a commodity actors must expect utility from its possession. Viewed from the perspective of the buyer, a commodity is an object that “promises performance.”⁸² The recognition of such promises is a precondition for market exchange. If this recognition is not simply thought of as “natural,” the expansiveness of capitalism depends not only on the supply side, but also on expectations on the part of potential buyers, which make purchasing the goods offered appear worthwhile to them.

This holds for investment products as much as for consumption. Looking at investments in financial markets, the buyers of financial assets must hold the expectation that the product “performs” in the sense that its price will increase while they are holding the asset. Contrary to the claim made by rational expectations theory, I argue that the assessment of the performance of investments is “fictional” due to the uncertainty of future development.⁸³ The expectations of investors depend on financial theories,⁸⁴ narratives, and stories through which they are making sense of the situation⁸⁵ but also on practices of “acting sensibly” *in* the market.⁸⁶ Likewise, the purchase of labor power leads to the problem of whether the productive potential of the laborer can actually be “extracted” in the production process.⁸⁷ Investments in goods used for production are exposed to the vagaries of market demand for the finished products.

Looking at consumption—the field I will focus on in this section—for the economy to grow, people must value the consumption of more and of new goods more highly than the alternative of working less. But how is this attitude created and maintained? One of the puzzles of the dynamics of contemporary capitalist economies is why new products keep finding demand even though widespread affluence would indicate that consumers' needs might have already been met.

Economic sociology has an important focus on the investigation of processes of valuation through which expectations about the performance of goods are created.⁸⁸ However, it rarely connects the insights won on the micro level to an understanding of the operation of capitalism as an economic system.⁸⁹

Analytically, one can distinguish between three different ways consumption goods perform.⁹⁰ The performance can be *physical* when it makes a difference in the material world. Examples would be a house that provides shelter from the weather; a car that takes the driver from point A to point B; or the electricity a factory purchases to power its production. An increasing number of goods in affluent consumer societies, however, are not—or are only partly—valued for their physical performance alone. Instead, the performance of such products hinges on two other forms of value that can be called “positional value” and “imaginative value.” Both these forms of value refer to symbolic qualities that are maintained through communicative processes and market devices. In affluent consumer societies, it is increasingly through the transfer of symbolic qualities that expectations regarding the performance of consumer goods emerge. Consequently there is a “management of value” just as there is a “management of confidence” in the field of credit (see table 1).

As fictional, I describe qualities of consumer goods that go beyond their material performance. *Positional value* comes about because *third parties* value the commodity and place the owner of it in a position in the social space desired by him. I do not need to like Andy Warhol, but having one of his paintings in my apartment certainly impresses my visitors. The motivation for purchasing the painting hinges on aspirations of being recognized as a member of a certain community—in other words, on the status recognition the owner experiences.⁹¹ In the case of *imaginative value*, the social surroundings are left out: my social surrounding may or may not like the Andy Warhol painting, but I value qualities “in” it that I ascribe symbolically to it.⁹² Here the worth of objects stems from transcendental ideals and values that become symbolically represented by the object.⁹³

Expectations regarding the performance of goods valued for their symbolic qualities are fictional in the sense that their qualities only exist as evocations in the mind of the purchaser. In her work on life insurance, Viviana Zelizer⁹⁴ gave an example of how imaginative value is constitutive for the emergence of a market: in the United States, life insurance could become a marketable product in the nineteenth century only when it was interpreted as an expression of the family responsibility of the deceased. The product became a symbolic representation of the value of responsibility. Another example of imaginative value is the emergence of a market for whale watching.⁹⁵ Paying money to board a ship that sails off the coast for the sole purpose of observing whales swimming in the ocean would have appeared an act of utter madness to any

contemporary of Herman Melville. Only through a cultural shift of symbolic connotations from whales as wild creatures to be feared to symbolic representations of freedom and intact nature—or from “Moby Dick” to “Free Willy”—could whale watching become a commodity, although its value is purely symbolic. Observing whales makes it possible to “experience” a transcendent value.

Contemporary economies are increasingly built around expectations regarding the symbolic performance of goods. Markets for cars, tourism, computers, antiques, wine, lotteries, real estate, fair-trade products, or fashion cannot be understood without reference to expectations regarding the positional and imaginative performance of the goods. Proceeding from this perspective, however, makes it at the same time utterly clear that the expansion of capitalist growth becomes ever more precarious. Value must be created through ever-expanding communicative effort in which the meaning of products becomes established. The greatest threat to the premium segment of the car industry would stem from consumers losing interest in the symbolic qualities associated with cars.

The symbolic dimensions of goods create an attraction to them but also exert a structural force to exercise demand beyond functional necessity because social status positions hinge on the possession of these goods. For advanced economies to grow, however, it is not only necessary that objects be bought for their symbolic performance. Producers can only sell ever new (symbolic) products if their symbolic value is dynamic, that is, if the value of a purchased product diminishes and desires for new purchases can be created.

That such a dynamics of the symbolic value of goods indeed exists can be explained by two mechanisms, both described by Georg Simmel. The first is based on the desire for social distinction, and was introduced by Simmel⁹⁶ to explain the dynamics of fashion. If the purpose of consumption is to signal higher social status through the exclusivity and novelty of the fashion products consumed, goods lose value once they are diffused into the mainstream. This means that ever-novel objects must be defined as symbolic representations of distinction, a mechanism that finds expression in continuous processes of symbolic valuation and devaluation.

The second mechanism has its root in the process of appropriation itself, which leads, as Simmel observes, to a devaluation of the acquired object. The mental images associated with a good may differ considerably from the actual experience when possessing the good. Hence the evoked qualities of goods may also be fictional in the sense that they are valued only in anticipation but become devalued once the object has been actually purchased.⁹⁷ Simmel examined this relationship between appropriation and devaluation when he analyzed value as emerging from a distance between subject and object:

We desire objects ... in terms of [their] distance as something not-yet-enjoyed, the subjective aspect of this condition being desire. ... The object thus formed, which is characterized by its separation from the subject, who at the same time establishes it and seeks to overcome it by his desire, is for us a value. The moment of enjoyment itself, when the separation of subject and object is effaced, consumes the value. Value is only reinstated as contrast, as an object separated from the subject.⁹⁸

The Management of Value

The two mechanisms indicate that—as in the case of credit—the “management of value” becomes a prime task on which the growth of capitalist economies hinges. Enormous efforts are necessary to create, maintain, and shift the symbolic qualities of goods and to convince customers of their performance. These efforts lead to the emergence of a huge industry in its own right. The marketing departments of firms and firms specializing in marketing services attempt to shape consumers’ expectations.⁹⁹ In the historical development of capitalism, marketing costs have become an increasingly large part of the cost schedule of firms.

The management of value also takes place through “judgment devices”¹⁰⁰ produced and applied by state regulation, by firms, and by intermediaries in the field. Classification systems, critics, guide books, product rankings, product tests, opinion leaders, and certificates of authenticity or fair-trade labels all shape consumer expectations with regard to the functional and symbolic qualities of goods. In addition, consumers themselves, through their changing definitions of what is “hip” and what is “out” contribute to the dynamics of symbolic value. Expectations regarding value are also produced “on the spot”—as is the case, for example, in auctions, when auctioneers create a “pervasive sense of community” among the bidders.¹⁰¹ Only based on the promises created through the communication of the qualities of the goods do actors form expectations conducive to the creation of demand and to economic growth.

At the same time, actors’ expectations are the subject of competitive struggles between interested firms that attempt to get customers attached to their products and to detach them from their competitors’ products.¹⁰² This is again similar to the strategic interventions of interested actors in the management of confidence on financial markets. The expectations creating the symbolic value of goods are contingent and fragile because they are not based on material qualities of the product but on communicatively constructed meanings, which are created and shifted by powerful market actors. If value is created through the contingent definitions of the performance of goods, economic growth is understandable only as a social and cultural process and not as being based on “the necessities of life.”¹⁰³

Competition

Finally, competition is a fourth element of the dynamics of capitalism. It creates an engine for the restlessness of capitalist dynamics beyond personal motivation. In competitive markets, the rewards of profits go to those who prevail in the competitive struggle. The dynamism stemming from competition rests not only on the *pull* created by the prospect of gain for the winners, but also, and especially, on the strong *push* that competition institutionalizes for all market actors. Because competition licenses “depriving one’s peers of their livelihood by outbidding them,”¹⁰⁴ competition forces firms and individuals to employ resources in places where they are expected to yield the largest return, effectively accelerating the dynamics of the system. Competition is

also a causal force of capitalist growth because it provides strong incentives for firms to realize economies of scale.

Competitive markets are socially legitimated by the expectation that they lead to the creation of wealth in society.¹⁰⁵ Despite the costs involved for those who are ruined by competition, competition is expected to increase overall welfare. For the actors involved, competition, on the one hand, provides an institutional assurance that individual gain can be realized through outperforming others *and*, on the other, constitutes a risk that others can put them out of business by outbidding them. Precapitalist social formations imposed strict limitations on competitive markets and restricted them to the margins of society in order to limit their destructive consequences for the stability of communities. It is only in the capitalist order that the fear stemming from competition has been brought to the center of society as the price to be paid for reaping the expected benefits (increased economic wealth) stemming from the restless striving for superiority in the competitive struggle. The rise of capitalist growth in the nineteenth century is closely related to the lifting of restrictions on competition by banning guilds, reducing tariffs, and liberalizing market access.¹⁰⁶ Today's globalization can be understood as the continuation of this process.

From a micro perspective, the question arises of how expectations regarding opportunities for profit are created in competitive markets and how these expectations contribute to the dynamics of the capitalist system. In its standard models, economic theory assumes perfect competition. In such a market situation, there is no uncertainty regarding the strategic moves of competitors and hence optimal decisions can be determined. By contrast, industrial economists, but also economic sociologists dealing with competition, attempt to view strategies as being determined by market structures. Harrison White's¹⁰⁷ analysis of markets, for instance, sees markets as a set of differentiated firms with distinct identities.¹⁰⁸ Product differentiation produces niches with relative protection from competition. According to White, producers observe their competitors in the market and the distribution of competitors determines the niche in which they specialize. White's model reflects the structural conditions under which positive expectations for investments can emerge based on the relative stability of the market structure. Industrial economists assume that observing the competitive situation allows firms to coordinate towards a particular equilibrium. Following game theory reasoning,¹⁰⁹ players can coordinate expectations based on pay-off matrices. If this holds true, expectations and strategies in games of competition would not be contingent but determined by a focal point.

However, economists themselves have also cast severe doubts on this reasoning. Actors are frequently confronted with multiple equilibria, exposing them to decision situations in which they cannot anticipate the decisions of other actors and therefore depriving them of a basis for optimal decision making.¹¹⁰ "[E]ven apparently simple multi-period games of incomplete information often have multiple (perfect Bayesian Nash) equilibria that can be uncovered only by very sophisticated analysis. The assumption that boundedly rational humans can solve the much more complex games they face in real life seems to push the rationality assumption very far indeed."¹¹¹

Because actors lack the ground on which to rationally assess the optimal choice, the indeterminacy of the situation makes the expectations an actor forms about a competitor's reactions the outcome of imaginaries and power struggles over these imaginaries. The indeterminacy creates at the same time space for "creative dissonance," which can be the source of profits, but also the source of unpredictable losses due to a wrongly assessed situation.¹¹² This idea has been explored by David Stark,¹¹³ who showed that a given situation in which actors hold the same information allows for the simultaneous existence of different evaluative angles. Entrepreneurship, Stark argues, "exploits the indeterminate situation."¹¹⁴ Each structuring of the market situation through the formation of expectations and corresponding strategic choices reduces uncertainty in decision making but can be challenged by other profit-seeking actors providing alternative interpretations on which they form new expectations.¹¹⁵

Management of Strategic Expectations

Since expectations, once they become influential, affect a strategic situation, the *management of strategic expectations* also plays a crucial role in the development of strategies in competitive markets. An example of this is provided in a study on the emergence of the US electricity industry by Yakubovich et al.¹¹⁶ The authors conclude that the economic outcomes of the pricing system introduced in the electricity industry at the turn of the twentieth century were uncertain for the actors. The pricing system was a crucial feature in the competitive struggle between firms in the industry. The system that was finally introduced prevailed because of "fictional expectations" anchored in the cognitive frames of managers and because of "complex manipulations and exercises of power by leading industry actors, who mobilized support through their personal networks and domination of industry trade associations."¹¹⁷

For a microperspective on competition, questions arise on exactly how firms form expectations regarding the decisions of other firms and their opportunities, despite the indeterminacy of the situation, and on how they succeed in influencing other actors' expectations in ways favorable to themselves. The underlying assumption is that competition is cognitively structured in contingent ways through the actors' interpretation of the game being played, which, at the same time, constitutes it. "[A]ctors' choices depend on their articulation of stories about possible developments and these stories may contain models of those various possibilities and assessment of their probability. In that case, there is no clear distinction between choosing a strategy and thinking about the actors' strategic choices. Where many outcomes are possible, it may simply be impossible to deduce the actors' motives from the outcome, for among those motives there were intentions to construct worlds which did not succeed."¹¹⁸ In line with van Lente and Rip,¹¹⁹ one can speak of expectations in competition as "prospective structures"—structures that come into existence through the interpretation of the situation. Evidence for this is provided in many studies on innovation processes.¹²⁰

Conclusion

Political economists have recently returned forcefully to the topic of capitalism and its dynamics. Most of this research, however, says nothing about the microfoundation of the developments it observes or applies rational actor theory. I have suggested here that economic sociology is well equipped to provide a sociological microfoundation to the understanding of capitalist dynamics. By looking much closer at agency processes, economic sociology provides the tools to complement political economy on a crucial level of analysis. At the same time, economic sociology benefits from a closer alignment with political economy. When applied to the question of capitalism's dynamics, the numerous sociological studies on trust, the constitution of value, innovation, and competition that have been conducted in recent years contain insights that speak to important questions of economic macrodevelopment from a perspective of social interaction and the social, political, and cultural contexts in which decisions are made. Orienting its research toward the general question of capitalist dynamics would provide a much more unifying framework to economic sociology—something that is still missing, thus making economic sociology an especially fragmented field.

To this end, I have discussed four activities at the center of the capitalist economy: creativity (innovation), credit, commodification, and competition. I call these activities the four Cs of capitalism. My claim is that the dynamics of capitalism can be understood from the perspective of actors as a system of fictional expectations that manifest themselves in those four fields. I use the notion of fictional expectations to demarcate that decisions made under conditions of uncertainty are the outcome of indeterminate interpretations of a situation that is inherently unpredictable due to the openness of the future and the multiplicity of interpretative perspectives. The expectations are not rational in the sense of economic theory, nor do institutions transform uncertainty into risk. This implies that, contrary to the main claim of rational expectations theory, predictions regarding future states of the world are not necessarily accurate in the aggregate. Rather they express contingent beliefs in imaginaries of the future, in promises, in the performance of goods, and in the adequacy of strategies. The beliefs are connected to the cultural, structural, and institutional context. They motivate decisions and thereby form the “future present.”¹²¹

The capability of humans to imagine future states of the world is the central basis for a sociological microfoundation of economic macro phenomena. The notion of fictional expectations shares with economic reasoning that expectations regarding future states of the world are crucial for the understanding of economic development. Although most research in the social sciences sets out to explain present action due to past occurrences,¹²² I argue here that it is the future that shapes the present—or, to be more precise: it is the images of the future that shape present decisions. Expectations, their constitution, and their manipulation by powerful actors should move much more into the center of analyses in the social sciences.

The dynamics of capitalism depend on the creation of expectations that make promises appear credible, goods desirable, imaginaries worth pursuing, and strategies plausible. By influencing macroeconomic outcomes, expectations provide a link between

micro and macro levels of analysis. To enable the expansion in scope and complexity that has been characteristic of contemporary capitalist economies, societies needed to develop the cultural, political, and institutional prerequisites that allowed for highly unlikely behavior based on expectations of perceived opportunities in uncertain situations. Societies also had to create a desire to pursue these opportunities and, where needed, structures that would enforce compliance. Expectations are shaped communicatively by actors in the field—firms, the state, market intermediaries, advocacy groups, etc.—and are based on institutional, cultural, and network structures. Crises can be understood as immediate effects of sudden shifts in expectations.

Due to its impact on outcomes, the management of expectations is a pivotal element of capitalist development and the struggle for profit. Influencing the expectations of others and communicating expectations about the behavior of others means exercising social power in the economy. Given the fictional character of expectations, it is not accurate predictions of future states of the world that determine decisions, but rather a political game of negotiation and manipulation of the interpretation of a situation.

Bringing fictional expectations to the center of the microfoundation of political economy treats “interests, preferences, and group identities as *the product of endogenous social processes*.”¹²³ Social interaction in the economy is neither determined by rational calculation of the factors objectively influencing outcomes, nor does it reflect decisions based on hard-wired structures in our brains, as behavioral economics suggests. Rather, it is a profoundly social, political, and cultural process. Rational-choice explanations are misguided because decisions affecting the future “cannot depend on strict mathematical expectation, since the basis for making such calculations does not exist.”¹²⁴ Behavioral economics is unsuitable because it disregards the social foundations of expectations. Instead, economic dynamics should be explained based on a theory of socially anchored expectations weighted by economic and political power. Anchoring a theory of the dynamics of capitalism to the theory of expectations sketched here could provide the basis for the much-desired link between political economy and economic sociology.

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Notes

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2. Frank Dobbin, "The Sociological View of the Economy," in F. Dobbin, ed., *The New Economic Sociology. A Reader* (Princeton: Princeton University Press, 2004), 1-46; Neil Smelser and Richard Swedberg, eds., *The Handbook of Economic Sociology*, 2nd ed. (New York and Princeton: Russell Sage Foundation and Princeton University Press, 2005); Mark Granovetter, "Economic Action and Social Structure: The Problem of Embeddedness," *American Journal of Sociology* 91, no. 3 (1985): 481-510.
3. Wolfgang Streeck, "E Pluribus Unum? Varieties and Commonalities of Capitalism," in M. Granovetter and R. Swedberg, eds., *The Sociology of Economic Life* (Boulder, CO: Westview, 2011), 419-55.
4. For this shift see also William Sewell, "The Temporalities of Capitalism," *Socio-Economic Review* 6 (2008): 517-37. And Jürgen Kocka, "History and the Social Sciences Today," in H. Joas and B. Klein, eds., *The Benefit of Broad Horizons. Intellectual and Institutional Preconditions for a Global Social Science. Festschrift for Björn Wittrock on the Occasion of His 65th Birthday* (Boston: Leiden, 2010), 53-67. In economic sociology the notion of capitalism is seldom used. Exceptions are the two volumes edited by Victor Nee and Richard Swedberg: *The Economic Sociology of Capitalism* (Princeton: Princeton University Press, 2005) and *On Capitalism* (Stanford: Stanford University Press, 2007). Interest in macro-economic development has increased in economic sociology in recent years, motivated by the recent financial crisis and the "great recession": Greta Krippner, *Capitalizing on Crisis: The Political Origins of the Rise of Finance* (Cambridge, MA: Harvard University Press, 2011).
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6. Kathleen Thelen and Sven Steinmo, "Historical Institutionalism in Comparative Politics," in K. Thelen and S. Steinmo, eds., *Structuring Politics* (Cambridge: Cambridge University Press, 1992), 1-32.
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9. Sewell, "The Temporalities of Capitalism," 522.
10. Christoph Deutschmann, "Soziologie kapitalistischer Dynamik," (Cologne: MPIfG Working Paper, 2009); Walter W. Powell and Jeannette A. Colyvas, "Microfoundations of Institutional Theory," in R. Greenwood, et al., eds., *The Sage Handbook of Organizational Institutionalism* (London: Sage, 2008), 276-99.
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12. For a detailed discussion of the notion of fictional expectations see Beckert, "Imagined Futures. Fictional Expectations in the Economy," *Theory and Society* (2013). DOI 10.1007/s11186-013-9191-2.
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14. Robert Lucas, "Expectations and the Neutrality of Money," *Journal of Economic Theory* 4 (1972): 103-24; John F. Muth, "Rational Expectations and the Theory of Price Movements," *Econometrica* 29 (1961): 315-35.
15. John Maynard Keynes, *The General Theory of Employment, Interest, and Money* (London: MacMillan, 1964), 152.
16. Werner Güth and Hartmut Kliemt, "(Un)Eingeschränkt rational entscheiden in Geschäft und Moral," in Berlin Brandenburgische Akademie der Wissenschaften, ed., *Preis der Berlin-Brandenburgischen Akademie der Wissenschaften. Gestiftet von der Commerzbank Stiftung. Weyma Lübbe* (Berlin: BBAW, 2010); Herbert Simon, *Models of Man* (New York: Wiley, 1957).
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18. James Buchanan and Victor Vanberg, "The Market as a Creative Process," in D. Hausmann, ed., *The Philosophy of Economics* (Cambridge: Cambridge University Press, 2008), 379-98, 380f.
19. Paul DiMaggio, "Endogenizing 'Animal Spirits': Toward a Sociology of Collective Response to Uncertainty and Risk," in M. F. Guillén, et al., eds., *The New Economic Sociology: Developments in an Emerging Field* (New York: Russell Sage, 2002), 79-100, 90.
20. The notion of "management of expectations" shall not imply that actors could instrumentally steer and thereby control the expectations of other market participants. While actors undoubtedly try to influence expectations, I do not claim that a top-down control of expectations is possible.
21. John Dewey, *Human Nature and Conduct. An Introduction to Social Psychology*. (New York: The Modern Library, 1957), 223.
22. Ann Mische, "Projects and Possibilities: Researching Futures in Action," *Sociological Forum* 24 (2009): 694-704.
23. The reference here is Durkheim's theory of anomy: Émile Durkheim, *The Division of Labour in Society* (London: Macmillan, 1984); Emile Durkheim, *Suicide: A Study in Sociology* (New York: The Free Press, 1997).
24. Jens Beckert, "The Social Order of Markets," *Theory and Society* 38 (2009): 245-69.
25. Karl Polanyi, *The Great Transformation* (Boston: Beacon Press, 1957).
26. Wolfgang Streeck, "How to Study Contemporary Capitalism," *Archives Européennes de Sociologie* LIII, no. 1 (2012): 1-28.
27. This categorization is in principle open to further elements. Two possible candidates would be property rights, class and consumption. Theories of capitalism usually emphasize the crucial role of property rights for the development of capitalism: Randall Collins, "Weber's Last Theory of Capitalism," *American Sociological Review* 45 (1980): 925-42; Douglass North, *Institutions, Institutional Change, and Economic Performance* (Cambridge: Cambridge University Press, 1990); Rudolf Richter and Eirik Grundvig

- Furubotn, *Neue Institutionenökonomik*, ed. Rudolf Richter, 3 ed., *Neue Ökonomische Grundrisse* (Tübingen: Mohr Siebeck, 2003); Karl Marx, *Soziologie Kapitalistischer Dynamik* (1977). While I agree that property rights are important, I maintain that they take a derived place by being necessary conditions for the expansion of credit, innovation, competition, and commodification. Class is included as an important influence on the operation of the elements discussed here. The crucial development of the commodification of labor, forming the basis of class relations in capitalism, is included under the heading of commodification. Finally consumption is discussed under the more general heading of commodification.
28. The four elements are interdependent and only in combination do they produce the dynamic restlessness of the capitalist order. Competition motivates innovation but also commodification. Innovation depends on credit to secure the means to cover costs in the innovation process that will only later be recovered through the sales of the product. The extension of credit relations creates capital for investments, effectively fostering pressures for commodification.
 29. By highlighting the four elements I am not aiming at a theory of the origins of capitalism and its different forms. My only claim is that the dynamics of capitalism operate through the four elements identified and that they have increased in scope in the course of modern capitalism's development.
 30. Luhmann, "The Future Cannot Begin: Temporal Structures in Modern Society."
 31. William J. Baumol, *The Free-Market Innovation Machine: Analyzing the Growth Miracle of Capitalism* (Princeton: Princeton University Press, 2002); Deutschmann, "Soziologie kapitalistischer Dynamik; Joseph Schumpeter, *Theorie der wirtschaftlichen Entwicklung* (Berlin: Duncker & Humblot, 1912).
 32. Creativity, as understood here, is not limited to the entrepreneur in Schumpeter's sense but rather seen as an integral part of all work processes. In capitalism, the creativity of the laborer comes under the control of owners of capital who buy labor power and thereby the potential for capital accumulation stemming from the creativity of the laborer. The dynamics of capitalism are therefore also linked to the class structure emerging from the commodification of labor.
 33. Robert Solow, "Technical Change and the Aggregate Production Function," *Review of Economics and Statistics* 39 (1957): 312–20.
 34. Trigilia, "Why Do We Need a Closer Dialogue between Economic Sociology and Political Economy?"
 35. Richard Bronk, *The Romantic Economist. Imagination in Economics* (Cambridge: Cambridge University Press, 2009), 201; Inka Tappenbeck, *Phantasie und Gesellschaft. Zur soziologischen Relevanz der Einbildungskraft* (Würzburg: Königshausen und Neumann, 1999), 53.
 36. David E. Nye, "Technological Prediction," in M. Sturken, D. Thomas, and S. J. Ball-Rokeach, eds., *Technological Visions* (Philadelphia: Temple University Press, 2004), 159–85.
 37. *Ibid.*, 160.
 38. Schumpeter, *Theorie der wirtschaftlichen Entwicklung*.
 39. *Ibid.*, 163.
 40. *Ibid.*, 165.
 41. See also Jens Beckert, *Beyond the Market. The Social Foundations of Economic Efficiency* (Princeton: Princeton University Press, 2002); Christoph Deutschmann,

- Kapitalistische Dynamik. Eine gesellschaftstheoretische Perspektive* (Wiesbaden: VS Verlag für Sozialwissenschaften, 2008).
42. Luhmann, "The Future Cannot Begin: Temporal Structures in Modern Society."
 43. Sewell, "The Temporalities of Capitalism," 523.
 44. Harro van Lente and Arie Rip, "Expectations in Technological Developments: An Example of Prospective Structures to Be Filled in by Agency," in C. Disco and B. van der Meulen, eds., *Getting New Technologies Together. Studies in Making Sociotechnical Order* (Berlin: de Gruyter, 1998), 203–29, 222.
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 46. Robert Merton, *Social Theory and Social Structure* (Glencoe: The Free Press, 1957).
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 48. Alejandro Portes and Julia Sensenbrenner, "Embeddedness and Immigration: Notes on the Determinants of Economic Action," *American Journal of Sociology* 98 (1993): 1320-50; Trigilia, "Why Do We Need a Closer Dialogue between Economic Sociology and Political Economy?"
 49. See Deutschmann, "Social Rise as a Factor of Capitalist Growth," 4f.
 50. Sophie Mützel, "Koordinierung von Märkten durch narrativen Wettbewerb," in J. Beckert and C. Deutschmann, eds., *Wirtschaftssoziologie* (Köln: Kölner Zeitschrift für Soziologie und Sozialpsychologie, 2010).
 51. Deutschmann, "Soziologie kapitalistischer Dynamik," 32.
 52. Niall Ferguson, *The Ascent of Money. A Financial History of the World* (New York: Penguin, 2008), 31.
 53. David Graeber, *Debt: The First 5,000 Years* (New York: Melvillehouse, 2011).
 54. Schumpeter, *Theorie der wirtschaftlichen Entwicklung*, 95ff.
 55. Credit allows entrepreneurs access to economic goods before they have a "normal claim" to them. "It temporarily substitutes, as it were, a fiction of this claim for the claim itself" (Schumpeter, *Theorie der wirtschaftlichen Entwicklung*, 107).
 56. See also Bruce G. Carruthers and Arthur L. Stinchcombe, "The Social Structure of Liquidity: Flexibility, Markets and States," *Theory and Society* 28 (1999): 353-82.
 57. The difference between the two concepts I see as follows: Trust is demarcating a situation in which the other party may take the deliberate decision to damage me for his own benefit. Confidence is a situation in which I engage in incalculable risks that emerge from the openness of the future, which is unforeseeable for both parties. Fraud would be a breach of trust. The expectation—say that Goldman Sachs will stay in business—is an expression of confidence.
 58. Graeber, *Debt. The First 5,000 Years*, 47.
 59. Heiner Ganßmann, *Doing Money* (London: Routledge, 2011).
 60. In a monetary system in which paper money is covered by a commodity—mostly gold—the promise is that the issuer will redeem the bill against a certain amount of the commodity. Effectively this was to make credible the promise of the issuer of paper money that he will not increase the money supply at a rate that will devalue the currency.
 61. See also for the role of interpretation in the valuation of financial assets, Prato/Stark "Attention Structures and Valuation Models: Cognitive Networks among Securities Analysts," (2012).
 62. Ganßmann, *Doing Money*, 14.
 63. Philip Mirowski, "Postmodernism and the Social Theory of Value," *Journal of Post Keynesian Economics* 13, no. 4 (1991): 565-82, 581.

64. Geoffrey Ingham, *The Nature of Money* (Cambridge: Polity Press, 2004), 31.
65. Heiner Ganßmann, "Geld und die Rationalität wirtschaftlichen Handelns," (2010), 14f.
66. Georg Simmel, *The Philosophy of Money* (London: Routledge, 1978), 179, quoted from Ingham, 65.
67. Deutschmann, "Soziologie kapitalistischer Dynamik," 32.
68. Lendol Calder, *Financing the American Dream: A Cultural History of Consumer Credit* (Princeton: Princeton University Press, 1999).
69. Since the functioning of institutions also depends on the "good will" of those regulated by the institutions, moral resources may be an indispensable factor in the possibility of capitalist dynamics; Wolfgang Streeck, "Wirtschaft und Moral: Faceten eines unvermeidlichen Themas," in W. Streeck and J. Beckert, eds., *Moralische Voraussetzungen und Grenzen wirtschaftlichen Handelns*, MPIfG Working Paper 07/06 (Köln: Max-Planck-Institut für Gesellschaftsforschung, 2006), 17.
70. The willingness to give credit also depends, of course, on the interest rate. But it would be short-sighted to see the expansion of credit only as a function of the interest rate, as can be seen in economic crises when even interest rates close to zero do not lead to an increase in borrowing. Cf. Keynes, *The General Theory of Employment, Interest, and Money*.
71. Ibid.
72. Martin Hellwig, "Discussion on International Contagion: What Is It and What Can Be Done against It?" *Swiss Journal of Economics and Statistics* 134, no. 4.2 (1998): 715-39, 718.
73. Keynes, *The General Theory of Employment, Interest, and Money*.
74. Erving Goffman, *The Presentation of Self in Everyday Life* (New York: Doubleday, 1959).
75. Jens Beckert, "Trust and the Performative Construction of Markets," MPIfG Discussion Paper 05/8 (Köln: Max-Planck-Institut für Gesellschaftsforschung, 2005); Michael Bacharach and Diego Gambetta, "Trust in Society," in K. S. Cook, ed., *Trust in Society, Trust* (New York: Russel Sage, 2001), 148-84.
76. Keynes, *The General Theory of Employment, Interest, and Money*, 162.
77. Akos Rona-Tas and Stefanie Hiss, "Forecasting as Valuation: The Role of Ratings and Predictions in the Subprime Mortgage Crisis in the United States," in J. Beckert and P. Aspers, eds., *The Worth of Goods. Valuation and Pricing in the Economy* (Oxford: Oxford University Press, 2011), 223-46.
78. Keynes, *The General Theory of Employment, Interest, and Money*, 162.
79. Michal Kalecki, "Political Aspects of Full Employment," *The Political Quarterly* 14, no. 4 (1943): 322-30.
80. Fernand Braudel, *Civilization and Capitalism, 15th-18th Century*. (London: Fontana, 1985); Polanyi, *The Great Transformation*.
81. Commodification can proliferate through geographic expansion when more regions and countries are included in the system of market exchanges (land grabbing). Expansion can take place, secondly, when products and services hitherto provided in noncommodified form come to be traded on markets. Third, the expansion of the realm of commodities takes place through newly developed products entering the market. Finally, commodification can unfold in the time dimension through futures markets (future grabbing). I am not claiming that commodification is a unidirectional and uncontested process. Indeed, many social conflicts are about the limits of commodification—for instance, in the case of private provision of water, but also organ transplants, prostitution, and illegal drugs. See Viviana Zelizer, *The Social Meaning of Money: Pin Money, Paychecks, Poor Relief, and*

- Other Currencies* (New York: Basic Books, 1994). Nevertheless, it is fair to state that over the past 200 years we have observed an expansion of commodity relations at the expense of householding and reciprocity as forms of distribution of goods and services.
82. George Lennox Sharman Shackle, *Epistemics & Economics: A Critique of Economic Doctrines* (Cambridge: Cambridge University Press, 1972).
 83. A striking example of this is provided in a recent paper by Zsuzsanna Vargha, "Realizing Dreams, Proving Thrift: How Product Demonstrations Qualify Financial Objects and Consumer Needs in Home Savings and Loans," in J. Beckert and C. Musselin, eds., *Constructing Quality. The Classification of Goods in the Economy* (Oxford: Oxford University Press, 2013, 31-57) in which she shows how the value of home loan contracts in Hungary is constructed in the interaction between sales agent and customer. I concentrate in this section on consumer demand. The contingency of expectations regarding value applies, however, also to financial products and to labor markets. In labor market economics the contingency of value has been investigated in efficiency wage theories that proceed from the uncertainty of whether employees will indeed apply their labor power to the benefit of the firm: Georg A. Akerlof, "Gift Exchange and Efficiency-Wage Theory," *American Economic Review* 74, no. 2 (1984): 79-83; Johannes Berger, "Warum arbeiten die Arbeiter? Neomarxistische und neodurkheimianische Erklärungen," *Zeitschrift für Soziologie* 24, no. 6 (1995): 407-21. Work in the *économie des conventions*: François Eymard-Duvernay and Emmanuelle Marchal, *Façons De Recruter. Le Jugement Des Compétences Sur Le Marché Du Travail* (Paris: Editions Métailié, 1997); Philipp Gerlach, "Der Wert der Arbeitskraft. Bewertungsinstrumente und Auswahlpraktiken im Arbeitsmarkt für Ingenieure in Frankreich und Deutschland" (University of Cologne, 2012) shows the social processes through which expectations about the productivity of a candidate are formed in the recruitment process.
 84. Hirokazu Miyazaki, "The Temporalities of the Market," *American Anthropologist* 105, no. 2 (2003): 255-65.
 85. Mützel, "Koordinierung von Märkten durch narrativen Wettbewerb."
 86. Charles Smith, "Coping with Contingencies in Equity Option Markets: The 'Rationality' of Pricing," in J. Beckert and P. Aspers, eds., *The Worth of Goods* (Oxford: Oxford University Press, 2011), 272-94, 277.
 87. Berger, "Warum arbeiten die Arbeiter? Neomarxistische und neodurkheimianische Erklärungen."
 88. Jens Beckert and Patrik Aspers, eds., *The Worth of Goods. Valuation and Pricing in the Economy* (Oxford: Oxford University Press, 2011); Lucien Karpik, *Valuing the Unique. The Economics of Singularities* (Princeton, NJ: Princeton University Press, 2010); Smith, "Coping with Contingencies in Equity Option Markets: The 'Rationality' of Pricing"; David Stark, *The Sense of Dissonance: Accounts of Worth in Economic Life* (Princeton, NJ: Princeton University Press, 2009).
 89. Streeck, "How to Study Contemporary Capitalism," 11.
 90. Jens Beckert, "The Transcending Power of Goods," in J. Beckert and P. Aspers, eds., *The Worth of Goods* (Oxford: Oxford University Press, 2011), 106-28.
 91. André Orléan, *L'empire de la Valeur* (Paris: Editions du Seuil, 2011).
 92. To avoid a possible misunderstanding: This does not imply that imaginative value is purely individual. To the contrary, the preferences are rooted culturally and socially. However, the value does not necessarily emerge from calculated effects of positioning the owner in a certain position in social space.

93. Beckert, "The Transcending Power of Goods."
94. Viviana Zelizer, *Morals and Markets: The Development of Life Insurance in the United States* (New York: Columbia University Press, 1979).
95. Thomas B. Lawrence and Nelson Phillips, "From Moby Dick to Free Willy: Macro-Cultural Discourse and Institutional Entrepreneurship in Emerging Institutional Fields," *Organization* 11 (2004): 689-711.
96. Georg Simmel, "Die Mode," in G. Simmel, ed., *Philosophische Kultur* (Leipzig: Alfred Kröner Verlag, 1919), 25-57.
97. Albert Hirschman, *Shifting Involvements. Private Interest and Public Action* (Princeton, NJ: Princeton University Press, 1982), 1; Colin Campbell, *The Romantic Ethic and the Spirit of Modern Consumerism* (Oxford: Basil Blackwell, 1987).
98. Georg Simmel, *Philosophy of Money*, 3 ed. (London: Routledge, 2004), 66.
99. Sophie Dubuisson-Quellier, "From Qualities to Value - Demand Shaping and Market Control in Mass Consumption Markets," in Jens Beckert and Christine Musselin, eds., *Constructing Quality: The Classification of Goods in the Economy*, 2013, 247-267.
100. Karpik, *Valuing the Unique. The Economics of Singularities*.
101. Charles Smith, *Auctions, the Social Construction of Value* (Berkeley: University of California Press, 1989), 56.
102. Michel Callon, Cécile Méadel, and Vololona Rabeharisoa, "The Economy of Qualities," *Economy and Society* 31, no. 2 (2002): 194-217.
103. Adam Smith, *The Wealth of Nations* (Chicago: University of Chicago Press, 1976), 368.
104. Streeck, "How to Study Contemporary Capitalism," 6.
105. Albert Hirschman, *Rival Views of Market Society* (New York: Viking Press, 1986).
106. Braudel, *Civilization and Capitalism, 15th-18th Century*; Polanyi, *The Great Transformation*; Max Weber, *Economy and Society*, 2 vols. (Berkeley: University of California Press, 1978), 635ff.
107. Harrison White, "Where Do Markets Come From?" *American Journal of Sociology* 87 (1981): 517-47.
108. According to White, competition is a process that takes place through the mutual observation of the strategies through which competing firms position their products in the market. Each product occupies a distinct niche and the positioning of any of them takes place through the attempt to find a not-yet-occupied niche in which the product finds demand but is differentiated from competing products. Hence markets are understood as stable relational role structures, and the reproduction of markets and the survival of the firms operating in them presuppose this structuring of markets.
109. Drew Fudenberg and Jean Tirole, *Noncooperative Game Theory for Industrial Organization: An Introduction and Overview*, vol. 1, *Handbook of Industrial Organization* (Amsterdam: Elsevier, 1989).
110. Jon Elster, ed., "Introduction," in *Rational Choice* (New York: New York University Press, 1986), 1-33, 19.
111. Richard L. Schmalensee, "Industrial Economics: An Overview," (Massachusetts, IL: Sloan School of Management Massachusetts Institute of Technology, 1988), 59.
112. Timur Ergen, "Konkurrenz und Diskurs. Interpretative Politik in der deutschen Energiewende," (Köln: MPIfG, 2011); Stark, *The Sense of Dissonance: Accounts of Worth in Economic Life*.
113. Stark, *The Sense of Dissonance*.
114. *Ibid.*, 17.

115. Jens Beckert, "Agency, Entrepreneurs and Institutional Change: The Role of Strategic Choice and Institutionalized Practices in Organizations," *Organization Studies* 20 (1999): 777-99; Deutschmann, "Soziologie kapitalistischer Dynamik."
116. Valery Yakubovich, Mark Granovetter, and Patrick McGuire, "Electric Charges: The Social Construction of Rate Systems," *Theory and Society* 34 (2005): 579-612.
117. *Ibid.*, 581f.
118. Charles F. Sabel and Jonathan Zeitlin, *World of Possibilities. Flexibility and Mass Production in Western Industrialization* (Cambridge: Cambridge University Press, 1997), 15.
119. van Lente and Rip, "Expectations in Technological Developments: An Example of Prospective Structures to be Filled in by Agency."
120. Nick Brown, Brian Rappert, and Andrew Webster, eds., *Contested Futures. A Sociology of Prospective Techno-Science* (Aldershot: Ashgate, 2000).
121. However, one can assume that fictional expectations themselves shape the future they predict in the direction of the prediction. This performative effect might with hindsight be seen as confirmation of the accuracy of a prediction, although the outcome is the result of the joint belief in the fictional expectation. Michel Callon, ed., *The Laws of the Markets* (Oxford: Blackwell Publishers, 1998); Donald MacKenzie and Yuval Millo, "Constructing a Market, Performing Theory: The Historical Sociology of a Financial Derivatives Exchange," *American Journal of Sociology* 109, no. 1 (2003): 107-45.
122. James Mahony, "Path Dependence in Historical Sociology," *Theory and Society* 29 (2000): 507-48.
123. DiMaggio, "Endogenizing 'Animal Spirits,'" 94.
124. Keynes, *The General Theory of Employment, Interest, and Money*, 162f.

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