

Markets from meaning: quality uncertainty and the intersubjective construction of value

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This article explores price formation in markets where quality cannot be based on intrinsic characteristics of the good exchanged. In such markets, quality uncertainty is not an information problem as described by Akerlof in the market for lemons model. Instead, defining quality is a problem of contingent assessments that are arrived at intersubjectively through discursive practices and mutual observation of market participants. Quality is endogenous to the market process. Institutions and conventions play an important role, much as they do in the market for lemons model, but their function is to generate confidence rather than trust. Prices emerge in such markets from a combination of intersubjectively established quality assessments, institutions and existing structural characteristics of the market. I call this the *markets from meaning* model, which I develop based on the art market and expand to capital investments and financial speculation.

Key words: Akerlof, Confidence, Endogenous preferences, Trust, Information, Uncertainty, Quality, Prices, Value, Art market, Investment, Financial markets, Future

JEL classification: B55, D46, D81, D82, D84, E12

1. Introduction

This article relates quality and uncertainty. The existence of goods whose qualities are not inherent in the product but intersubjectively determined poses important and interesting problems for the theory of markets. The recognition of the intersubjective determination of quality may enhance our understanding of preference building and price formation on markets. It may also explain important institutions observable on markets.

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There are many markets in which prices are hardly based on qualities inherent in the product. For instance, consumer markets like those for wine, fashion, sporting events or travel destinations, where value is based largely on symbolic qualities. Other markets—like the car market, the market for smartphones or housing markets—are more mixed in the sense that the value of products is more strongly anchored in material qualities but also, in significant ways, in symbolic ones. If quality is not to be understood from the materiality of the object, neither sellers nor purchasers can infer prices from inspecting intrinsic characteristics and comparing them to those of similar products. Nevertheless, some products sold in such markets fetch very high prices, constituting large price differences between products that may look very similar in terms of their material characteristics.

In other important markets, product quality cannot be known in the present because it depends on future developments, which are not yet knowable. This holds for all capital investments and financial markets where actors need to make decisions despite the uncertainty of future outcomes.

If looking at qualities intrinsic to the object were the only way to determine value, uncertainty in these markets would be so excessive that demand would be random and low. Markets for these products would fail because price differences would be unintelligible and the uncertainty would be on overload. To understand the prices for these products, we must look at how actors assess their quality. I argue that the judgements of quality by actors are social in character; they are based on intersubjective processes that unfold between market participants and are anchored in evolving institutions.¹ I will call this the *markets from meaning* model.

The article aims at demonstrating the sociological contribution to a theory of value and price. The art market is used as a finger exercise to develop these thoughts. This market is chosen not for its economic importance, but because it clearly exhibits the mechanisms identified. In the latter parts of the article, the systematic considerations are extended to capital investments and speculation on financial markets which brings the uncertainty caused by the openness of the future to the centre of attention. Extending the model into financial markets in this way will highlight its broader significance for the economy.

2. Art as an example of the model

2.1 *The art market*

In 2004, the Saatchi Gallery in London sold a tiger shark preserved in formaldehyde to an art collector for the estimated sum of eight million dollars. The purchase of this work, created in 1991 by British artist Damien Hirst, is just one example of the high price some art fetches on the market. It is clear that the price of eight million dollars is not explained by production costs for the piece, which the artist estimated at 50,000 dollars.²

¹ See also the contributions in Fullbrock (2002).

² See also for this example Thompson (2008). Thompson's discussion of the art market uses the concept of branding to explain price differences. Although there are many overlaps with the argument developed in this article, I do not think that quality assessments can be understood comprehensively as the outcome of marketing strategies.

The art market is not an example of a market in which asymmetric information creates the uncertainty regarding quality. In the *market for lemons* model (Akerlof, 1970), asymmetric distribution of information regarding the inherent quality of the product leads to market failure because buyers are only willing to pay for average quality, causing sellers to withdraw above-average-quality products from the market and thus creating a downward spiral of quality deterioration of market supply. In the lemons market, product quality can be determined objectively because it is intrinsic to the object; uncertainty is an information problem.³ This holds for other markets as well, for instance commodity markets, markets for computer hardware or for building materials and more generally: markets for products that are valued for a technical performance, which can be objectively established and ‘inspected’ by scrutinising the product.⁴ Uncertainty in the art market, however, is different. Sellers and buyers may already have full information on all the inherent qualities of the piece: the size, the materials used, when it was produced, what it depicts, its restoration state and the name of the artist. They nevertheless may not be able to assess its quality.

The source of uncertainty in the art market, then, is the *independence* of the quality assessment of the object from (most) of its intrinsic properties.⁵ This phenomenon arises from the immateriality of what qualifies as quality (Beckert and Rössel, 2013) and, one can assume, is also at the root of the perplexity or even resentment in public opinion in response to deals like Hirst’s shark. To any outsider, art market prices are completely opaque. What is the basis for such a high price, or for any price in this market, for that matter?

Imagine yourself in an auction house that sells works from different artists and let us assume that the auction house would not provide price estimates for the art works. After being given the opportunity to inspect the individual pieces carefully, you are asked to bid on them. Any non-specialist in the field would be at a complete loss in this situation: if there were bids at all, they would be random and low, at least if measured against the high prices actually paid for the work of some artists.⁶ If only the intrinsic qualities of the artwork were under consideration, neither the high prices for some artworks nor the wide price differences between artists could be justified. Uncertainty would be paramount. The art market would fail, eliminating most of the revenues it currently generates.

³ The explicit reference in this article to Akerlof (1970) as a contrasting model does not mean that I follow Akerlof’s functionalist explanation of institutions as being designed as a response to market failures (for a critique, see Fine and Milonakis 2009). For this, see also Section 3.

⁴ This distinction is an analytical one. In many markets, symbolic qualities and inherent material product qualities come together in the assessment of quality. An example is the car market, where brands are valued not just for their technically superior qualities but also for their *image*. The image of a brand is the result of intersubjectively constituted meaning of the product. Experts often have a better understanding of actual material differences, making consumers vulnerable to marketing strategies that build on symbolic value.

⁵ One may argue that inspectable qualities are not completely irrelevant. Materials can be so expensive that they explain parts of the price, and the authenticity of an artwork is also an inherent quality (though the value of authenticity is not).

⁶ A natural experiment on this was conducted in 2014 by the British street artist Banksy, who set up a pop-up stall in New York’s Central Park among the souvenir stands lining the sidewalk, selling authentic works by the artist—which would have cost several ten thousand dollars each in a gallery—for 60 dollars each. Despite the bargain price, he did not sell more than a few of them (Guardian 12.6.2014; <https://www.theguardian.com/artanddesign/2014/jun/12/bansky-prints-new-york-stall-fortune-bonhams>).

2.2 *The market field*

In the art market, quality is an intersubjective property that emerges from the contingent assessment of the artworks by the actors in the market and does not exist independently from it.⁷ Interactions between actors allow the artistic significance of an artist or one of the artworks by that artist to be evaluated and for quality to be assessed.⁸ The discursively established evaluations provide justification for prices (Boltanski and Esquerre, 2016).

Quality is the outcome of judgements of artworks by relevant actors in the market. The actors relevant in the art market are not just buyers (museums, private collectors) and sellers (artists, galleries, auction houses), but also intermediaries, especially museum curators, art schools, art consultants, art historians, prize juries, art journalists and foundations conserving the oeuvres of late artists. Any actor recognised in the market as relevant in the judgement of the quality of an artwork could be added to this list (Bourdieu, [1992] 1996, p. 229). This plurality of relevant actors orienting their actions to one another is defined as a field (DiMaggio and Powell, 1983; Bourdieu, [1992] 1996; Fligstein and McAdam, 2012).

In a field actors struggle for positions—for the artworks and for themselves—by evaluating artists through both discourse and decision-making: talking about artists, purchasing artworks, pricing those artworks, adding them to a collection, exhibiting them, recommending them to a potential purchaser, writing about them in public media, analysing them within the context of art history, granting a diploma or an award to an artist, etc. The field of art consists of a narrative web that offers evaluations from different perspectives.

Actors mutually observe one another's evaluations and decisions. Evaluations are based on judgements regarding the artistic value of an artwork and its potential to appreciate in value. Art collectors, gallery owners, museum curators, journalists, etc. form their judgements by observing judgements from other actors in the field. The model assumes a process in which quality assessments are influenced by the observation of the assessments of others, that is, on 'second order observations' (Luhmann, 1995). Collectors observe other collectors and museum curators, taking note of the price development of the artist's work, the books published and the articles written about the artist. Galleries observe the development of the artist's oeuvre, taking note of other galleries, media reports on the artist, auction results, declarations of interest from museums and collectors, small talk at art fairs, sales figures, etc. These assessments in turn contribute to the judgements by all the other market actors who are observing them. Assessing quality is 'a game of reflecting mirrors' (Moulin, 1986, p. 374).⁹

⁷ This also implies the *vulnerability* of value in such markets. If the assessment of quality of an artist changes in the field, the value of his artworks implodes. Value has no anchor outside its intersubjective construction. On the other hand, goods that are considered 'rubbish' (Thompson, 1979) can re-emerge as valued antiques, vintage cars or rediscovered artists, due to changing sentiments in the field.

⁸ My interest in the discussion here is primarily the artistic value and not the investment value of art, though art-markets focus increasingly on the latter. The investment value is discussed in Section 4, using financial assets as prime example.

⁹ This stands close—but is not identical—to the notion of intersubjectivity developed by John Davis (2002). According to Davis, the intentions of individuals are mediated by their attributions of the intentions of the collective. My reasoning stands in the pragmatist tradition (Mead, [1934] 1967), emphasising that the individual encounters others not as a homogenised collectivity, but rather as a plurality of individuals and needs to synthesise their distinct reactions for the formation of his or her own identity.

Not all actors have the same weight. The assessments being made have more or less influence on the other actors' judgements, depending on the credibility of the speaker. Credibility is based on reputation (status) and pecuniary power. It structures the field hierarchically. Quality thus also depends on the status rank of the actors uttering judgements (Podolny, 1994; Aspers, 2009). Status is gained from a history of verifiably 'correct' judgements, which is in fact an assumed influence over the judgement of others.

The role of status in the field can be identified quite easily: Having been selected to exhibit at the *documenta* in Kassel or the *Biennale* in Venice sends a different signal to other market actors than the exhibition of the work in a local and widely unknown gallery. Being represented by an internationally acclaimed gallery like the Saatchi Gallery provides attention in the field that representation by a largely unknown gallery does not. Having been added to the collection of a famous museum sends a different signal than when a work is purchased by an unknown collector. Status stems from earlier engagement in the market and can be seen as a form of institutionalisation anchored in sedimentation. Status reflects symbolic capital. Seen from a behavioural perspective, status can be interpreted as a heuristic: actors deal with the uncertainty of quality by anchoring their assessments in perceived status differences, which are read as information from which to make inferences regarding quality (Heiner, 1983; Ariely, 2008; Kahneman, 2011).

Pecuniary power is relevant for influencing evaluations in the field as well. Having the means and being willing to actually purchase a specific artwork at a given price supports a judgement by turning the proclaimed value into a market price. High sale prices are themselves read as a signal of quality (Stiglitz, 1987) and thus feed back into quality assessments. Pecuniary power reflects economic capital.

The quality judgements by the actors in the field are informed by the judgements of the other actors observed (and discursively engaged with) and the weight these actors have, conveyed by their status and power. In this sense, quality assessments express the structure of the field (Bourdieu, [1992] 1996).

Based on mutual observations of judgements and decisions, 'islands' of overlapping meaning emerge where actors converge in their assessment of an artist. Since these assessments are shared as narratives in the field, converging aesthetic accounts emerge. As Blumer (1969, p. 279) remarked with regard to fashion: By 'virtue of their intense immersion in this world[,] the buyers came to develop common sensitivities and similar appreciations'. The assessments formed by economic agents constitute a 'collective belief' (Durkheim, [1912] 1965). With reference to Ludwik Fleck's ([1935] 1979) notion of thought collectives, one could speak of 'valuation collectives'. It is through the (partial) shared assessments of quality that quality uncertainty is reduced (Orléan, 2012, p. 13) and commitments to purchases emerge. The consensus emerging can be seen as a 'meso-level social order in which actors (who can be individual or collective) are attuned to and interact with one another on the basis of shared (which is not to say consensual) understandings about the purposes of the field, relationships to others in the field (including who has power and why), and the rules governing legitimate action in the field' (Fligstein and McAdam, 2012, p. 9).

Not all actors converge on one opinion. Indeed, such complete consensus on artistic value is exceptional, and in the art market, it holds for only a small number of artists (e.g. Caravaggio, Picasso, Duchamp, Matisse) who have been fully integrated into the

canon of art history. Even in these cases, judgements of quality can change over time, as for instance the history of perceptions of the work of Caravaggio shows.

That opinions in the field do not fully converge is not surprising, given that there is no objective anchor for the assessment of quality.¹⁰ But reducing uncertainty only requires that there be convergence among some actors on the judgement of quality. Each node (artist) is observed by different actors, who each occupy a different position in the field. Actors' assessments reflect their position in the market; their interests, values and tastes; as well as what they pay attention to (Prato and Stark, 2012). This difference in judgements is the basis for the possibility of novel perceptions of artistic quality and the dynamics of the market. It is through the remaining dissent that new perceptions emerge (Stark, 2009). Evaluations are contingent, contested and subject to change. Seen from the investment side, the dissent in quality assessment is also a precondition for profits in the market: if everybody held the same assessment of what is valuable, buyers would suffer 'the winner's curse' (Thaler, 1994) and earn nothing from their purchases.

Because judgements of quality are plural rather than fully identical, individuals need to form a position on their own when assessing the artistic value or the investment value of an artwork. But this valuation echoes the quality assessments in the field and changes in accordance with such assessments. Thus, valuations are never individualistic, even though they are held by individuals. If quality assessments in the field change, so do preferences—at least in the aggregate—and with them, other things being equal, also the price for the artwork. Inclusion into the collection of a high-status collector, exhibition by a high-status museum, increased attention in the media or the sale of works at increased prices are examples of events that lead to changes in assessment; they raise the position of the artist because they are read as signals of quality. At the same time, the position of an artist in the field needs to be continuously reconfirmed. If this does not happen, the artist's position in the field will decline. Changes in preferences are endogenously produced through the intersubjective practices of quality evaluation through which actors mutually observe each other.

Changes in the assessment of artists and the status of actors in the market field emerge from the continuous struggles for recognition among actors. Actors stand in competition in convincing other actors of their assessments. Future status and pecuniary gain depend on success in convincing others of one's own assessment of quality. The different positions in the hierarchical order of the field distribute chances for influence unequally. Fluidity is created especially by the entry of new artists and new artistic styles, by the entry of new collectors, but also by the exit of intermediaries (e.g. gallery owners, art critics), which opens space for the entry of new actors and thus for shifts in the hierarchical order. Through these events, the market is constantly undergoing change, without questioning the general *modus operandi* of the market.

2.3 *The markets from meaning model*

Discursive practices and narratives infuse artworks with intersubjectively shared meanings that constitute their perceived quality and reduce uncertainty in the market. *Quality* reflects appreciations of the artistic worth of an artwork in the field of art. *Value*

¹⁰ For financial markets, see Orlean (2012, 2014, p. 17f).

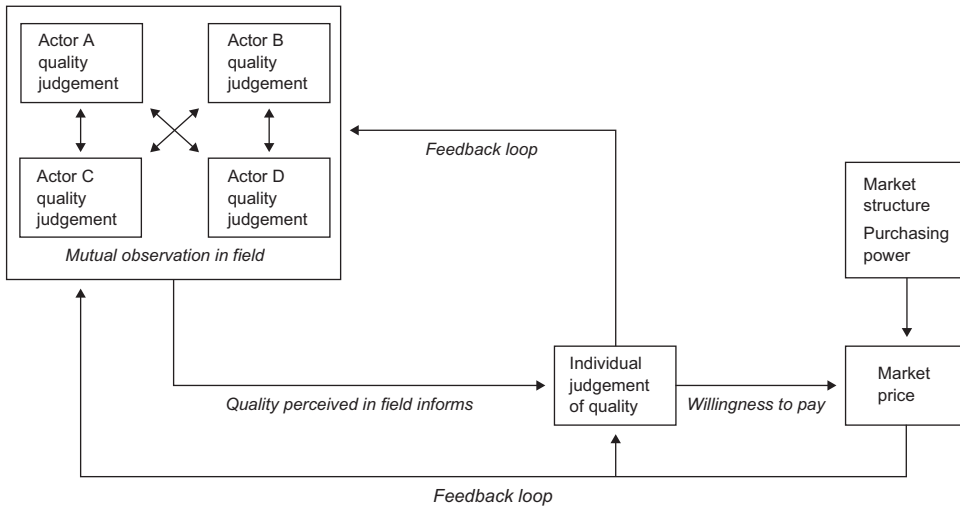


Fig. 1. The markets from meaning model of price formation.

reflects the subjective interpretation of the quality assessments communicated in the market; it refers to the quality assessments of actors and their willingness to pay a certain amount of money for the artwork (even if they have no intention of actually buying it). *Price* is the market outcome, emerging from quality assessments, assignment of value and further market factors such as purchasing power, transaction costs and the competitive structure of the market.

Figure 1 depicts the model. The position of an artist in the market is the outcome of the entirety of the judgements of that artist’s work. By means of interaction, actors interpret each other’s assessments and incorporate them into their own valuation. The weight of individual judgements is a function of their status in the market. Unlike in the market for lemons model, it is not the intrinsic characteristics of the object that constitute quality; rather, quality is an ascription.¹¹ Any change in the assessment of quality strengthens or disconfirms the artist’s position in the field. In pragmatist terms, the sum of the assessments of an artist is the ‘generalised other’ (Mead, [1934] 1967), determining the quality (‘identity’ in Mead’s terms) of the artwork.

The quality assessment in the market informs individual judgements and the value ascribed to an artwork. Willingness to pay changes as quality assessments change. Current judgements, together with market structures and purchasing power, determine prices through the market mechanism. Prices, when read as quality signals, feed back into quality assessments and valuation. Quality, value and price are thus the outcomes of ‘selves in interaction’ (Mead).

The process of quality assessment for products whose qualities are not intrinsic to the object is related to the concept of endogenous preferences (Bowles, 1998). Endogeneity means that preferences are not externally given and stable, but instead are affected by policies or institutional arrangements (Bowles, 1998, p. 75). Although the theory of endogenous preferences focuses on institutional arrangements and cultural contexts,

¹¹ See also Durkheim (1974, p. 86): ‘There are many instances in which no such relation exists between the characteristics of an object and the value attributed to it’.

the focus here is on the creation of contexts of meaning through intersubjective discursive engagement in the field. Individual intentions are, in the sense of Davis (2002), mediated by the intentions that actors attribute to the group to which they belong. The markets from meaning model also relate to the concept of interdependent utility functions (Komlos and Salamon, 2005). However, it does not emphasise consequences for individual utility stemming from the distribution of a good (as it is the case for positional goods), but rather the interdependency of the quality assessment of goods. The feedback effect from prices on the assessment of quality picks up the analysis of bandwagon effects (Leibenstein, 1950) and the hot hand fallacy (Johnson et al., 2005).

3. Institutions

In the *markets from meaning* model, like in the *markets for 'lemons'* model, the assessment of quality is steadied through institutions. But the institutions tend to be of a different kind. As argued by Akerlof (1970), institutions that are enforceable by third parties can counteract market failure caused by information asymmetries. In consumer markets, product warranties are the most prominent example. These institutions function to produce *trust*, that is, the belief of the less informed party that it will not be cheated by the more knowledgeable party.

Such institutions play only a limited role in the markets from meaning model. They are significant for solving information problems in the market, and in the art market, one such problem is the authenticity of the artwork being sold. Buyers must be able to trust that the artwork is authentic. This trust is produced institutionally, for instance through expert reports by recognised authorities in the field and the transparency of the provenance of the artwork. These experts use institutionalised templates. If an artwork turns out not to be authentic, that is, not the work of the artist the seller claims it is, the buyer has a recourse in the institutions of the legal system. Trust-producing institutions protect buyers from deception and fraud. Authenticity is an information problem. But this kind of problem plays no role in explaining the large price differences among artworks that have already been recognised as authentic.¹²

Institutions in the markets from meaning model serve primarily to produce not trust, but *confidence*. Confidence is the belief in the credibility of a narrative of the alleged quality of the product. By creating confidence in a multitude of actors, a narrative becomes a convention. In this sense, what renders reputation to an artist is institutionalised. The reputation-generating power of a celebrated exhibition like the *documenta* in Kassel is institutionalised in the field, even though there is no legal stipulation guaranteeing that this art show will influence the assessment of the quality of an artist exhibited there. A loss in reputation of the *documenta* would be a process occurring over time, but at the current moment, actors can be confident that quality signals can be inferred from its selection of artists. The same holds for museums (e.g. MoMa), galleries (e.g. Saatchi), art prizes (e.g. the Turner prize) and art critics (e.g. Clement Greenberg). The position of these 'judgment devices' (Karpik, 2010) is 'entrenched' (Aspers, 2009). This entrenchment is the sediment of earlier discourse and produces confidence in quality assessments, reducing uncertainty and increasing

¹² Normally, authenticity is checked and taken for granted in transactions. However, if the authenticity of an artwork is contested, it has great consequences for its value and price.

buyers' willingness to make purchases. It signals quality though no legal recourse is possible. The influence of such conventions takes place through the 'anchoring' of behaviour (Kahneman, 2011).

Confidence-enhancing institutionalisation also takes place through conventions that constitute 'how-to' rules. In the primary art market, for instance, the price of the work of an artist varies with the size and type of work (e.g. drawing, painting, sculpture). Larger works have a higher price, and oil paintings are more expensive than drawings. This holds despite quality differences between individual works and is an institutionalised convention to reduce uncertainty in the market (Velthuis, 2005).¹³

Further institutionalisation of quality assessment takes place through calculative devices. Databases such as *artprice.com* allow observing the development of auction prices for artists and make rankings possible which identify 'undervalued' and 'overpriced' artists and thus provide orientation for purchasing decisions based on past transactions. They are calculative devices that are conventionally used in the market to judge market prices and help provide confidence in the legitimacy of prices for specific transactions or provide a critique of them.

4. Application to investment markets

The model exemplified by the market for contemporary art can easily be extended to the analysis of other markets where product value depends on judgements of aesthetic or moral criteria. Examples are the wine market (Podolny, 1993; Beckert and Rössel, 2013), the market for fashion (Blumer, 1969; Aspers, 2006), the market for antiques (Bogdanova, 2013), the market for coffee (Fischer, 2017), the market for halal food (Van Waarden and van Dalen, 2013), the market for fair trade products (Bartley et al., 2015) and the market for travel destinations (Bandelj and Wherry, 2011). If we understand these markets as consumer markets, value is not linked to the expectations of future profits, but rather to the satisfaction of concrete needs.¹⁴ Uncertainty does not stem from asymmetric information, but from lack of clarity as to what qualifies as quality.¹⁵

Instead of describing these markets, however, where the similarities to the art market are not surprising, the remainder of this article will focus on capital investments and financial markets to show that the relevance of the model in analysing quality uncertainty extends far beyond aesthetic and moral markets.

Similar to the case of evaluating aesthetic or moral qualities, investments and financial speculation are characterised by quality uncertainty, which is not covered by the Akerlof model. This uncertainty, however, has a different source compared with the consumer markets mentioned above. It is caused not by the contingency of what

¹³ This convention does not exist in the secondary market.

¹⁴ The art market is specific in the sense that both sources of uncertainty come together. The artistic value of an artwork is contingent, but so also is its future value. If the assessment of quality of an artwork is the basis for a purchasing decision that aims at financial gain from expected future selling of the artwork, or as a store of value, it also falls into the category of investment markets. This duality can even be found in markets that one would otherwise clearly define as consumer markets, not oriented towards future rewards but towards current utility. Earl (2001) describes how the attendance of live music performances can have a future orientation because it may be possible to 'dine out' later on having attended the concert.

¹⁵ In other markets, like the market for cars or housing markets, asymmetric information (lemons model) and uncertainty as to what qualifies as quality (market from meaning model) are both present simultaneously.

Table 1. Sources of uncertainty in different markets. The art market entails characteristics of the lower left quadrant and the upper right quadrant

		Uncertainty due to ...	
		indeterminacy of quality	indeterminacy of the future
Reduction of uncertainty through ...	anticipation of market opinion coherence in quality assessment	Art market	Financial speculation Capital investments

counts as quality, but by the impossibility of knowing what the profitability of the investment will be. Uncertainty is related to the openness and unpredictability of the future (see Table 1).

4.1 Capital investments

Investments in firms and financial assets are motivated by the goal of storing value and increasing it. The problem, which is to different degrees inherent in all investment decisions, can be illustrated by looking at venture capital investments. The firms seeking venture capital usually do not yet have a fully developed product, and neither product development nor market acceptance can be foreseen because of the newness and uniqueness of the product (Shapin, 2008, p. 269ff; Giraudeau, 2012, p. 213). Although venture capitalists try to calculate the outcome (future pay-offs) of their investment as precisely as possible to establish profitability of that investment, ‘these numbers are subject to significant assumptions and judgement and so are inherently subjective’ (Nama and Lowe, 2013, p. 33). Future cash flows and inherent risks simply cannot be known. Investment decisions thus have an uncertain future value due to the impossibility of correct calculations of future profits (i.e. the quality of the investment). As a consequence, decisions rather rely on opinion, or, more precisely, ‘upon the amount of confidence in that opinion’ (Knight, [1921] 2006, p. 227). Viewed from a Keynesian perspective, the price of capital assets varies with the optimism or pessimism of investors. Prices come about ‘through the continuous revaluation of the money price of *existing* assets by the market, due to changes in psychological expectations’ (Townshend, 1937, p. 165). These psychological expectations, however, are not individual, but rather created intersubjectively in the field and are thus social in character. The process of intersubjective construction of expectations (quality assessments) can be described in terms of the markets from meaning model.

Though venture capital firms accept that the majority of investments will fail, they still try to identify those investment opportunities, which will make a profit.¹⁶ They do not invest randomly. How then do they evaluate the quality of an investment?

Entrepreneurs present their business plan and company vision to potential investors in pitches in which they expose themselves to scrutiny and questions. Assessments of firms’ future profitability are based on narratives that must be convincing. These

¹⁶ Venture capital firms use a portfolio model to protect against the risks of high failure rates.

narratives are offered in the business plan and are supported by calculation of future returns. Calculations are used to demonstrate the profitability of the investment through the use of numbers and calculative models. Given the uncertainty of future outcomes, however, the numbers they show are based on un-confirmable assumptions regarding future states of the world. Their function is to create confidence in an investment through recourse to calculative tools that enjoy legitimacy in the community of entrepreneurs and investors. On their own, however, numbers cannot inspire decisions. The credibility of the narrative told by the entrepreneur is based, in addition, on the entrepreneur's ability to convey an impression of personal virtue and passion, and on networks of familiarity (Shapin, 2008). The assessment of prospective returns on an investment is anchored in 'narrative embedding' (Lane and Maxfield, 2005) which includes numbers, prospective stories and the observation of the reactions of other actors in the field. Events such as investment by a high-status hedge fund or the publication of a report from an influential analyst are observed by other potential investors and read as signals of quality that convey confidence in an investment narrative.

Viewed more broadly, an investment's profitability is evaluated within a field that includes consultants, scientists, accountants, the media, economists, analysts, investment bankers, managers, entrepreneurs and capital owners. These actors assess an investment's value by articulating expectations of future development discounted to present value (Doganova, 2011, p. 15). Assessments of quality emerge from imaginaries turned into narratives and combined with mathematical calculations, accounting conventions, and available data (Shackle, 1972, p. 8). As in the art market, assessments float in the field and are mutually observed by actors in a system of reflecting mirrors (Moulin, 1986).

In these intersubjective processes, actors gain confidence in their imaginaries by listening to the accounts of others and revise their expectations as they deem necessary. Quality, in other words, is constituted in practical processes by means of the narrative staging of expected future returns and the associated risks. Like in the art market, actors do not fully converge in their opinions regarding the profitability of a specific investment opportunity. Assessments differ. The reason for this is incomplete and dispersed information, but the different positions in the market, which lead to a variety of interests and expectations, are also relevant (Richardson, 1960; Prato and Stark, 2012). Such differences in the assessment of future opportunities are a precondition for the functioning of investment markets: If all investors would see the same prospects, profits would be wiped out.

The evaluation underlying investment decisions is also the outcome of a social relationship, in that assessments depend on the structural composition of the field, that is, on the relative position of the different actors. The investments of venture capital companies are mutually observed in the field and the investment by a high-status firm read by other firms as a signal to invest as well. Because imaginaries about the profitability of investments have distributive effects, interested actors may attempt to mobilise other actors around specific imaginaries or to detach others from them (Mützel, 2010). Their effectiveness in this depends on their symbolic and economic capital. Quality assessments may have immediate economic effects, by initiating investment or altering the costs of capital for firms. The latter is the case when positive imaginaries allow companies to borrow more cheaply (Soros, 1998, cited in Bronk, 2013, p. 344).

Business plans, models of capital budgeting and procedures of due diligence are conventions used to establish confidence in the quality of an investment opportunity. They are relevant not because they make it possible to foresee the future outcome of an investment, but because they are institutionalised tools within the community of experts charged with the valuation of investments that help cope with an uncertain future. They are devices that help to produce confidence.

4.2 *Financial speculation*

Like the art market and capital investments, financial markets are characterised by the quality uncertainty of their products. In financial markets, the quality of assets is determined by future income streams, volatility and the market price of the security at the end of the investment period. Thus, what constitutes quality is clearly defined, and value and price follow directly from perceived product quality. However, as in capital investments, the openness of the future prevents foreknowledge of *which* financial products will be most lucrative in hindsight.

Despite the similarity between capital investments and financial assets in terms of the unpredictability of their future value, there exists a difference between them that makes financial speculation an informative third illustrative case for the markets from meaning model. Capital investments are cases of what Keynes ([1936] 2006, p. 158) called *enterprise*; by contrast, most financial market transactions are a case of what he called *speculation*. In the first case, market actors try to forecast the prospective yield of an investment over its whole life; they are interested in its fundamental value. In the second case, they are interested in short-term gains and attempt to this end to forecast the psychology of the market.¹⁷

Keynes demonstrates what he means by ‘forecasting the psychology of the market’ with the famous analogy of a beauty contest in which the task is not to identify the prettiest face, but to forecast what the other competitors will think the prettiest face is. The analogy to financial speculation is that the quality of the security, that is, its profitability as an investment, does not depend on its fundamental value but on market opinion. The more ‘the market’ thinks of the security, the higher its price. This implies that even if individual investors believe that the price for a security is too high in terms of its fundamentals, they will act rationally by continuing to buy it for as long as they believe that the other speculators will do the same (Orléan, 2014).

This is an interesting further case of the intersubjective constitution of quality and value. Quality uncertainty is reduced through (at least partial) convergence on an opinion regarding market development, not through convergence on an assessment of actual product quality. This claim contradicts the efficient market hypothesis (Fama, 1965), which claims that financial assets have a fundamental or intrinsic value and that prices in financial markets oscillate around this fundamental value.¹⁸

¹⁷ This does not mean that speculation does not make recourse to fundamental value. This is done to identify market inefficiencies which can be exploited for short-term profits. Such arbitrage strategies are based on the collective belief that markets tend towards fundamental value. For these different investment strategies in financial markets, see also Ortiz (2014, p. 41).

¹⁸ According to the efficient market model, markets are self-correcting: they increase demand for assets that are ‘undervalued’ as measured by the ‘correct’ fundamental value of these assets. Financial markets thus lead to the efficient allocation of capital in the economy.

The markets from meaning model follows an opposite suggestion, namely ‘to abandon the idea that value enjoys some special sort of objectivity’ (Orléan, 2014, p. 189) and sees market price as depending on the contingent opinions of investors regarding the opinions of other market actors. Like in the art market, the assessed quality of financial securities as stores of value depends on collective beliefs that form intersubjectively in the market. The value of an asset is thus not anchored in something objectively given—fundamental value—but in the discursively established assessments by traders and their mutual observation. Implied volatility, a crucial measure to determine the value of derivatives in structured finance, expresses ‘an estimate of the operators’ perception of future market movements’ (Esposito, 2018, p. 225). It thus measures what market actors think other market actors think, that is, reflects the sentiment of the market. It is not an assessment of the actual future volatility of a derivative, but rather of the collective belief in this volatility. This suggests that financial markets are ‘in essence ... markets in stories’ (Tuckett, 2012, p. 21). Speculative investment is a matter of confidence in these stories where engagements arise from the discrepancy between the valuation of securities based on the perception of the prevailing opinion and the individual traders’ opinions.

As in the art market, quality uncertainty is reduced intersubjectively through mutual observation and the emergence of partial consensus. The liquidity of the market rests on a collective belief, anchored in ‘the confidence that the financial community places in it’ (Orléan, 2014, p. 209). As a consequence, financial markets are not automatically self-correcting at all, but can spiral into speculative bubbles and self-reinforcing crises. This risk is especially high if market opinion is very homogenous (Beckert and Bronk, 2018).

In financial markets, as in the art market, assessments of quality are not stabilised primarily through institutions that aim to produce trust, but rather through institutions that produce confidence. Such institutions include financial models. The efficient market hypothesis, for example, is a ‘how-to’ rule for the assessment of prices. Traders use the calculation of fundamental value, and the recognition of differences to actual market prices, as a heuristic device allowing them to find reasons for specific arbitrage trades (Miyazaki, 2003). The assessed ‘correct value’ is either a critique or a confirmation of actual market prices. The mathematical models based on the efficient market hypothesis allow traders to find direction for their trades despite the uncertainty of the future. Examples of other institutionalised behaviours in financial markets are as follows: following market trends based on the assumption of the greater wisdom of crowds; giving authority to reports from analysts and credit rating agencies; and believing in dominant narratives (e.g. ‘the new economy’, the ‘Asian tigers’, ‘BRICS’). Such ‘valuation conventions’ (Orléan, 2014, p. 234) compensate for the impossibility of objectively calculating quality given the openness of the future. They stabilise confidence in the assessment of quality for as long as the market collectively believes in them.¹⁹

¹⁹ For this, see also Townshend (1937).

5. Conclusion

This article contributes to the understanding of value and price by asking how assessments of product quality emerge in markets. Buyers are only willing to engage in market transactions if they can establish the quality of the products offered. If quality relates to the intrinsic characteristics of a product, it can be objectively determined, for example, in the market for used cars or in standardised commodity markets. In these markets, actors might be confronted with problems of asymmetric information (Akerlof, 1970).

However, in many important markets, quality is not an inherent feature of the product or cannot be known in the present because of the uncertainty of future development. In these cases, quality is based on contingent judgements through which actors in the field define quality. Two cases can be distinguished: quality can be uncertain either because there is no objective standard as to what counts as quality or because the relevant qualities of the product can only be known in the future.

These features, leading to the indeterminacy of assessments of quality, hold in a surprisingly large set of markets: in those in which goods are valued for their aesthetic, moral or symbolic meanings. The art market was discussed as an illustrative example. Economically more important is the large range of markets for consumer products where products are not valued for their functional qualities alone, but also—and sometimes almost exclusively—for their symbolic meanings (Beckert, 2011). Examples are the car market, the market for consumer information technology, the fashion market and the market for tourism. In these markets, qualities become established through intersubjectively shared narratives, formed by mutual observations, advertising and branding, and also by the use of the product by consumers. For the latter case, investment markets, the article looked at capital investments and financial speculation where quality assessments are also the result of intersubjective processes. Markets for intellectual property rights and labour markets have similar features of future-related quality uncertainty (Eymard-Duvernay and Marchal, 1997).

Without the means to establish quality taxations and confidence in these assessments, these markets would fail: demand would be erratic and prices low. The markets from meaning model argues that in these markets, uncertainty is reduced intersubjectively through narratives, which create cognitive overlaps in the field regarding the assessed quality of products. Confidence is discursively established (and destroyed) through the staking of validity claims on quality that are confirmed or challenged by other actors or future events. Uncertainty is also reduced through conventions and calculative devices that are legitimated institutions recognised for their capacity to define commonly accepted qualities. In this process, symbolic and economic capital reflects power differences that provide different opportunities to actors depending on their position in the field. Not only buyers and sellers are market actors contributing to the assessment of quality, so are market intermediaries. Thus, markets are best analysed as fields (Bourdieu, [1992] 1996; Beckert, 2010; Fligstein and McAdam, 2012).

This article suggests that value and preferences are not exogenously given, and not the reflection of individual taste, but rather an endogenous outcome of the market process, and one that is socially shaped. Markets emerge from intersubjectively shared

meaning that is created by ‘selves in action’. If quality uncertainty is fully embraced, and not just treated as an information problem, it provides the vantage point for a sociological model of economic value and price.

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