PERFORMATIVITY RATIONALIZED

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Abstract: Economic sociologists have been criticized for using the term “performativity” in a way that seems unfaithful to Austin’s notion. In this paper I defend this usage against Uskali Mäki’s challenge, in particular his claim that economic theories cannot constitute illocutionary acts. To counter this claim I argue that performative speech acts play primarily a coordinating role by manipulating agents’ beliefs, and this is the same role that theories like the Black-Scholes model of option pricing play in financial markets, if MacKenzie’s historical reconstruction is right.

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1. Introduction

The concept of performativity originates from the philosophy of language of the 1950s, and in particular from John Austin’s speech act theory. Since then however it has attracted a motley crew of supporters, ranging from Jacques Derrida to Pierre Bourdieu, Judith Butler and John Searle. More recently performativity has become a key term in the “new economic sociology” of Donald MacKenzie and Michel Callon, inspiring a number of projects and case studies aimed at showing how economic science may “perform” economic markets.¹

When technical terms enjoy wide circulation in different disciplines, they seldom retain a sharp...
connotation. Uskali Mäki (2013) has denounced this drift: the concept of performativity in his view has been stretched too far in the economic sociology literature. He sees two main problems: (i) attaching different meanings to the same term creates confusion; (ii) none of these meanings, he claims, is faithful to the original Austinian notion. So economic sociologists should better dispense with performativity.

Mäki’s first critique is, I believe, justified. The time is ripe to regiment our language and seek a precise definition of the concepts used in the new economic sociology programme. However I disagree with Mäki on the second point: economic sociologists in my view should retain the concept of performativity. The linguistic mechanisms identified by Austin shed light on some interesting phenomena studied by sociologists of financial markets. So keeping performativity in current sociological discourse is not incompatible with seeking more conceptual and linguistic precision.

To support this claim will require some argumentation, however. Part of the problem is that “performativity” is not a well-defined object. Different scholars have interpreted Austin’s theory in different ways, and have developed his approach in different directions. The question of economic sociologists’ fidelity cannot be settled by purely exegetical means, and quite inevitably we will have to make some theoretical decisions as we proceed. My approach will be scientific rather than interpretive: I will move from the assumption that Austin identified an important linguistic phenomenon, that he provided invaluable insights and tools to understand its functioning, but that he left a lot of work to do for his followers. The distinction between “illocutionary” and “perlocutionary” aspects of speech acts, upon which Mäki’s critique is based, has been a major topic of discussion for example. I will endorse a deflationary interpretation, according to which illocutionary effects do not have any major ontological implications. This interpretation in turn is based on a specific account of constitutive rules and the role they play in the definition of institutional terms. While neither of these accounts can be found in Austin’s writings, they fill important holes in his theory and they provide a plausible picture of the mechanics of performativity.

My strategy will develop as follows: in section 2 I will briefly illustrate Austin’s theory and complement it with Searle’s account of constitutive rules to define the felicity conditions of speech acts. Constitutive rules hold by agreement or convention, so section 3 outlines the standard (Lewis-Schelling) theory of conventions as equilibria of coordination games. In the same section I will argue that a performative speech act in Austin’s sense is essentially a correlation device. Having introduced the fundamental tools, in section 4 I will illustrate how economic theories may work as correlation devices in coordination games, focusing on MacKenzie’s study of the Black-Scholes model of option pricing. The goal is to show that Austin’s speech acts and the models of economic theory may perform similar functions in certain conditions. So economics
may be performative in Austin’s sense. In section 5 I will discuss Michel Callon’s claim that the success of economic models depends on factors that have nothing to do with people’s beliefs about the theory itself. Section 6 defends the account of performatives as correlation devices from Mäki’s charge of ignoring the distinction between constitution and causation. Section 7 concludes with a summary of the argument.

2. Austin on performativity

In his masterpiece, *How to Do Things with Words* (1962), John Austin showed that many linguistic utterances have primarily pragmatic functions. Such utterances are not aimed at describing the world, but at *acting* in a social environment (warning, insulting, admonishing, joking, and so forth). Austin’s pragmatism was a reaction to the narrow concern for the truth value of propositions displayed by his contemporaries. Against the logical positivist tradition Austin argued that many utterances are not to be evaluated according to their truth or falsity but according to their *felicity*. Felicity is a pragmatic notion of success: an utterance is successful (“felicitous”) if it satisfies certain pragmatic criteria, or if it is appropriate in the given circumstances. For example: a warning is felicitous if the speaker believes that there is a danger, if she intends to alert her audience, if the signal is appropriate to the source and gravity of the threat, and so on. Truth matters, but the main purpose of the utterance is not to convey information about a state of affairs: shouting “there is a lion!” may be appropriate even if the utterance is false (if, say, the lion turns out to be a tiger) provided it satisfies the conditions of felicity. And the opposite may be the case: “there is a beetle!” may be a totally unfelicitous warning, even if it is true.

A surprising feature of performative speech acts, noticed by Austin and his followers, is their fecundity: in some occasions we can create something simply by saying it. Consider the following classic examples:

I promise to give you ten dollars.

You are now man and wife.

In uttering the first statement one is making a promise, or creating an obligation that did not exist before. In the second case, by uttering the formula an official creates a marriage – she brings into existence a husband, a wife, a set of reciprocal rights and duties that did not exist before. Speech acts however cannot create social objects out of the blue. Performative statements *presuppose* the existence of social conventions “in the background”, so to speak. In *How to Do Things with Words* Austin lists some background conditions for the functioning of performatives. The first one is:
(A1) There must exist an *accepted conventional procedure* having a certain conventional effect, that procedure to include the uttering of certain words by certain persons in certain circumstances. (Austin 1962: 14, italics added)

If condition (A1) does not hold, a performative speech act “misfires”. When my daughter performs a “wedding ceremony” with her dolls, for example, she is not creating a marriage: the utterance misfires.\(^2\) Austin adds that when a speech act misfires “it is presumably persons other than the speaker who do not accept it” (1962: 27). So performativity presupposes sociality – “a whole code of procedure”, in his own words.

What is the relation between performative statements and “accepted conventional procedures” exactly? Austin does not say much. His examples however contain insights that can be turned into a full theory. In the case of marriage, the procedures are expressed by rules such as “the bride and groom must speak in front of witnesses”, “the ceremony must be administered by an official appointed by the Church or State”, and the like. These rules are conventional in two intuitive senses at least: (i) they are partly arbitrary (why should there be two witnesses rather than three or four? Why a priest rather than a doctor or a lawyer?), and (ii) they hold by agreement among the members of the community.\(^3\)

John Searle (1969, 1995) has developed this aspect of Austin’s theory by introducing the concept of *constitutive rule*. A “constitutive rule” is a statement of the form “X counts as Y in C”. For example:

Saying “I do” in front of witnesses and a public official in the appropriate place (etc.) counts as getting married.

An individual who is born in the USA, is at least 35 years old, has won the majority of delegates in a national election (etc.) counts as the President of the United States.

In Searle’s abstract formula, X stands for a pre-existing entity (an individual, or a linguistic act, in the above examples); Y is a *status function*, a set of roles, duties, rights that are assigned conventionally; C stands for the context in which the assignment takes place. An institutional fact thus requires that X is the case, that C is the case, and that there is general agreement in a population that X counts as Y in C – or in other words, that the members of a social group accept the constitutive rule.

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\(^2\) In the sense that it is not creating any institutional fact; it is not misfiring as a piece of gameplay, of course.

\(^3\) The agreement may or may not be sanctioned by legislation; the important point in any case is that the rules do not hold by natural necessity.
An important point made by Searle concerns the nature of status functions (Y, in the formula above). A crucial difference between institutional entities on the one hand, and natural entities and artefacts on the other, is that in the former case the relation between the function (Y) and its substratum (X) is purely conventional. This is not true in case of natural functions: the heart is able to pump blood in virtue of its physical features and of the structure of the human body. In the case of artefacts, a function (e.g. the function of a chair) is attributed to an object (a piece of wood) in virtue of its physical characteristics (it can be used to sit on). Social entities are different because the conditions that ought to be satisfied are often conventional. Status functions can usually be attributed independently of the physical characteristics of the status-bearing object (X). A classic example is money: pieces of metal, paper, shells, fur can all be used as currency. What really matters is that there is general agreement that X (say, shells) count as Y (money) in C (the Solomon Islands). There is no difference between being money and being accepted as money, once the conditions of acceptance have been satisfied.

3. Coordination and convention

To say that speech acts require conventional constitutive rules is not very illuminating, unless we can explain what a convention is. Luckily social scientists and philosophers have a well worked-out theory, built on the seminal contributions of Thomas Schelling and David Lewis. The theory is based on game-theoretic concepts – in particular the notion of coordination game – and helps clarify the connection between conventions and performativity.4

A coordination game is a strategic situation with multiple Nash equilibria. A Nash equilibrium is a steady state where each player’s action is an optimal response to the actions of the other players. Since social scientists typically aim at explaining robust patterns of behaviour, and out-of-equilibrium actions are unlikely to be repeated over time, the concept of Nash equilibrium is attractive both for explanatory and for predictive purposes. Coordination problems however have long been a puzzle for game theorists, because the standard theory lacks the resources to identify which, among the many possible patterns, will be chosen by rational individuals. Schelling (1960) and Lewis (1969) argued that, in the case of social conventions, arbitrary elements of the environment and the history of play often create focal points that people exploit to coordinate successfully.

4 Many philosophers consider the linguistic approach to social ontology based on constitutive rules incompatible with the scientific approach of game theory. This is not true, however, as Guala and Hindriks (2014), Hindriks and Guala (2014), and Hédoin (2015) try to explain.
Lewis’ analysis is mostly devoted to games with symmetric payoffs, such as the “driving game” that we unwittingly play every time we drive our cars (should we keep right or left? It does not matter, provided we all follow the same convention). The theory however can be easily extended to games with asymmetric payoffs. Consider the following scenario: two tribes settle in a new valley with their cattle. When they spot a patch of green land, they must decide whether to graze or not. If they both graze, they are likely to clash and fight; if they both abstain, they will forego an opportunity to feed their cattle. The best solution is that one tribe grazes, and the other one does not: but who should give way?

\[
\begin{array}{ccc}
G & NG \\
G & 0, 0 & 2, 1 \\
NG & 1, 2 & 1, 1 \\
\end{array}
\]

Figure 1: Hawk-dove

The problem can be represented by means of a game matrix known as “hawk-dove” in biology and “chicken” in economics (Figure 1). G, NG (Graze, Not Graze) and NG, G (Not Graze, Graze) are both Nash equilibria of this game. The problem is to identify an equilibrium selection device that will help avoid the two inefficient outcomes (G, G and NG, NG). Lewis and others pointed out that history may be such a device: whoever arrives first acquires the right to use a piece of land.\(^5\) For every future interaction, precedence can work as a conventional signal that regulates coordination in the grazing game.

The key idea is that the players can achieve a superior equilibrium if they use a correlation device.\(^6\) They may for example adopt a profile of conditional strategies like the following:

If you occupied the land first, then graze it; if you arrived second, then do not graze it (if F then G; if S then NG)

A pair of strategies like this guarantees each tribe an average payoff of 1.5 in repeated play, if we assume that roughly 50% of the time one tribe occupies first and 50% of the time the other does it. It also guarantees that no resource is wasted, since the two tribes will never end up in (G, G) or (NG, NG). Finally,

\(^{5}\) See also Sugden (1986), for example.
\(^{6}\) The interpretation of Lewis’ conventions as correlated equilibria is due to Vanderschraaf (1998). Correlated equilibria were introduced in the game-theoretic literature by Aumann (1974).
the strategy is analogous to a rule that assigns a primitive property right (the right to use). Notice that it is not important that the tribes have a special term or concept for the institution of private property. Perhaps they are only following a custom or a rule of thumb, and we – as external observers – see in these behavioural regularities a primitive institution of property. Be that as it may, a conventional coordination device can bring about a state of affairs (an institution of property) that did not exist before.\(^7\)

Speech acts so far do not play a role in the story. But language as we know is a powerful coordination device. It is easy to concoct an alternative story of the grazing game where the problem of coordination is solved by means of a speech act: suppose that when they first entered the valley, both tribes met in the middle of the plain. To resolve their dispute they called a shaman who, after some smoking and chanting, declared in public: “All the land that lies north of this point is your territory; all the land that lies south is their territory; and this is the border that separates the two territories”.

Nothing much has changed from the earlier story, except that now a speech act works as coordination device. The speech act seems to create by magic a state of affairs (with territories, borders, and grazing patterns) that previously did not exist. But so did the coordination device (precedence) in the old story. So there does not seem to be anything special with speech acts, except that they are extremely handy and flexible tools to achieve coordination.

Notice that performative speech acts involve conventions at two different levels: (i) a speech act may create a focal point that solves a coordination problem with multiple equilibria. The solution is conventional in the sense that it is one among several possible coordination equilibria. (ii) The speech act is just one among several possible coordination devices that could have achieved the same outcome. Another speech act, or even a non-linguistic device (a river, a pointing gesture) could have played the role of correlation device.

The same applies to other paradigmatic performative speech acts, like wedding ceremonies or appointments. A marriage between two individuals (Ann ad Bob) is conventional in the sense that it is one among several possible arrangements: Ann in principle could have married Dave, and Bob could have married Carol. But the coordination device – the wedding ceremony – is also conventional, because the same result could have been achieved in several alternative ways. Ann and Bob could have tattooed each other’s name on their shoulders, or could have performed a ceremonial dance, or any other ritual that is

\(^7\) Something similar may have happened with promises: perhaps they started as rules that allowed Jill to punish Jack if Jack did not do what he said he would. In *The Genealogy of Morals* Nietzsche (1887) outlines an intriguing story about the emergence of sociality based on this simple mechanism.
publicly associated with the rules of marriage.⁸ Saying “I do” in front of a priest is one among many ways to signal that two individuals will adopt a certain set of rules (the rules of marriage) to regulate their behaviour.

An advantage of speech acts over other ceremonial acts is that they are particularly transparent devices to achieve coordination. If I say “I’ll see you in my office at noon” there is little doubt that I am setting a meeting. Similarly, when the priest says “you are now man and wife” everyone understands what outcome (coordination equilibrium) he is trying to implement. But it is worth emphasising that speech acts can help coordination only if they change beliefs in the appropriate manner. And this is true of performative utterances in general. When I say “I promise to give you ten euro next week” I am trying to change your beliefs, to convince you that I will return the money if you lend it to me.⁹

This point is often made by distinguishing between the “illocutionary” and the “perlocutionary” aspects of a speech act (both terms were introduced by Austin). The illocutionary aspect pertains to the conventional meaning of the speech act, for example to the fact that saying “I do” in certain circumstances counts as getting married, or that saying “I promise” counts as making a promise. The perlocutionary aspect instead pertains to the “consequential effects upon the feelings, thoughts or actions of the audience, or of the speaker, or of other persons” (Austin 1962: 101). Although the distinction has been widely debated, it is customary to interpret the illocutionary aspect of an act as being essentially communicative, and the perlocutionary one as causal or pragmatic.¹⁰ Mäki criticizes MacKenzie for mixing illocutionary and perlocutionary acts, so I will have to return to this distinction later. For the time being, let me state a claim that will play a crucial role in my argument: performative speech acts “create” things (institutions, promises, etc.) by manipulating beliefs, and in particular the systems of mutual beliefs that are crucial for coordination and cooperation in complex societies.

4. Economic models as coordination devices: the case of option pricing

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⁸ On the importance of public rituals for coordination, see Chwe (2001). Chwe emphasises that the coordination device (or ceremony) must be common knowledge, so that the right system of mutual beliefs is in place. For a sceptical view on common knowledge requirements, see e.g. Binmore (2010).

⁹ Austin and Searle have stressed that a promise is not just a prediction (“I am not just saying “I believe that I will give you ten euro next week”). The key point is that it creates an obligation that did not exist before. The obligation implies that if I will not give you ten euro next week then you will be entitled to punish my behaviour – either informally (e.g. by reproach or ostracism) or formally (calling the police, or taking me to court). So the promise, if successful, changes a wide set of beliefs, for example the expectation that other parties will help you get the money back if I will not return it.

¹⁰ See e.g. Schiffer (1972) and Bach and Harnish (1979).
Let us suppose that performatives facilitate coordination, by changing the beliefs of individuals involved in complex strategic interactions. In this section I will show that scientific theories can play the same role, in the appropriate circumstances. Economics, in particular, can “perform” economic reality by changing the beliefs – and hence the behaviour – of the agents in the economy. To drive this point home, I will rely on a paradigmatic study in the new economic sociology literature: the case of option pricing analysed by MacKenzie in several articles and in an influential monograph (MacKenzie 2006). Since the theoretical and historical details are complex, I will stick to a general level of description. Interested readers are invited to read the full account in MacKenzie’s monograph.

Let us begin with some basic theory of pricing. Prices solve coordination problems: imagine two individuals, Ann and Bob, who would like to trade a commodity (say, a book). Ann is willing to buy the book for no more than 100 dollars; Bob is willing to sell the book for no less than 80 dollars. Any price between 100 and 80 dollars constitutes a possible contract: Ann of course would prefer to exchange at a price close to 80, and Bob would prefer a price close to 100, but for both of them agreeing on any price within that range is better than not trading at all.

The classic theory of market exchange predicts that in a perfectly competitive market commodities will be traded at the clearing price, that is the price that makes the quantity demanded equal to the quantity supplied. This holds – ceteris paribus – for mundane goods like books and groceries, as well as for financial products like shares and bonds. Economists however have struggled to extend the theory to peculiar products like stock options or derivatives. Stock options give the opportunity to buy (“call”) or sell (“put”) a certain commodity at a given price in the future. They can be used to manage risk, protecting investments from unforeseen fluctuations in the price of stock or commodities. But suppose you want to buy an option: who is going to sell it to you, and how much will it cost?

Valuing options has been for centuries a major headache for economic theorists and practitioners. The lack of a sound theory of pricing in fact was one of the factors that delayed the development of derivative markets. The staggering diffusion of derivatives in the last three decades can be partly attributed to the introduction of a satisfactory pricing formula by Fischer Black, Myron Scholes, Robert Merton and other financial economists in the 1970s. Although the model is relatively complex, the basic idea of the Black-Scholes approach can be explained by means of a simple analogy. Suppose you want to know the weight of an item – an apple, for example – but you cannot measure it directly because it is never found separately

11 Since it is commonly known as the Black-Scholes theory or model, I shall use for simplicity that expression from now on. Scholes and Merton received the Nobel Prize in 1997 (Black had died two years earlier). The key publications are Black and Scholes (1973) and Merton (1973).
from other commodities. As an alternative solution, you can try to determine its weight indirectly by measuring the weight of a basket that includes some apples and, say, some bananas, if you already know the weight of the bananas. Out of metaphor, in the case of option theory the weight of an apple stands for the price of an option, and the basket of fruit for a “riskless portfolio”. A riskless portfolio is a set of financial products the value of which is equal to the riskless rate of interest (the return of “safe” government bonds). So if the portfolio is riskless, its price must be equal to that of government bonds (we know the weight of the basket, so to speak). And if the portfolio includes items of known value, by mere subtraction we can derive the price of an option (see Box 1). The Black-Scholes formula generalizes this approach, whereby the price of an option is a function of the current price of the stock, the exercise price, the time it can be exercised, the interest rate, and the variance of the probability distribution of future prices.

Box 1

The following example is borrowed from MacKenzie (2006: 285-8). Imagine a binomial world, i.e. a situation that can only develop in one of two ways: in Future1, one unit of stock that today is worth $100 will be worth only $50 in, say, one year’s time. In Future2, it will double its price and be worth $200. Now, what is the value (today) of a call option to buy a unit of that stock in one year at $150? If somebody asked you to sell such an option, how much should you request in exchange? To answer this question, we start from a riskless portfolio consisting of one stock plus the sale of three call options at $150. The crucial point is that the value of the portfolio in a year’s time is $50 dollars whatever happens. The proof is simple:

- If the price of stock goes down to $50 (Future1), the options will go unexercised, so the portfolio will be worth the value of one unit of stock ($50).
- If the price goes up to $200, you lose $150 when the options are exercised, so the portfolio is worth one unit of stock ($200) – $150 = $50.

Moving from this simple idea we can determine the price of the options. From the future nominal value of the riskless portfolio, we ought to deduct the rate of interest to obtain its discounted value. With a 5% interest rate, for example, we would obtain $50 \times (1 / 1.05) = $47.62. Since the unit of stock is worth $100 today, the difference (100 – 47.62 = $52.38) must be due to the three options; therefore, each option is worth $52.38 / 3 = $17.46. Notice that because prices change constantly, a riskless portfolio must be continuously adjusted. This is basically the technique used by hedge funds to manage risk, or to put “ceilings” and “floors” to potential gains and losses. Moving beyond a simple binomial world adds considerable complications, like the use of a log-normal distribution, but fortunately none of this is relevant for our purposes.
MacKenzie stresses that the Black-Scholes model was important not just from a scientific point of view, but also because of its practical applications. Black initially made money by selling spreadsheets with the estimated price of options in the Chicago derivatives market. This may seem a strange move: in principle, it would have seemed a good idea to keep the formula secret and to exploit the difference between the “true” price of options (which nobody else knew) and their market price. This technique, known as “arbitrage”, is widely used in the stock market, and is a crucial mechanism to keep prices close to their efficient value. Once Black and Scholes had decided to make the formula public for academic reasons, however, it made sense to circulate it among practitioners in a format that could be applied easily ion the trading pit. Surprisingly, this move played an important role in the subsequent success of their model.12

It may be argued that without the formula the market for derivatives would have not existed. Before the development of modern finance theory, option markets were underdeveloped because of the difficulty to determine the true value of derivatives. Another way to put it is that before the formula was made public there were too many possible pricing equilibria. Two dealers could agree in principle to exchange options at several different prices, some of which however might have turned out later to be excessively high or low. The Black-Scholes model thus provided a way to identify one price as the right price. But for traders to act on such information, they had to believe the theory to be correct. The publication of the Black and Scholes model changed traders’ beliefs about the value of options, and simultaneously changed higher-order beliefs about other traders’ beliefs: if I buy an option today for a price that I consider correct, I must be confident that I will be able to sell it tomorrow for a price that will not diverge too much from what I will consider to be the real value of the option. But I will be able to do this only if the other traders agree, that is if they endorse the same theory that I use to determine the value of the option. The theory can work as a coordination device only if it is common knowledge among traders.

MacKenzie claims that the theory did play such a coordinating role. The Black-Scholes model, to begin with, “inherited the general cognitive authority of financial economics” (2007:70). In other words, it was seen by traders as scientific and as such provided a credible focal point for pricing in the derivatives market. Second, the model was simple: in spite of the underlying mathematical complexity, it was based on a small set of parameters and concepts that could be easily understood and discussed even by non-economists. This was crucial because traders had to use the formula in their everyday work, an activity that was facilitated by the spreadsheets prepared by Black. Finally, as already mentioned, the model was publicly available, because

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12 From now on I will take the publication of a scientific model to be analogous to the performance of a speech act. This is potentially contentious, especially for those philosophers who take models to be non-linguistic entities. These philosophers agree, however, that models are routinely used to construct or derive linguistic statements (predictions, hypotheses), and that these statements in turn guide the behaviour of scientists and practitioners. For our purposes we only need to claim that models provide signals and that these signals can be used for coordination.
its inventors had decided to circulate it and to sell calculating tools (like Black’s spreadsheets) that could be used by practitioners. Other models were not made available and thus never influenced traders’ behaviour in the same way as the Black-Scholes equations.

It is clear that the Black-Scholes model has the typical features of a successful coordination device, in the Schelling-Lewis sense. The first feature (epistemic authority) is analogous to the shaman’s authority in the story of the previous section: even though nobody understands the fine details, the shaman is recognized to have a skill that no one else has, and his speech acts are taken on faith by other individuals. This is sufficient, in a situation of indeterminacy, to trigger convergence of beliefs and hence coordination. The second feature (simplicity) is also an important property of focal points: a salient strategy must be immediately identifiable by everyone, so as to short-cut complex chains of reasoning, and must lead straight to action. The third key feature is the uniqueness of the focal point – in this case no other model could compete because no other model was commonly used by traders. Making the model public unwittingly ensured that it would act as an equilibrium selection device.

The Schelling-Lewis theory of coordination offers only a general account of the mechanics of coordination. The three features mentioned above are typical but by no means jointly necessary or sufficient to ensure coordination. Each one of them, moreover, is dependent on the instantiation of a number of psychological and social mechanisms that are context-specific and of which we only have a partial understanding. So the claim is not that publication sufficed to guarantee the success of the Black-Scholes theory, but merely that its public circulation was an important element of the story. And the story probably involves a loop from theory to behaviour and from behaviour to theory again.

5. Performativity, arbitrariness, and failure

Before we proceed, let us examine a couple of objections that could be raised against this account. First, one might say that the Black-Scholes model could not work as a coordination device because the choice of the model was not conventional: no other theory could satisfy the scientific requirements of finance theory. Arguably an option must have a Black-Scholes price, for example, because any other price would be vulnerable to arbitrage.

Notice however that vulnerability to arbitrage is an empirical hypothesis. Far from being a logically irrefutable statement, the Black-Scholes theory was based on a number of assumptions that could (and did, at some point) turn out to be wrong. Black-Scholes prices are correct only if certain conditions hold – if the
market is perfectly efficient for example – and we know that this is not necessarily the case. So the choice of the model was not forced by purely logical reasons. Its acceptance and its use required coordination among various players, as well as the setting up of institutional mechanisms that facilitated the functioning of the model and its use by traders in the derivatives market.

Second, one might say that the Black-Scholes model could not be a convention because its success did not depend solely on its acceptance: it is not true that any other formula proposed by a “shaman” with epistemic authority would have worked equally well. The model had special features that made it fit a particular social and technological environment, and which explain its acceptance in a community that had previously rejected other pricing models.

Michel Callon (2007) has noticed that theories like the Black-Scholes model do not just depend on the beliefs of market participants. Callon claims that the Black-Scholes model could work correctly as a predictive device only in an adequate environment – a “sociotechnical agencement”, in his jargon. Callon defines an agencement as “a combination of heterogeneous elements that have been carefully adjusted to one another”, “endowed with the capacity of acting in different ways depending on their configuration” (2007: 319-320). The emphasis on the materiality of agencement is meant to refute the account of performativity as a self-fulfilling prophecy:

> Whereas the notion of a self-fulfilling prophecy explains success or failure in terms of beliefs only, that of performativity goes beyond human minds and deploys all the materialities comprising the sociotechnical agencements that constitute the world in which these agents are plunged: performativity leaves open the possibility of events that might refute, or even happen independently of, what humans believe or think. (Callon 2007: 323)

Callon disagrees with the idea that the formulation of an economic theory (like a declaration or a speech act) is sufficient to bring about effects that are consistent with the theory itself. He points out that the background conditions may occasionally constitute obstacles to the fulfilment of a prophecy, preventing the theory from creating its own confirmatory effects. The Black-Scholes model in fact failed empirically, and failed for reasons that are independent of the beliefs of the economic agents.\(^\text{13}\)

Callon’s point about the fallibility of economic models is correct, although his distinction between

\(^\text{13}\) At some point during the 1987 financial crisis the theory seemed to work as a self-defeating prophecy – in the sense that it invited traders to take actions that increased the spread between predicted and actual market prices (Mackenzie calls it “counterperformativity”).
Performatives and self-fulfilling prophecies is questionable. Performative statements and self-fulfilling prophecies are two aspects of the same phenomenon. But most self-fulfilling prophecies, including performative speech acts, are dependent on the instantiation of background conditions that have little to do with agents’ beliefs. Suppose that I say “I’ll meet you here at noon”, for example. Suppose that with this sentence I am trying to influence your beliefs in such a way as to facilitate coordination. Successful coordination cannot depend exclusively on my speech act, surely, and its effect does not merely depend on your beliefs; a number of other background conditions must be in place, even if the belief mechanism works well. Perhaps you really intend to be here at noon, but one of your tires breaks along the way and as a consequence you do not show up. The prophecy has failed, for reasons that have little to do with your beliefs or mine. So the success of self-fulfilling prophecies does not depend on beliefs only. The self-fulfilling character of a speech act merely requires that it contributes to create expectations that – together with other background conditions – causally contribute to make the theory true (it is part of its perlocutionary aspect, in Austin’s terminology). But it is always possible that some background conditions fail. Similarly in the Black-Scholes case traders’ faith in the theory was an element that contributed to fulfil the prophecy, but other conditions were required for its successful performance.  

6. Constitution and causation

MacKenzie’s account of the Black-Scholes theory illustrates how an economic model may work as a coordination device. I will now argue that this is the same role played by paradigmatic performative speech acts like ceremonial formulae, promises, and appointments. If correct, this would legitimize the use of Austin’s performativity in the new economic sociology programme.

In spite of the similarities, there may be non-trivial differences between the phenomena studied by economic sociologists and Austin’s performative acts. An important difference, according to Mäki, concerns the relation between speech acts and institutional acts (or facts):

The connection between speaking words and doing things is one of constitution rather than causation. Saying “I apologize” constitutes the act of apologizing. Saying “I agree” constitutes the act of agreeing. Those utterings do not cause those acts, rather they are constituted by those utterings. To utter those sentences is to take those actions. (Mäki 2013: 447)

Mäki goes on to say that the “performative” theories studied by economic sociologists do not play the

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14 On this point see also Brisset (2014).
constitutive role that characterizes Austin’s performative utterances: by stating a theorem or proposing a model, an economist may well change the beliefs and behaviour of market participants (a case of causal efficacy) without creating or constituting anything new. No “Black-Scholes institution” comes into being when the formula is stated, as opposed to the way in which a promise, a president, a meeting, or a marriage comes into being when the relevant speech act is uttered. Another way to put it is that while performative statements are both illocutionary and perlocutionary acts, the “utterance” (publication) of an economic theory can only be a perlocutionary act (see Mäki 2013: 449-450).

Mäki’s critique is challenging, partly because the notion of constitution is notoriously difficult. The cases that philosophers have studied, moreover – like part-whole relations – are usually of little help to address the problems that social ontologists are concerned about. To say that Michelangelo’s statue of David is constituted by a certain piece of marble is to say that whenever the statue is there, the piece of marble is also necessarily there. Necessity here may be interpreted in a conceptual or in a more robust ontological fashion, but definitely not in a causal sense. The piece of marble does not cause or bring about Michelangelo’s David: in an intuitive sense, it is Michelangelo’s David, or at least a crucial aspect of the entity that we call “David”. But the relation of constitution that applies to statues, however, does not necessarily apply to performative statements. Many philosophers are convinced that invoking constitution in the case of speech acts is misleading, because the analysis of performatives does not require any esoteric metaphysical relation.

Ruth Millikan for example has argued that constitution is always either a semantic or a causal relation, and that the “robust” ontological interpretation results from unnecessarily conflating the two. Here is the abstract of one of her recent papers:

> Intentions and conventions can “make a thing be what it is” in two different ways. Taken separately, neither has any magic in it at all. Neither produces objects of a kind that is in any way remarkable or that requires any special mode of understanding. Only by running these two ways together in our minds do we imagine “socially constructed” or “socially constituted” objects to be other than wholly mundane. (Millikan 2015: 27)

Many philosophers agree with Millikan on this point. Roughly speaking, the idea is that there is a semantic relation that corresponds to the illocutionary aspect of speech acts; and there is a causal relation that corresponds to the perlocutionary one. This way of framing the issue has some striking consequences: it helps seeing, in particular, that the essential aspect of performative statements is the perlocutionary or

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15 For two notable exceptions, see Thomasson (1999) and Epstein (2015).
causal one, while the illocutionary (semantic) aspect is secondary and even dispensable.

The first step is to ask what, if anything, could be constituted by a performative speech act. In Searle’s formula of constitutive rules, this amounts to ask what the Y-term stands for. Unfortunately the “X counts as Y” formula is elliptic, because the content of the Y-term is left undefined. To say that

saying “I do” in front of a priest counts as a getting married,

or that

being voted by the majority of delegates in a national election counts as being the President of the United States,

is vacuous unless we specify the meaning of the institutional Y-terms that appear in these formulae. What is “to get married”, and what is “the President of the United States”? Joseph Ransdell (1971), Amedeo Conte (1988) and Frank Hindriks (2009) have pointed out that in order to make the meaning of constitutive rules explicit it is necessary to expand the formula by adding another term that specifies the import of the institutional term. And in most cases, the import of the Y-term is a set of rules or actions that indicate what various individuals can or must do in various circumstances.

For example, in the case of marriage the Y-term is associated with a series of rights and duties that regulate the behaviour of married couples. Husband and wife must support each other economically, are responsible for the welfare of their kids, have a right of sexual monopoly, and so on and so forth. Similarly the rules of conduct of the President of the United States – what she can or must do – are specified in the Constitution, in the legislation, and in the unwritten customs of US politics. Analogous accounts can be provided for other paradigmatic cases of performative speech acts, like promises, decrees, christenings, etc.

In order to unpack the meaning of the Y-term, it is useful to modify the logical structure of constitutive rules by adding a Z-term that refers to the rules associated with the Y-term. The formula now becomes:

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\text{in } C, X \text{ counts as } Y \text{ and } Y \text{ implies } Z.
\]

Even though this analysis seems innocuous, it has non-trivial consequences. The constitutive rule formula now gives the full definition of the meaning of the Y-term: X defines its denotation (the entities that are
conventionally called Y) and Z its connotation (the normative consequences of being called Y, according to local conventions). This helps seeing how performatives can simultaneously describe and prescribe behaviour: they are, in the terminology of Millikan (1995), “pushmi-pullyu representations”. But the XYZ formulation also shows that the Y-terms of constitutive rules are dispensable. If their meaning is captured by the X- and Z-terms, then constitutive rules can be translated into simpler formulae where the Y-terms do not appear.

When I say that the game-term [the Y-term] is eliminable, I mean that it has no logical function in the game that cannot be handled by its replacement with an expression of its import: aside from its (replaceable) function of linking connotation with import, the function of the term in the game is merely mnemonic and practical. (Ransdell 1971: 390)

There is no difference between, on the one hand,

saying “I promise to do A” counts as promising to do A, and promising to do A implies that you ought to do A (X counts as Y, and Y implies Z),

and, on the other,

Saying “I promise to do A” implies that you ought to do A (X implies Z).

Now, the fact that Y-terms are eliminable does not mean that the social entities they refer to do not exist. Marriages, borders, and presidents are very real things that we must retain in our ontology. The XYZ analysis of constitutive rules rather helps us appreciate what sort of things these institutional entities are. And once we see it more clearly, the idea that the illocutionary aspect is primary becomes rather dubious. When Y is eliminated, the illocutionary aspect of the performative disappears, leaving only the perlocutionary one. This is the second striking consequence of the XYZ analysis, and the one that matters most for the purposes of this paper.

So, to return to Mäki’s argument, the idea that the relation between performative speech acts and institutional facts is one of constitution is probably a grammatical illusion. Even though it appears plausible when institutional entities and phenomena are described in XY terms, it becomes odd as soon as the full meaning of constitutive rules is unpacked using the XYZ formula. Take promising again: the content of “you ought to do A” may be analysed in detail, specifying a set of things that the promisee is entitled to do if A is not done. The promisee can blame, criticize, get compensation from the promisor for example. And these
entitlements in turn may be specified by listing other actions that other parties (the police, the judiciary, the community members) are expected to implement (expropriating goods, jailing, or just gossiping) in case the promisor does not fulfil her obligation. At the bottom, an institutional term refers to a complex set of normative expectations.  

Similarly, to say that this garden is John’s property means that Ann and Bob must not use it without his permission. That if they try to use it, and John applies reasonable force to keep them out, he believes that he will not be fined or jailed. That if John calls the police, he expects that they will help him, and so on and so forth. These beliefs and expectations constitute the institution of private property: in a very obvious sense, there are no genuine property rights in a society where people do not expect each other to enforce the actions implied by the Y-term.

Now, recall that according to Mäki (2013) institutions like promises, weddings, etc. are constituted by performative speech acts. But the idea of a constitutive relation linking speech acts with institutional facts loses much of its appeal once we realise that the Y-terms are eliminable. Take the following cases:

(1) saying “I promise to return the money” constitutes promising.

(1’) saying “I promise to return the money” constitutes the expectation that people will form a bad opinion of you if you do not return it.

(2) saying “I do” constitutes getting married

(2’) saying “I do” constitutes the expectation that a judge will make you pay alimony if you betray me.

Although (1) and (2) sound grammatically correct; (1’) and (2’) are odd. But if the XYZ account of constitutive rules is right – as argued by Ransdell, Conte, and Hindriks – then we should take our intuitions regarding (1’) and (2’) seriously, because (1) and (2) are elliptic statements that include unanalysed institutional terms.

Clearly the right way to adjust (1’) and (2’) is to recognize that the speech acts in question have causal force with respect to the expectations. Saying “I do” brings about a set of beliefs concerning the actions of your

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16 The idea is originally in Lewis (1969) but has been further articulated by Sugden (1986, 1998), Bicchieri (2006) and others.
spouse and of third parties. Uttering “I promise to do A” triggers a set of expectations concerning your own actions and the actions that others will perform if you do not do it. But bringing about and triggering are causal relations, rather than relations of conceptual or ontological dependence. Once the meaning of the Y-term has been made explicit, it becomes apparent that the causal, perlocutionary aspect of performative speech acts is primary, while the illocutionary aspect is accessory.

If this is the case, then there is a close analogy between the effect of these performative speech acts and the causal effects of a theory like the Black-Scholes model. “Uttering” the Black-Scholes model creates shared beliefs about the correct way of pricing options, and sets in motion expectations concerning the behaviour of traders in the market. Mäki is right that stating an economic theory does not constitute a new institutional act, but this simply means that we do not use an institutional term to refer its effects. But this does not make it ontologically different from promising or marrying. The idea that there is a separate institutional act that is constitutively dependent on a speech act is as misguided as the idea that there is a thing that travels from Jill to Jack when she gives him a kiss. It is an illusion of grammatical form that is easily dispelled by reformulating the constitutive rule in an equivalent form.

Institutional facts are nothing but sets of actions and expectations about actions. Whether or not we use a special name to refer to the latter is irrelevant. Many familiar institutions are not associated with a Y-term: driving on the right hand-side of the road, for example, lacks a name. But Y-terms are eliminable and unnecessary, as we have seen, so driving on the right is a genuine institution like getting married or making promises: it stands for a set of actions (which can be described in Z-terms) that people must perform when driving, the shared expectation that most drivers will perform those actions, and that those who won’t do it will be punished by the relevant authorities.

7. Concluding remarks

My goal in this chapter has been to argue that economic sociologists have not illicitly appropriated the concept of performativity. In order to do so I have outlined a theory of performativity that builds on the insights of Austin and his followers, with a little help from the theory of conventions of Schelling and Lewis. The latter helps to lay out the analogy between the coordinating role played by speech acts in ordinary institutional contexts, and the coordinating role that economic models may play vis à vis market behaviour. Since the effect of correlation devices on behaviour is primarily causal, I have defended this account from Mäki’s charge of ignoring the fundamental constitutive role of performative speech acts. This required revisiting the illocutionary-perlocutionary distinction and analyzing the deep structure of constitutive rules.
Once institutional acts (and facts) are demystified, the analogy between Austin’s performative speech acts and the coordinating role of theories like the Black-Scholes model becomes even more apparent. And with this step, my defence of the way in which performativity has been used in the economic sociology literature is complete.

It is important to stress that I have not offered an exegesis of what Austin or Searle meant when they originally articulated the notion of performative statement. The argument is based on a theory of performativity, which is partly independent of Austin’s and Searle’s texts because it addresses issues that they did not clarify, and ventures in areas that they did not explore. The claim that institutional facts are not constituted but caused by performative statements depends crucially on a specific interpretation of the content of Y-terms – namely the idea that they refer to sets of behavioural rules, and that the latter entail (normative) expectations. This idea is not widely accepted, to be sure. Some philosophers think that the notion of constitution is ontologically thicker, and disagree with the attempts made by Millikan and others to reduce it to more basic relations. As long as the concept of performativity is used as an explanatory tool in the context of a scientific research programme, however, I find the interpretation of performatives as coordination devices entirely natural and plausible. Whether there is more to them than this, is something that philosophers will continue to discuss for a long time, but that is unlikely to have much influence on the practice of social science.

References


