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social norms and the law. After one eats in a restaurant, that one has to leave a tip is a social norm, and that one has to pay for the food is law. As is evident from this, *both norms and the law influence our behaviour*. What we say, for instance, can be curtailed by having laws that restrict freedom of speech. But not having such a restrictive law, or having a law or a constitutional requirement – such as the First Amendment in the US – which gives individuals the right to say what they wish or believe in, does not automatically guarantee freedom of speech. *Social* restrictions can also curtail our freedom. If there is a social norm against a certain opinion or viewpoint or against the explicit mention of certain facts of life, then through the threat of ostracism and other ‘social’ punishments the individual freedom to express a viewpoint or fact can be limited.

The goods that we buy, the food that we consume, the services that we render are all influenced both by the law and the norms of society. But in traditional economics there was little recognition of this fact, especially the influence of norms. In recent years this has been changing and there have been several initiatives to integrate the analysis of norms and institutions with markets and the provision of public goods (see, for instance, Ullmann-Margalit 1977; Elster 1989). Indeed some of the clues to important economic phenomena – for instance, why one nation has rapid growth and another stagnates – may lie in these extra-economic factors.

This essay begins by discussing what social norms are and how they influence economic functioning. It comments on the relation between norms and evolutionary processes and the interconnections between social norms, the law and the state and in particular the much-discussed question: to what extent can social norms or voluntary community-based effort be a substitute for law?

SOCIAL NORMS. Like cows, social norms are easier to recognize than to define. Most existing definitions are suggestive rather than exact. Consider Axelrod’s definition (1986: 1097): ‘A *norm* exists in a given setting to the extent that individuals usually act in a certain way and are often punished when seen not to be acting in this way.’ This is a useful working definition but clearly it is understandable only by those who already know what a norm is. Likewise, Elster (1989: 99–100) defines ‘social norms by the feature that they are *not outcome-oriented*’; and he adds that for ‘norms to be *social*, they must be shared by other people and partly sustained by their approval and disapproval’. He then goes on to distinguish these from ‘legal norms’, which are ‘enforced by specialists who do so out of self-interest: they lose their job if they don’t. By contrast, social norms are *enforced by members of the general community*.’ It is worth adding that at times social norms can get internalized to the extent that they do not need social enforcement and are adhered to by individuals of their own accord. With these suggestive ideas in the background, it is convenient to study norms by distinguishing between three

kinds of social norms: rationality-limiting norms, preference-changing norms and equilibrium-selection norms.

A '*rationality-limiting norm*' means a norm which stops us from doing certain things or choosing certain options, irrespective of how much utility that thing or option gives us. Thus most individuals would not consider picking another person's wallet in a crowded bus. This they would do not by speculating about the amount the wallet is likely to contain, the chances of getting caught, the severity of the law and so on, but because they consider stealing wallets as something that is *simply not done*.

In traditional economics the 'feasible set' of alternatives facing an individual (from which the person makes his or her choice) is defined in terms of technological or budgetary feasibility. Thus a consumer's feasible set is the collection of all the combinations of goods and services that the consumer can purchase given his or her income. From the above discussion it should be evident that a rationality-limiting norm further limits the feasible set, because now certain alternatives may be infeasible to an individual not just because they are technologically infeasible (like walking on water) or budgetarily infeasible (like buying a Jaguar car) but because they are ruled out by the person's norms. Indeed a person endowed with norms may forego options which could have enhanced his utility and thus such a person would be considered irrational in terms of mainstream economics. Basically, such norms limit the domain over which the rationality calculus is applied.

Some may argue that instead of thinking that such norms limit individual rationality, we can simply redefine our utility function so that what I described above as normatively infeasible is described as an option which gives a very low utility, perhaps negative infinity. But doing this *invariably* runs the risk of reducing utility theory to a tautology. Moreover, in reality there are certain things we would love to do but our norms get in the way. Nevertheless, this does not mean that norms never change our preferences or utility functions. Certain norms do get internalized. There are many individuals whose religion requires them to be vegetarian and they tell you that they find non-vegetarian food revolting anyway. More often than not this is no coincidence; a religious norm adhered to over a stretch of time often gets internalized so that one begins actually to prefer what the norm requires one to do. This can explain why one finds systematic variations in taste across regions and nations. What starts out as a norm or a custom can over time become part of one's preference. Such a norm may be referred to as a '*preference-changing norm*'. The only reason for being aware of this kind of a norm is that it can give us an understanding of how some of our preferences are formed. This can enormously enrich the traditional model of economics, which treats preferences as primitives.

Finally, consider the norm, in many countries, of driving on the right. It is true that this norm is additionally fortified by the law; but it is arguable that even if this were just a norm or a convention and not the law, people would still drive on the right. This explains why the police have to be vigilant in enforcing the stop-sign rule or the speeding rule but not the drive-on-the-right rule. The first two are laws which are not in people's self-interest (they may of

course be in their *group* interest). But the third is a norm which, once it is in place, happens to be entirely compatible with self-interested behaviour. In the absence of such a norm, there are at least two possible equilibria – everyone drives on the left and everyone drives on the right. The norm is very different from the two discussed above because it simply helps people *select* an equilibrium. It is for this reason that I call such a norm an '*equilibrium-selection norm*'. This is the norm the study of which is currently in vogue in economics and has generated a lot of literature, to the extent that economists tend to forget about the other kinds of norms – conveniently so, since the equilibrium-selection norm is the one which is most compatible with conventional economics.

According to this terminology, Akerlof's (1976) conception of caste is that of an equilibrium-selection norm. More recently, Cooter (1997), in discussing the connection between norms and law, identifies norms entirely with equilibrium-selection norms. He describes a 'social norm' as an 'effective consensus obligation' and goes on to identify a consensus obligation with an equilibrium of a game. All these are special cases of the general idea of a social institution as an equilibrium of a game (Schotter 1981; Calvert 1995).

Some writers have distinguished between 'conventions' and (equilibrium-selection) norms, by treating the latter as special conventions, the adherence to which are additionally fortified by the human desire for peer approval (Sugden 1989; see also Wärneryd 1990). Thus Sugden (1989) has described the norm which used to exist in a fishing village in Yorkshire, whereby the first person arriving on the shore after a high tide had the right to collect the driftwood. Moreover, if she placed two stones on top of the pile, she could leave the pile and take it at leisure. Sugden explains how such a rule can emerge initially as a convention which is an equilibrium, in the sense that once it is there, it is no one's interest to deviate from it unilaterally. Then, over time, as people get used to it, they develop a sense of rights associated with this convention; so that anybody violating it is met with social disapproval. That is how the convention becomes a social norm. While recognizing the scope for this kind of categorization, I shall nevertheless proceed by using the terms 'convention', 'custom' and 'norm' interchangeably.

The simplest example of such an equilibrium-selection norm may be illustrated with the prisoner's dilemma. If the game is played once, no rational player will cooperate, as is well known. But suppose the game is being played by two players repeatedly and without end. Then it is possible for the two players to adopt strategies such as the tit-for-tat strategy or the trigger strategy, which result in cooperation and which are in each player's self-interest. A tit-for-tat strategy is one where the player begins by cooperating and then does what the other player has done in the previous game. Evidently, if each of the two players play tit-for-tat, they will end up cooperating throughout. If one of them deviates in one period by playing noncooperatively, then (given that they are playing tit-for-tat strategies) from then on they will both play the noncooperative strategy. Hence, unless the discount rates of the players are so low that the future losses forever do not offset the one-time gain from

sudden defection, no player will deviate. Hence, the tit-for-tat strategy can be thought of as a social norm which, once in place, survives because of self-interest (given that the time discount rate is below some critical level). So, far from being contrary to one's self-interest, these kinds of norms are parasitical on self-interest. Hence, they sit rather comfortably with conventional economics and its *homo oeconomicus*.

The distinctions discussed above may not always be self-evident. Consider the norm of reciprocity, whereby human beings exchange favours over time. For instance, a person in need can expect help from other members of the tribe or the village, the implicit understanding being that the help will be reciprocated at other times when fortunes are reversed. This norm can be thought of as a rationality-limiting norm since the person who helps out the destitute seems to do so against his *self-interest*. But we can also take a long-run perspective on this and argue that if an individual refuses to help when it is his turn, the whole system can collapse. So, in a manner akin to the case of cooperation in the repeated prisoner's dilemma, the norm of reciprocity may be an equilibrium-selection norm. In other words, it will be foolish not to recognize that there may be competing explanations for the same norm.

NORMS, THE LAW AND THE STATE. At one level there is a lot in common between social norms and the law. Both place restrictions on individual behaviour. Both tend to work through sanctions. It is not surprising that there has been a large literature that compares and contrasts these two related forms of control over the individual (Hart 1961; Raz 1980).

To understand the role of law in economics it is helpful to think of an economy as a large 'game'. That is, every citizen in the economy can be thought of as a 'player' who has available to him or her a set of actions (also called strategies). The final outcome that occurs in the economy depends on the choice of strategy by each player, and each player's 'payoff' or utility depends on everybody's choice of strategy. It is the latter, which allows one person's strategy to affect another person's utility, that gives the game-theoretic approach its distinctness. It recognizes that externalities may be ubiquitous rather than the exception. An economy described as above may be called an 'economy game'.

What role does law play in such a game? The traditional view is that the law either limits an individual's set of available strategies or changes the payoff function. Consider two laws: (a) one that bans cigarette smoking and (b) one that declares that anybody driving at a speed above 100km per hour has to pay a fine of 200 francs. Now, (a) can be thought of as a law that limits the set of strategies or actions open to an individual and (b) can be thought of as a law that changes the payoff function of individuals. Earlier, the payoff from driving at 140km per hour would be the sum of the joy of arriving early at the destination and the thrill of speed. But now (that is, once law (b) is in place), we have to subtract from that the expected cost of the fine (that is, 200 francs multiplied by the probability of getting caught) to compute the payoff of driving at 140kmph. So, it does seem that the law can affect the feasible set and the payoff function.

Note however that it is also possible to think of the ban on smoking not as a restriction on the set of what a person can do but as a change in the payoff function, because we can say that even after the smoking ban a person *can* smoke, but has to pay a huge penalty if he is caught. Baird, Gertner and Picker (1994) take exactly this view. They think of laws as invariably affecting only the payoff functions of players. This is a plausible alternative characterization.

More controversially, it is possible to go a step further and argue that strictly a law cannot affect either the strategy sets or the payoff functions. We have the impression that the law changes the payoff function because, unwittingly, we treat the enforcers of the law as agents exogenous to the economy game. We assume that they mechanically enforce what the law lays down. Once the state is endogenized, however, and the enforcers of the law are also treated as players with their own motivations, it becomes evident that the law cannot change the payoff functions or the strategy sets. This is because all players taken together are free to ignore the law and do exactly what they were doing in the absence of the law, and in so doing get the same payoff as before. So, according to this argument, the law cannot change the game. It can only influence the *outcome* of the economy game and it does so by influencing the beliefs of players concerning how other players will behave, and by creating focal points (Basu 1997).

Much of the above description of the role of law in economics can be translated to social norms as well. The way in which norms differ from the law is in terms of their origins and enforcement. According to one classic view, usually associated with Austin (1861), a law is a command from the sovereign to his subjects. In Austin's model the sovereign is 'illimitable' – he can legislate any law into existence and in the exercise of his legal powers he is not himself limited by the law. While Austin derived many of his views from Bentham, Bentham did not consider the sovereign to be illimitable.

This view of the law as something that can only come from the state or the sovereign and is enforced by the agents of the state can, however, be taken too far, as when some commentators do not regard 'primitive law' as law at all. On the other hand, anthropologists and historians have contested such an interpretation. Gluckman's (1955) classic work outlines the legal system of the Lozi people of Barotseland and though it is not formally the law of the state it is very much a legal system. Similarly ancient laws, such as the Code of Hammurabi in Mesopotamia which dates back to more than two thousand years BC or the laws outlined by Kautilya for the Maurya Dynasty in India in the book *The Arthashastra*, written some time between the fourth century BC and 150 AD, are by any standard legal systems. They are codified, have procedures for implementation and are enforced by well-defined agents.

It is true that some norms shade into laws and the boundary between the two is not always sharp. A good example is caste or race discrimination. Are these matters of law or norms? In contemporary India, for instance, caste is clearly a matter of norms, since the law does not recognize caste differences (excepting for some kinds of

affirmative action to reverse historical disadvantages). But if one goes back in time a thousand or two thousand years, the status of caste becomes ambiguous. If we recognize Kautilya's *The Arthashastra* as specifying the laws of that society, then caste, we have to admit, was a matter of law. As Kautilya states in no uncertain terms (1992: 484): 'A *Scrapaka* (a dog-breeder and an outcaste) man having sexual relations with an *Arya* woman shall be condemned to death. A *Scrapaka* woman having relations with an *Arya* male shall be mutilated by having her ears and nose cut off.' (I leave it to the reader to decide which of these was considered the bigger crime.) But if one goes even further back in time the caste system is simply an informal social system or norm, not enforced by the 'state' as law. Leaving such troublesome cases aside, we can, in general, assert that norms are either enforced by the community or society at large or by the individual's own sense of shame and embarrassment, whereas the law is enforced by the state or some organization resembling the state.

Secondly, the *origins* of norms and laws are usually different. Laws typically *can* be enacted; and so dates *can* be associated with particular laws. There are no doubt laws which do not take the form of legislative statutes. This is true, for instance, of English common law, and of the US practice of relying on interpretive principles and judicial rulings. As Ferejohn notes (1995: 193), 'Many nonstatutory legal materials [...] bear a formulaic resemblance to statutory commands, while having a different pedigree.' Nevertheless, laws *can* be adopted through acts of parliament, even if (at times) only to codify what is already accepted by custom. Social norms, on the other hand, almost always emerge gradually. Repeated patterns of behaviour gradually ossify into custom and then into a social norm, the violation of which causes eyebrows to be raised and is seen as an aberration. The origins of many norms, such as caste norms, disappear into the mists of distant history.

As with all distinctions, this is not one without its problems. Legal theorists talk of 'natural laws' and 'positive laws' (for discussion, see Goldsmith 1996). The former consist of that which stems from our natural sense of morals and justice, whereas the latter refers to the codified laws of the state or some comparable organization. First of all, to the extent that 'natural laws' are also laws, their roots may be as difficult to locate as the roots of norms. Moreover, even for many positive laws, the origins often lie in the gradually hardening norms of the society. Thus the law can at times be simply a codification of norms. Not surprisingly, legal scholars and philosophers have differed on whether laws, especially natural laws, are invented or discovered (Olafson 1961).

This conflict recently arose in the case of Miriam Wilgal, an eighteen-year-old woman in Papua New Guinea, whose clan agreed to give her away to another clan as part of a traditional tribal contract. The trouble arose because Miriam refused to go, taking the case to court and citing the 'written law' of the state. The court ruled in her favour. But the clan that has failed to secure Miriam has threatened to press counter-charges for the violation of contract and the denial of traditional tribal rights. As the *New York Times* (6 May 1997) noted: 'In effect, they are

threatening to use the modern legal system to demand their traditional tribal rights.'

The origins of many norms are more difficult to understand than their persistence (Basu, Jones and Schlicht 1987). As Akerlof (1976) had argued, a norm persists if it is no one's individual interest to violate it. Hence, as in the prisoner's dilemma game, norms can survive as long as they are individually rational, even though they may harm the group as a whole. On other occasions some norms may be in the interest of one group and hurt another. These, at first sight, seem to amount to a rejection of 'functionalism', which claims that institutions exist to fulfil useful social functions. However, one can bring back a minimal functionalism by recognizing that norms must have some properties of evolutionary stability.

EVOLUTION AND NORMS. Where these norms come from is difficult to explain but we can, at least partially, understand why some norms exist and why some do not, in terms of *evolutionary* stability. Indeed evolution and norms are topics that have for long been discussed as closely related to each other (Hayek 1960; Axelrod 1986; Boyd and Richerson 1994). According to this argument, we do not see any society with the norm that one must not eat proteins simply because such a society would perish along with its norm. Similarly we do not find any society where stealing anything from anyone is considered legitimate because such a society would soon be in complete chaos, become impoverished, and wither away.

On Forest Home Drive in the city of Ithaca, New York, there is a bridge on which two cars cannot cross at the same time. When we were children we were told how in the Andes there are pathways along steep mountains, which are so narrow that two persons cannot pass; and so when two persons found themselves face to face on one of these paths, the one with the quicker draw survived by shooting the other person. In Ithaca a different norm is used. Cars pass in little convoys, three or four at a time, and the convoys from the two directions alternate. That is, after the third or the fourth car ahead goes, one just stops and waits for an oncoming convoy and then starts once again. This is against one's self-interest; so it is indeed a rationality-limiting norm. However, the reason why we find some norm of this kind and not the Andean custom of a shoot-out is that it is evolutionarily more stable. This is also the reason why the 'Andes custom' probably exists nowhere outside children's tales. A society practising this norm would not survive and so neither would the norm. In brief, the evolutionary argument explains why certain norms cannot exist by demonstrating why societies which carry such norms cannot survive.

There are different ways of formalizing this intuition. Let me here follow the route of evolutionary game theory *à la* Maynard Smith and Price (1973). In their model agents play a certain game pairwise, but unlike in the economist's game in their 'game' (a) each agent plays a fixed strategy, and (b) the payoffs do not really indicate utility but are fitness indices, whereby a higher payoff implies a faster reproduction of the agent playing that strategy. Assumption (a) is justified by the fact that in these 'games' the players are typically animals or phenotypes who cannot

choose rationally but are programmed to behave in certain ways. A hawk always plays the aggressive strategy, a dove the accommodating one. Now think of a society in which all players are identical, that is they play the same strategy. Into this society occasionally other strategies (that is, players using other kinds of strategies) enter as mutants. If the mutants earn a greater payoff when they play the incumbents they kill off the original population. Otherwise, the mutants get killed off and we say that the existing population is 'immune' against the particular mutant in question. If a particular strategy is immune against all possible mutants we say that that strategy is 'evolutionarily stable'. That is, agents programmed to play that strategy will survive the process of natural selection. From this to explain the evolutionary survival of norms is a small step.

Consider what has been described above as a rationality-limiting norm. Hence a social norm is a restriction on what people choose. This is the view that Boyd and Richerson (1994:72) take in their anthropological study of norms: 'A culture's norms determine which behaviours are permissible and which are not.' Hence, if we start with a game in which each person has a feasible set of strategies, then a 'norm' is a subset of that set. For instance, *i*'s norm may allow *i* to choose anything from that set, except the strategies of picking pockets in buses and jumping queues. Hence, a person with a norm is between the textbook *homo economicus* who is free to choose any strategy and Maynard-Smith and Price's player who has to choose one specific strategy. Now instead of looking for strategies which are evolutionarily stable we can look for norms which are evolutionarily stable (Basu 1996). Such an approach can yield interesting insights. It can explain certain kinds of cooperative behaviour and altruism. Stable norms can earn payoffs greater than in a Nash equilibrium.

A related question that in recent times has exercised the minds of many researchers working in the area of law and social norms is this: can social order be achieved through social norms and community efforts, without the intervention of the state and its laws, and without bringing in the effects of natural selection and evolution?

LAW AND ORDER. 'Legal centralism' is a phrase that has been used by Williamson (1983) to express the belief that all law and its enforcement come from the government. From such a belief it is easy to jump to the belief that the order that we see in the world – to the extent that we do – emanates from the law and its enforcement. This belief has in turn given rise to a large literature, both theoretical and empirical, which challenges this assumption (Taylor 1976; Sugden 1989; Ellickson 1991). With the rise of game theory the theoretical ideas are now easy to grasp. First, we can often shape the behaviour of another person by using the threat of 'exit' from a relationship. Secondly, many games or strategic environments in which some suboptimal outcome seems inevitable turn out differently when repeated interactions are considered. As already noted, if the prisoner's dilemma is played repeatedly the players may be able to cooperate without the need for third party intervention. The threat of future retaliation keeps the players in line. Unfortunately, and this is important to keep in mind, this method cannot explain cooperation in

the prisoner's dilemma but only in a variant of it, namely when it is played an infinite number of times.

Whether for these reasons or not, there are many examples of societies or groups ushering in order without recourse to the law. Bernstein (1992) has described in detail how the diamond industry organizes its own system of punishment and monitoring without seeking legal help. Ellickson (1991) documents how the ranchers of Shasta County, California, have evolved their own rules and sanctions to bring order in their lives and professional pursuits. Interesting though these facts are one has to be careful in posing these examples and arguments as part of the debate on state intervention and nonintervention. There is no reason why we must think of the state as a force opposing private efforts. After all, the state itself emerged gradually, from the atomistic actions of individuals. So in some ways the state is itself like a norm. Hence, the state may be viewed as one of the many different instruments through which individuals create order among themselves. Instead of thinking of the law and social norms as alternative systems, or worse, as adversaries, it is possible to treat the legal system as part of the general theory of norms.

KASIBH BASU

See also CONVENTION AT THE FOUNDATION OF LAW; CONVENTIONS; CUSTOMARY LAW; EFFICIENT NORMS; EVOLUTIONARY GAME THEORY; GAME THEORY AND THE LAW; PRISONERS' DILEMMA; PRIVATE COMMERCIAL LAW.

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BIBLIOGRAPHY

- Akertof, G.A. 1976. The economics of caste and of the rat race and other woeful tales. *Quarterly Journal of Economics* 90: 599–617.
- Austin, J. 1861. *Lectures on Jurisprudence*. London, John Murray (1911 edition).
- Axelrod, R. 1986. An evolutionary approach to norms. *American Political Science Review* 80: 1095–1111.
- Baird, D.G., Gertner, R.H. and Picker, R.C. 1994. *Game Theory and the Law*. Cambridge, MA: Harvard University Press.
- Basu, K. 1996. Notes on evolution, rationality and norms. *Journal of Institutional and Theoretical Economics* 152: 739–50.
- Basu, K. 1997. Prelude to political economy: The role of norms and law in economics. Paper presented at the Conference on 'Social Science and Social Change' at the Institute for Advanced Study, Princeton, 9–11 May 1997.
- Basu, K., Jones, E.J. and Schlicht, E. 1987. The growth and decay of custom: the role of the new institutional economics in economic history. *Explorations in Economic History* 24: 1–21.
- Bernstein, L. 1992. Opting out of the legal system: extralegal contractual relations in the diamond industry. *Journal of Legal Studies* 21: 115–57.
- Boyd, R. and Richerson, P.J. 1994. The evolution of norms: an anthropological view. *Journal of Institutional and Theoretical Economics* 150: 72–87.
- Calvert, R.L. 1995. The rational choice theory of social institutions. In *Modern Political Economy*, ed. J.S. Banks and E.A. Hanushek, Cambridge: Cambridge University Press.
- Cooter, R.D. 1997. *Law from order*. Mimeo: University of California, Berkeley.
- Ellickson, R.C. 1991. *Order without Law: How Neighbors Settle Disputes*. Cambridge, MA: Harvard University Press.

- Elster, J. 1989. Social norms and economic theory. *Journal of Economic Perspectives* 3: 99–117.
- Ferejohn, J. 1995. Law, legislation, and positive political theory. In *Modern Political Economy*, ed. J.S. Banks and E.A. Hanushek, Cambridge: Cambridge University Press.
- Gluckman, M. 1955. *The Judicial Process among the Barotse of Northern Rhodesia*. Manchester: Manchester University Press.
- Goldsmith, M.M. 1996. Hobbes on law. In *The Cambridge Companion to Hobbes*, ed. T. Sorell, Cambridge: Cambridge University Press.
- Hart, H.L.A. 1961. *The Concept of Law*. Oxford: Clarendon Press.
- Hayek, F. 1960. *The Constitution of Liberty*. London: Routledge & Kegan Paul.
- Kautilya. 1992. *The Arthashastra*. Edited by L.N. Rangarajan, New Delhi: Penguin Books.
- Maynard Smith, J. and Price, G.R. 1973. The logic of animal conflict. *Nature* 246: 15–18.
- Olafson, F.A. 1961. Natural law and natural rights. In *Society, Law and Morality*, ed. F.A. Olafson, Englewood Cliffs, NJ: Prentice-Hall.
- Raz, J. 1980. *The Concept of a Legal System: An Introduction to the Theory of Legal System*. 2nd edn, Oxford: Clarendon Press.
- Schotter, A. 1981. *The Economic Theory of Social Institutions*. Cambridge: Cambridge University Press.
- Sugden, R. 1989. Spontaneous order. *Journal of Economic Perspectives* 3: 85–97.
- Taylor, M. 1976. *Anarchy and Cooperation*. London: Wiley.
- Ullmann-Margalit, E. 1977. *The Emergence of Norms*. Oxford: Clarendon Press.
- Wärneryd, K. 1990. Economic conventions: essays in institutional economics. PhD dissertation. Stockholm School of Economics.
- Williamson, O.E. 1983. Credible commitments: using hostages to support exchange. *American Economic Review* 73: 519–40.