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Conventions

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ideological infighting among dogmatic economists. Perhaps it is because it permits us to find success with a limited objective of constructing models that can be confirmed, rather than trying to find universal 'truths'. Perhaps it merely is, as Popper fears, an all-too-easy way to avoid criticism.

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Conventions

There are a number of different terms used in economics to characterize social conventions and conventional behaviour: conventions, rules and norms, and sometimes habits, routines, customs and traditions. The vocabulary is not used entirely consistently, but economists tend more often to emphasize rules, norms and conventions, with the latter concept acquiring more interest since the development of game theory.

Perhaps the most remarkable thing about conventions is their ubiquity. In daily life, there are conventions about how to dress, how to speak to others, how to eat, how to wait in line, and so on in truly an endless list. As sociologists note, there are conventions surrounding virtually every activity we engage in. In economic life, innumerable conventions surround market exchange, the forms of which include allowable free-riding, forms of competitive behaviour, expectations about rivals, grounds for trust and mistrust, product quality and fair dealing. Yet until quite recently economists, in their concentration on rational choice theory, have almost entirely ignored the role conventions play in behaviour and decision making. It should come as less of a surprise that the principal issue concerning conventional behaviour in economics is how to accommodate rule and convention following to the theory of instrumental rationality.

The original literature on the subject, stemming from the work of Simon (1982), essentially treats conventions and rules interchangeably, and looks upon them as broad decision strategies alternative to case-by-case decision making. People are procedurally or boundedly rational, not substantively so, and thus they employ rules and conventions to economize on scarce computational resources. Knudsen (1993) traces this to a self-reflexivity, infinite regress

problem in traditional rational choice analysis, where to exercise choice we must first decide whether it pays to make a choice, which itself requires that we decide whether it pays to decide whether it pays to make a choice, and so on. Thus conventions and rules are essentially simplifying devices individuals use in decision making.

Yet if rules may be understood as personal means of saving on costly computations, rules in another sense are shared by individuals who are in regular interaction with one another. Here we may also distinguish rules from norms by noting that, whereas shared rules can describe established patterns of behaviour, shared rules in the sense of norms are established patterns of behaviour that individuals believe *ought* to be maintained, either in a moral or pragmatic sense. This normative force some rules have is not explained by seeing them as decision making-simplifying devices. Why is it, that is, that individuals feel compelled to observe conventions?

Lewis (1969), following Hume (1978) and Schelling (1960), has been very influential in this regard by getting economists to think about conventions as patterns of interdependent behaviour, or in game-theoretic terms. On his view, conventions are solutions to coordination problems, where individuals adopt a norm or convention, as in Axelrod's (1984) analysis, tit-for-tat in a repeated game or game with no foreseeable end, to solve prisoner's dilemma-type problems. That the 'cooperate-unless-the-other-doesn't' norm here is in each individual's interest reinforces its observance and thus explains how individuals can come to believe they ought to follow rules and conventions. Lewis's basic definition of convention is thus:

> A regularity R in the behavior of members of a population P when they are agents in a recurrent situation S is a *convention* if and only if, in any instance of S among members of P,
> (1) everyone conforms to R;
> (2) everyone expects everyone else to conform to R;
> (3) everyone prefers to conform to R on condition that others do, since S is a coordination problem and uniform conformity to R is a coordination equilibrium in S. (Lewis, 1969: 42)

A refinement on this is that what has come to be known in game theory as the common knowledge assumption also holds. Gilbert (1989) provides a critical analysis of Lewis and the game-theoretic approach to understanding convention.

An important issue raised by Lewis's approach concerns how conventions come to be established at all. Sugden (1986, 1989) has developed a game-theoretic explanation of the emergence of conventions, not restricted to coordination games, in which individuals first play a symmetrical game in which they do not know the best strategy to adopt and thus repeatedly play a mixed set of strategies until, through trial and error, they learn the proportion between the strategies that maximizes their expected utility. The resulting Nash equilibrium is said to be stable in an evolutionary sense, and the players are said to play evolutionarily stable strategies, or ESSs (a concept which comes from the work of the biologist Maynard Smith (1982) who was concerned with the evolution of patterns of behaviour in animal species). Assuming, however, that more than one stable equilibrium and set of ESSs is available, it can then be shown that, if for any reason whatsoever (say, some 'accident of history') one set of players begins to play asymmetrically, that is, to play one way in certain circumstances and another way in other circumstances, it will be in the interest of all players to adjust to this asymmetrical strategy of play, if the initial number of adherents to the new form of play is significant. This asymmetrical or context-dependent play, when it becomes fully established, constitutes a convention.

Sugden thus takes conventions to be rules or norms regulating social life that obtain in games with more than one ESS, that come about through evolution, that are self-enforcing and that (following Hayek, for example, 1960) reflect anarchic or spontaneous order as the unintended consequences of individuals' acting rationally in terms of their own preferences. The answer to the question of how conventions come to be established is that they are not chosen, but simply evolve without design. Indeed, on Sugden's view, the market as a form of spontaneous order itself depends upon institutions, particularly private property rights and enforceable contracts, which are best understood as conventions resulting from an unintended process of evolution. More generally, Sugden distinguishes three broad categories of conventions: coordination conventions, property rights conventions and reciprocity conventions.

A crucial issue for this view concerns how specific conventions come to evolve rather than others, especially since the initial development of a convention sets in motion a self-reinforcing process that ultimately makes that convention more viable than others. Following Schelling, evolutionary game theorists have appealed to the intuitive idea of prominence and salience, that is, aspects of a situation that stand out in individuals' common experience and serve as focal points around which individuals coordinate their decisions. This raises difficult epistemological issues, however, since it is not easy to say why some things are prominent in our experience and others not so.

Sudgen nonetheless elaborates on Schelling's point to argue that, if prominence is a matter of common experience, conventions may spread by analogy from one context to another. An example is the 'first come, first served' principle of queuing that seems to have many applications. Such an account may be question-begging, however, since it seems the very drawing of an analogy itself presupposes the existence of prior conventions about how we recognize similarities between old and new situations, thus posing the possibility of an infinite regress in the argument. Relevant here, then, is the philosophical literature going back to Quine (1953) on similarity and analytic judgment.

Other researchers in this tradition have emphasized that, just as conventions can come into being, so they can also pass out of being. Hargreaves Heap and Varoufakis (1995) note that the conclusion of an evolutionary process is unlikely to be pure stasis, and that a potential weakness in evolutionary game theory's account of conventions is its failure to explain the subversion of established conventions, or how particular conventions break down and are replaced by others.

An interesting conclusion of the game-theoretic approach to the understanding of conventions is that evolution need not produce conventions that are optimal (as also suggested by the existence of such conventions as the QWERTY keyboard). Sugden's account of the way in which conventions come to be established through accidents of history explains how this is possible, and it is not difficult to produce examples of games in which inefficient conventions in terms of player payoffs become self-perpetuating. This conclusion contrasts with Hume's view that rules and conventions tend to operate in the best interest of society. It also raises questions about the wisdom of seeing the market as an invisible hand process that always works to bring about the greater social good. If conventions evolve spontaneously, and if many of the conventions involved in the market are Pareto-inferior to other conventions we may imagine, then the evolution of the market may be irrational in important respects. This point may be extended by noting that market conventions are sometimes unjust and discriminatory.

These latter conclusions clearly turn on our having standards for evaluating conventions that are independent of the perspectives generated by their evolutionary success. Hume resisted this

possibility by arguing in his account of the origin of the principles of justice that the norms of justice are merely long-observed conventions to which we have come to annex the idea of virtue. No higher standard for judgment can thus exist apart from our conventional beliefs and, should some conventions appear inefficient or unjust, we might best attribute this to lags in individuals' acceptance of those conventions.

Needless to say, few moral philosophers today would take such a view seriously. In the first place, it is questionable that moral principles are reducible to conventions and, in the second place, moral principles are not often thought merely a matter of preferences, particularly for those in a more deontological tradition. Perhaps more important for economics, however, is the fact that Sugden does not restrict his analysis of conventions to coordination problems, thus allowing some conventions regarding moral norms to favour some people at the expense of others. Were economists to come to look upon moral norms in this way, Pareto efficiency judgments might lose some of their appeal, and perhaps begin to develop a richer conception of the types of normative judgments appropriate in economics.

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Critical Rationalism

A central aspect of Karl Popper's philosophy of science is what he calls 'critical rationalism'. Popper is often credited with explicitly creating critical rationalism in Chapter 24 of his *Open Society and its Enemies*, but to some extent it is also implicit throughout his *Logic of Scientific Discovery*. With the word 'critical' Popper wishes to make clear that his form of rationalism differs from that most closely associated with classical eighteenth-century rationalism that Voltaire satirized in *Candide*. Classical rationalism is based on an optimistic belief that it is possible to be rational about *everything* – and for this reason Popper called this 'comprehensive rationalism'. According to Popper, comprehensive rationalism is part of a more general theory of knowledge which asserts that every knowledge claim must be justified by a proof. Popper and his followers call this theory 'justificationism'.

Whether or not rationalism is comprehensive hinges on whether or not *every* true statement can be proved with a rational argument. According to Willard Van Quine, only tautologies can be proved true (Quine, 1965). Whether this limited notion of comprehensive rationalism is all that one can hope for depends on what one means by a true statement. In one sense, Quine's view