9400
SELF-REGULATION

Anthony Ogus
University of Manchester
© Copyright 1999 Anthony Ogus

Abstract

Self-regulation encompasses a wide range of arrangements, from private ordering without resort to legal rules to state-enforced systems of delegated rules. Transaction cost analysis has been used to explain how private ordering emerges, and principal-agency theory to indicate the advantages, but also the difficulties, of state delegation. While public choice theory, as supported by empirical studies, suggests that rent-seeking is inherent in delegated self-regulatory regimes, institutional structures capable of controlling this phenomenon can be envisaged.
JEL classification: D45, D71, K20
Keywords: Self-Regulation, Private Ordering, Decentralized Law-Making, Regulatory Competition

1. Introduction

Self-regulation, understood narrowly as law formulated by private agencies to govern professional and trading activities, has been rigorously criticised by lawyers and economists alike. From a legal perspective, it is seen as an example of modern 'corporatism', the acquisition of power by groups which are not accountable to the body politic through the conventional constitutional channels (Schmitter, 1985). The capacity of such groups to make rules governing the activities of members of an association or profession may itself constitute an abuse if they lack democratic legitimacy (Page, 1986). The potential for abuse may become intolerable if, and to the extent that, the rules affect third parties (Cane, 1987). Further, if the group's functions cover policy formulation, interpretation of the rules, adjudication and enforcement (including the imposition of sanctions) as well as rule making, this conflicts with basic notions of separation of powers (Harden and Lewis, 1986).

For their part, economists have traditionally focused on how self-regulatory powers may be exercised to impede competition on the supply side of the market. Barriers to entry may be created, thereby raising prices and conferring rents on incumbent practitioners; standards governing practice may be devised more to confer utility on suppliers than to meet consumer preferences (Shaked

and Sutton, 1981a). And the prospect of gaining such advantages may lure groups into spending resources to persuade legislatures to grant them self-regulatory powers - a social deadweight loss (Tullock, 1967).

While criticisms such as these may be appropriate in some circumstances, they are based on a very incomplete picture of self-regulation. The modern law and economics literature has been concerned to explore a much broader conception of the phenomenon and in so doing to identify institutional arrangements which may escape, or meet, the traditional criticisms and which thereby may be conducive to allocatively efficient outcomes. A survey of this literature must necessarily begin with an investigation of the nature of self-regulation.

2. The Nature of Self-Regulation

In its most literal sense, and as it used in psychology (Carver and Scheier, 1981), self-regulation means acting according to one's own volition, and not as a response to an external constraint. Thus interpreted, the concept would cover an infinite number of self-imposed behavioural standards, including those determined internally by the management of a firm. Although the latter may have no legal significance, they are not irrelevant to discussions of regulatory systems (Bardach and Kagan, 1982; Cheit, 1990). The internal standards are designed to ensure quality of the kind which will meet consumer preferences. On the assumptions of competition between suppliers, adequate information possessed by consumers and an absence of externalities, there is no need to render the standards legally enforceable.

When used in a legal context, the 'self' in 'self-regulation' is not used in the literal sense. Rather it connotes some degree of collective constraint, other than that directly emanating from government, to engender outcomes which would not be reached by individual market behaviour alone (Black, 1996). It is also normally taken to imply 'a fairly well established and generally recognised set of rules, whether customary or reduced to writing, in accordance with which the activity is regulated' (Cane, 1987).

There is, nevertheless, a multitude of institutional arrangements which fall somewhere between government regulation on the one hand and individual, unconstrained behaviour on the other and which can therefore be treated as self-regulation (Rees, 1988; Cheit, 1990). The possibilities can be considered on two spectra depicting, respectively, degrees of autonomy from government and legal force (Page, 1986; Baggott, 1989). The first ranges from, at one extreme, rules private to firms, groups or organizations to, at the other, those approved by a government minister or some independent public authority; in between, representatives of the public interest may participate in, but not

conclusively determine, the decision making. The second encompasses varying degrees of legal force. The rules may be: formally binding, non-compliance leading to public law or private law sanctions; codes of practice which presumptively apply unless an alleged offender can show that some alternative conduct was capable of satisfactorily meeting the regulatory goals; norms the breach of which leads to non-legal sanctions, such as ostracism; or standards compliance with which is purely voluntary.

3. Spontaneous Private Legal Ordering

In its most complete sense, and thus at one end of the spectra described above, self-regulation involves a system of private ordering, without any form of state intervention; that is, without any imposition of rules by those with political power. This phenomenon is covered by other chapters (notably Spontaneous Emergence of Law, 9500, and Non-Legal Sanctions, 0780) and the treatment here is consequently brief - for a valuable overview of the literature, see Klein (1997).

Economic explanations of how informal systems emerge are epitomized by studies of primitive societies (Benson, 1988). The basis is reciprocity: individuals recognise the benefits they will derive from behaving in accordance with others' expectations. Such reciprocity may be reflected in individual agreements but, as standards of behaviour, will spread to other members of a group as property rights when the benefits of doing so exceed the costs of defining those rights. While originally disputes may be resolved by force, individuals will normally find non-violent methods (for example, arbitration or mediation) to be cheaper; and ostracism from the group will generally be an adequate sanction for non-compliance.

Analysis of this kind has been used to explain other historical self-ordering arrangements, including: the Maghribi Traders (Greif, 1989); the Law Merchant (Benson, 1989; Milgrom, North and Weingast, 1990); medieval Iceland (Friedman, 1979); and the mining camps in the American West (Anderson and Hill, 1979; Umbeck, 1981). In more modern contexts, equivalent systems can emerge within groups to reduce the costs of drafting commitments and of establishing and activating enforcement systems (Charny, 1990). The expectation is that such cost savings will be significant where the group is small enough for informal control - generally requiring continuing face-to-face interaction - but where also power is broadly dispersed (Ellickson, 1993). Illustrative studies are those on diamond traders (Bernstein, 1992) and neighbour disputes (Ellickson 1991).

Within a broader social setting decentralized law making encounters the problem that some individuals will tend to free-ride on the enforcement of others. This may be only partly solved by the internalization of norms, and thus

public institutions (courts) are necessary to identify situations requiring state-imposed incentives (Cooter, 1996). Nevertheless, informal systems also occur in international trading environments (Benson, 1992; see also Schanze, 1988). Here there is an increased need to accommodate the system to inter-group interaction. The co-existence of groups creates incentives for each to compete to attract or hold members and a form of mutual insurance emerges to prevent individuals taking advantage of other individuals and then escaping to another group (Benson, 1993).

A not insignificant part of the literature addresses the normative issue of choice between public and private ordering. Some (for example, Friedman, 1973; Rothbard, 1973; Benson, 1990) reveal a hostility to almost all instances of state-imposed law, arguing from public choice theory that it is predominantly motivated by pressure for wealth transfers and undermines the incentives of the reciprocity-based system of property rights. But, apart from the important reminder that the consequences of government failure may be more severe than market failure, it is not clear that these contributions add much to the debate which has taken place within the mainstream of law and economics (Katz, 1996), and which has its origin in the Coase Theorem (Coase, 1960). The ability of consensual bargaining to achieve efficient outcomes is a function of transactions costs, thus suggesting that the normative question of when private ordering should prevail should be determined by an analysis of how those costs impact on any given situation. Self-regulation may, therefore, be an appropriate solution where bargaining, at low cost, can occur between risk-creators and those affected; occupational health and safety provides a familiar example (Rees, 1988; Ogus, 1995; though for reservations, see Baldwin, 1987).

4. Self-Regulation as Delegation of State Law-Making Powers

In the previous section, we examined systems of private ordering which emerge independently of state intervention. As a legal phenomenon, self-regulation is more usually analysed as a deliberate delegation of the state's law-making powers to an agency, the membership of which wholly or mainly comprises representatives of the firms or individuals whose activities are being regulated.

Public interest arguments for such delegation can be derived from principal-agent theory (Tuohy and Wolfson, 1978). Once the principal (normally, the legislature) has decided that an activity ought to be regulated on grounds of market failure, for example externalities or information asymmetries, the question arises what form of regulation is appropriate. That can be assessed by reference to such variables as the costs of information upon which the rule-making decisions are to be based and those of monitoring compliance and enforcing the rules. The principal may rationally conclude that

these costs would be minimised if the tasks of rule-formulation, monitoring, adjudication and enforcement were to be conferred on a self-regulatory agency (hereafter SRA) (Trebilcock, 1983; Cane, 1987).

Since SRAs typically command a greater degree of expertise and technical knowledge of practices and innovatory possibilities within the relevant area than the principal, information costs for the formulation and interpretation of standards are lower. Secondly, for the same reasons, monitoring and enforcement costs are also reduced, as are the costs to the regulatees of dealing with regulators, given that such interaction is likely to be fostered by mutual trust. This aspect is particularly important where, as with advertising, it is difficult to define the desired behaviour with precision and an adversarial relationship between regulator and regulatee is likely to be counterproductive (Baggott and Harrison, 1986). In addition, to the extent that the processes of, and rules issued by, SRAs are less formalized than those of public regulatory regimes, there are likely to be savings in the costs (including those attributable to delay) of amending rules. Finally, the administrative costs of the regime are normally internalized in the trade or activity which is subject to regulation; in the case of independent, public agencies, they are typically borne by taxpayers.

Delegation to SRAs should thus reduce the principal's costs of regulation; to what extent will they confer benefits of the kind which regulation is supposed to foster? Take a situation in which the quality of products or services cannot be observed by consumers prior to purchase. Although individual firms will be motivated to provide signals of quality (for example, product warranties), this may be very costly or - where the characteristics of quality are not easily definable - not feasible. It then becomes in the joint interest of the suppliers, as represented by the SRA, to maintain quality by self-regulation (Gehrig and Jost, 1995). And since, in such circumstances, attempts by consumers themselves to measure quality will also be costly and/or futile, such regulation will confer a benefit on them by obviating the need for measurement (Barzel, 1982).

Once such a regime of self-regulation has been established, individual suppliers have an incentive to supply (at lower cost) lower quality, but since the reputation of other firms will be affected by defaulters the SRA will be motivated to enforce the standards. On the basis of this analysis, it has been predicted that viable self-regulatory regimes will emerge where monitoring costs for the SRA are low, the number of local markets is small, and customers are relatively mobile as between suppliers (Gehring and Jost, 1995).

At the same time, there is every reason to expect that SRAs will use their law-making power to benefit their members in ways which are not consistent with the public interest (Horowitz, 1980). As has been formally demonstrated (Shaked and Sutton, 1981a), the self-regulatory rules may create barriers to entry and thus confer significant rents on incumbent practitioners. The latter

include non-financial benefits, for example, a quiet life, as well as monetary income (Lees, 1966).

Most obviously rent may be obtained where the SRA has the power to issue licences and therefore to determine the qualifications of those who engage in the activity (Moore, 1961). But there are also a variety of other ways in which 'quality' standards may be used to promote the interests of the regulatees, rather than those of the public. For example, most professional associations have, at some time or another, prohibited their members from advertising, ostensibly on the ground that 'touting' for business is incompatible with the ethical nature of professional practice (OECD, 1985). As we have seen, such bans can eliminate wasteful consumer searches on elusive quality characteristics (Barzel, 1982), but they can also inhibit comparative price shopping, thus generating monopoly rents for practitioners (Trebilcock, 1982). Secondly, restrictions can be imposed on the legal form used by professional firms (for example, insisting on partnerships and prohibiting corporations) or on the participation of professionals from other disciplines in the firm (OECD, 1985). Both forms of control can add to client costs insofar as they inhibit productive efficiency of the firm (Evans, 1980) and, in some cases, make it necessary for consumers to deal with two or more firms, rather than one (Quinn, 1982). The quality imposed by SRAs may exceed that which presumptively will meet consumers' preferences and not be justified by externalities; and the excessive cost will be borne by consumers (Trebilcock, 1983). Other welfare losses can arise from the tendency of SRAs to discourage diversity and experimentation (Ostry, 1978; White, 1979).

In the light of public choice theory, rent-seeking explanations of regulation are, of course, commonplace (Tollison, 1982). If rule-making remains with the legislature or an independent agency, interest groups representing the regulatees have the task of exerting influence on those institutions and diverting them away from public interest goals or other, competing private interest claims. Of course, delegation of the regulatory powers to SRAs relieves the groups of this task and the relative absence of accountability and external constraints maximizes the possibilities of rent-seeking - 'with self-regulation, regulatory capture is there from the outset' (Kay, 1988). Governments are motivated to maintain or extend the use of self-regulation because, while they may derive political benefits from measures which appear to benefit consumers and others, the costs are not revealed in any public accounts (Trebilcock, 1983). And it is difficult for the cost-bearers both to determine the amount of wealth transfers and to coordinate their activities in opposing them (Van den Bergh and Faure, 1991).

Although, as we shall see in the next section, there is considerable empirical evidence to support this theory of self-regulation, it has not gone unchallenged. Dingwall and Fenn argue that it cannot explain the persistence and stability of entry restriction; other forces must be at work to prevent pressure from

potential entrants building up to an intolerable level (Dingwall and Fenn, 1987). Such forces may lead to the emergence of illegal (or 'informal') markets (De Soto, 1989), or of reasonably close, but unregulated, substitutes (Fisher, 1997). Indeed, it may be an inherent feature of regulation that it cannot control every margin of adjustable behaviour, and thus rents are dissipated as firms seek to trade on these uncontrollable margins (Cheung, 1974).

Weingast also finds it hard to reconcile the theory with the fact that many of the self-imposed restrictions can dissipate rents or seem designed to increase a perception of quality maintenance at the expense of greater rents (Weingast, 1980). Drawing on Arrow's public interest analysis (Arrow, 1963), he sees self-regulation as performing a symbolic informational function: as a consequence of the uncertainties both as to quality in the unregulated market and to the effects of regulation there is a tendency for SRAs to adopt policies which improve observable features of the activity and give the appearance of service uniformity.

5. Sector-Specific Studies

Some studies of self-regulatory systems support the notion of spontaneous, private ordering described above. For example, there are incentives for banks voluntarily to become members of private protective and certifying agencies (Gorton and Mullineaux, 1987; Gehring and Jost, 1995), and for voluntary 'best practice' auditing and other standards to be diffused among different SRAs (Belcher, 1996). In the advertising industry, self-regulation has emerged as the suppliers have perceived the benefit to be obtained from acquiring public creditability for their products and from creating an image of professional responsibility (Baggott and Harrison, 1986). But these researchers also highlight the problem of enforcement: SRAs begin to adopt an aggressive stance only where there was perceived to be a threat of intervention by public agencies. The same phenomenon has been observed with the self-regulation of commodity exchanges (Pirrong, 1995; see also Page, 1987; Fishman, 1993; Black, 1997). Investigations of occupational health and safety systems, as they have increasingly shifted towards decentralised standard-setting by local arrangements between employers and employees, suggest this has been effective when the systems can be related to nationally established standards and are supported by knowledge that the arrangements will be enforced (Dawson et al., 1988). But there has been a decline in protection against risks created by small or non-unionised firms (Baldwin, 1987; Smith and Tombs, 1995).

Beginning with the pioneering work of Friedman and Kuznets (1945), published at the end of the Second World War, most attention has been given to regimes governing the professions (for a valuable survey of studies relating

to the medical professions, see Gravelle, 1985). Typically the regimes involve SRAs having the power to issue licences and therefore the ability to restrict entry (see Kessel, 1970, for a study on how control by the SRA was used for the benefit of members of the profession). The prediction that this will enable incumbent practitioners to earn rents is difficult to substantiate because it is necessary to disentangle supra-competitive profits from higher earnings which represent legitimate compensation for higher educational costs and greater responsibilities. Nevertheless when such variables are controlled for, researchers have found strong evidence of rents being earned by eyeglass suppliers (Benham and Benham, 1975), dry cleaners (Plott, 1965), lawyers (Holen, 1965; Lees, 1966; Domberger and Sherr, 1989; Curran, 1993) and dentists (Holen, 1965; Shepard, 1978; Wilson, 1987). Studies on other medical professions (Holen, 1965; White, 1979; Wilson, 1987; Curran, 1993) and architects (Button and Fleming, 1992) are less conclusive. In a general study, Maurizi found that there was a significant correlation between licensing regimes and monetary returns for about half of the systems examined (Maurizi, 1974). Exacerbation of shortages in the supply of practitioners (Hogan, 1979), maldistribution of such supply (Holen, 1965; Boulier, 1980; Pashigian, 1980) and poorer quality of service (Caroll and Gaston, 1979) are other welfare effects found to have resulted from licensing regimes.

Ongoing professional standards, established by SRAs, have also enabled them to protect anti-competitive practices: for example, fee regulation and restrictions on advertising which limit price competition (Benham, 1972; Office of Fair Trading, 1982; Domberger and Sherr, 1989; Van den Bergh and Faure, 1991); and 'professional ethics' which serve the wellbeing of practitioners rather than their clients and mask prohibitions on cost-saving innovation (Gravelle, 1985; Trautwein and Rönnau, 1993).

6. Competitive Self-Regulation

The above discussion suggests that, on certain key assumptions, systems of spontaneous private legal ordering can generate efficient outcomes but that state-delegated systems of self-regulation can lead to adverse welfare effects. The crucial factor which distinguishes the two systems is that the act of state delegation normally involves conferring on the SRA a monopoly power to legally constrain supply in the relevant market.

We have seen (Baggott and Harrison, 1986; Pirrong, 1995) that the threat of state intervention may, to some extent, mitigate the harmful effects of monopolization. A useful analogy may here be drawn with the theory of contestable markets which indicates that, under certain conditions, efficient pricing and production can be forced upon a monopolistic supplier by the threat

of competition, just as much as by actual competition (Baumol, Panzar and Willig, 1982). But the necessary conditions - notably the ability of the entrant costlessly to leave the market - are rarely met in practice (Waterson, 1988). Similarly, on cost grounds, SRAs may not regard the threat of state intervention as credible.

An alternative solution to the problem presents itself: if the principal objection to SRAs is that they are able to exploit their monopolistic control of supply so as to enable practitioners to earn rents, then why not force SRAs to compete with one another, so that the rents will be eliminated (Kay and Vickers, 1990; Ogus, 1995)? Such competition would obviously prevent SRAs creating barriers to entry. But it should also constrain SRAs to formulate standards which meet consumer preferences at lowest cost since, assuming consumers have adequate information to make appropriate comparisons, they will choose the combination of price and self-regulatory standards which most closely corresponds to those preferences.

Competition of this kind is inherent in systems of private ordering: suppliers compete to attract consumers by the quality (as well as the price) of their products and services. Quality is, to some extent at least, a consequence of standards and other forms of control imposed internally by the management of a firm. The standards may reflect public regulatory requirements but more often they are voluntary, representing the firm's response to assumed consumer demand and, in some cases, incorporating industry-wide practices. To signal to consumers the relationship between standards and quality, some form of voluntary accreditation or certification can be used (Bardach and Kagan, 1982). Suppliers who aim at different quality standards, and have difficulty in communicating that fact to consumers, will have an incentive to establish a rival certification system. Competing self-regulatory regimes may thus emerge.

Thus envisaged, competitive self-regulation is, in essence, no different from competition between national public regulatory regimes (Bratton et al., 1997). If there is mutual recognition of national standards and freedom of trade, consumers can choose between the different quality standards imposed by the national systems in accordance with their own preferences. Provided that they are informed as to the relevant national compliance certificate, competition between national regulatory regimes should induce standard-setters to meet those preferences (Kay and Vickers, 1990).

The policy implication of this analysis is that where the public interest arguments for the state delegating its regulatory powers are strong (see above), it should not grant monopoly power but rather enable two or more SRAs within a given supplier group to formulate alternative regimes (Ogus, 1995; for the effects of competition between professionals and para-professionals, see Shaked and Sutton, 1981b). Although there is a risk of cartelization, most industries are sufficiently heterogeneous for this purpose. An alternative is to retain the

monopoly but force different SRAs to compete *ex ante* to acquire the right to control supply by self-regulation. Competing applicants would be required to include their self-regulatory rules as part of the bid; and, as with other public franchises (Demsetz, 1968), the competition should force applicants to offer regimes consistent with the public interest.

There are, nevertheless, potential problems with these solutions. Consumers - more precisely marginal consumers (Schwartz and Wilde, 1979) - must be able to attribute general quality characteristics to certificates generated by the competing self-regulatory regimes; otherwise there will be a 'race to the bottom' (Akerlof, 1970). Secondly, there must be no significant externalities arising from their purchasing behaviour. The importance of information asymmetries and externalities and, in relation to the franchising solution, the need to scrutinize competing bids suggest that in many areas some residual form of state intervention will be optimal. It remains to consider this issue more generally.

7. Mixed Systems

As was indicated in the discussion of the nature of self-regulation, there is a wide range of possible institutional arrangements between public regulation on the one hand and pure private ordering on the other. In an effort to realize many of the benefits of self-regulation but controlling the costs which result from SRA rent-seeking, some jurisdictions have adopted what has been referred to as 'coregulation' (Grabosky and Braithwaite, 1986): SRAs regulate with some oversight or ratification by government, or officials representing the public interest (see for example Page, 1987). The main problem is that of informational asymmetry between the public agency and the SRA. The latter can withhold vital information unless there is confidence that it will be used to reach regulatory solutions which favour its members (Quirk, 1981). Typically, also, the SRA retains monopolistic control of enforcement.

In an important contribution to the literature, Ayres and Braithwaite argue, instead, for 'enforced self-regulation' (Ayres and Braithwaite, 1992; see also Braithwaite, 1982). Under this model, a public agency negotiates with individual firms regulations that are particularized to each firm, with the threat of an imposition of less tailored standards if it fails to cooperate. While the firm may thus formulate the rules, they are enforced by the public agency. The advantages are clear: as with other privately ordered systems, the rules are tailored to match the firm's circumstances and are less costly to adapt; there are incentives to identify least-cost solutions, which should encourage regulatory innovation; and firms would be more committed to the rules than if imposed externally. Moreover, the very fact of individualization avoids the monopoly problem. On the other hand, the administrative costs would be high. This

suggests that, for such a regime to be cost-effective, the firm must be large and the activity to be regulated must be one in which efficiency requires significantly differentiated standards (Latin, 1985).

Acknowledgements

I acknowledge with gratitude the very helpful comments of two anonymous referees.

Bibliography on Self-Regulation (9400)

Adelstein, Richard P. (1992), 'Charles E. Lindblom', in Samuels, Warren J. (ed.), *New Horizons in Economic Thought: Appraisals of Leading Economists*, Cheltenham, Edward Elgar, 202-226.

Anderson, Terry L. and Hill, Peter J. (1979), 'American Experiment in Anarcho-Capitalism: The *Not* so Wild, Wild West', **3** *Journal of Liberation Studies*, 9-19.

Barzel, Yoram (1982), 'Measurement Costs and the Organisation of Markets', **25** *Journal of Law and Economics*, 27-48.

Belcher, Alice (1996), 'The Invention, Innovation and Diffusion of Self-Regulation in Corporate Governance', **47** *Northern Ireland Law Quarterly*, 322-334.

Benham, Lee (1972), 'The Effect of Advertising on the Price of Eyeglasses', **15** *Journal of Law and Economics*, 337-352.

Benham, Lee and Benham, Alexandra (1975), 'Regulating Through the Professions: A Perspective on Information Control', **18** *Journal of Law and Economics*, 421-447.

Benson, Bruce L (1988), 'Legal Evolution in Primitive Societies', **144** *Journal of Institutional and Theoretical Economics*, 772-788.

Benson, Bruce L. (1989), 'The Spontaneous Evolution of Commercial Law', **55** *Southern Economic Journal*, 644-661.

Benson, Bruce L (1990), *The Enterprise of Law: Justice Without the State*, San Francisco, Pacific Research Institute for Public Policy.

Benson, Bruce L. (1992), 'Customary Law as a Social Contract: International Commercial Law', **3** *Constitutional Political Economy*, 1-27.

Benson, Bruce L. (1993), 'The Impetus for Recognizing Private Property and Adopting Ethical Behavior in a Market Economy: Natural Law, Government Law, or Evolving Self-Interest', **6** *Review of Austrian Economics*, 43-80.

Bernstein, Lisa (1992), 'Opting Out of the Legal System: Extralegal Contractual Relations in the Diamond Industry', **21** *Journal of Legal Studies*, 115-158.

Blair, Roger D. and Rubin, Stephen (eds), *Regulating the Professions: A Public-Policy Symposium*, Lexington, MA, Lexington Books.

Boulier, B.L. (1980), 'An Empirical Examination of the Influence of Licensure and Licensure Reform on the Geographical Distribution of Dentists', in Rottenberg, Simon (ed.), *Occupational Licensure and Licensure Regulation*, American Enterprise Institute, 73-97.

Braithwaite, John (1982), 'Enforced Self Regulation: A New Strategy for Corporate Crime', **80** *Michigan Law Review*, 1466-1507.

Button, Kenneth and Fleming, Michael (1992), 'The Effects of Regulatory Reform on the Architectural Profession in the United Kingdom', **12** *International Review of Law and Economics*, 95-116.

Caroll, Sidney L. and Gaston, Robert J. (1979), 'State Occupational Licensing Provisions and Quality of Service: The Real Estate Business', **1** *Research in Law and Economics*, 1-13.

Charny, David (1990), 'Nonlegal Sanctions in Commercial Relationships', **104** *Harvard Law Review*, 373-467.

Cheit, Ross E. (1990), *Setting Safety Standards: Regulation in the Public and Private Sectors*, University of California Press.

Cheung, Steven N.S. (1974), 'A Theory of Price Control', **17** *Journal of Law and Economics*, 53-72.

Cooter, Robert D. (1996), 'Decentralized Law for a Complex Economy: The Structural Approach to Adjudicating the New Law Merchant', **144** *University of Pennsylvania Law Review*.

Curran, Christopher (1993), ' The American Experience with Self-Regulation in the Medical and Legal Professions', in Faure, Micheal, Finsinger, Jörg, Siegers, Hacques and Van den Bergh, Roger (eds), *Regulation of Professions: A Law and Economics Approach to the Regulation of Attorneys and Physicians in the US, Belgium, Netherlands, Germany and the UK*, Maklu, Antwerpen, 47-87.

De Soto, Hernando (1989), *The Other Path: The Invisible Revolution in the Third World*, New York, Harper and Row.

Dingwall, Robert and Fenn, Paul (1987), 'A Respectable Profession? Sociological and Economic Perspectives on the Regulation of Professional Services', **7** *International Review of Law and Economics*, 55-64.

Domberger, Simon and Sherr, Avrom (1989), 'The Impact of Competition on Pricing and Quality of Legal Services', **9** *International Review of Law and Economics*, 41-56.

Ellickson, Robert C. (1991), *Order Without Law: How Neighbours Settle Disputes*, Cambridge, MA, Harvard University Press.

Ellickson, Robert C. (1993), 'Property in Land', **102** *Yale Law Journal*, 1315-1400.

Evans, Robert G. (1980), 'Professionals and the Production Function: Can Competition Policy Improve Efficiency in the Licensed Professions?', in Rottenberg, Simon (ed.), *Occupational Licensure and Regulation*, American Enterprise Institute.

Friedman, David (1973), *The Machinery of Freedom: Guide to Radical Capitalism,* New York, Harper and Row.

Friedman, David (1979), 'Private Creation and Enforcement of Law: A Historical Case', **8** *Journal of Legal Studies*, 399-415.

Friedman, Milton and Kuznets, S. (1945), *Income from Independent Professional Practice*, New York, National Bureau of Economic Research.

Gehrig, Thomas and Jost, Peter J. (1995), 'Quacks, Lemons and Self-Regulation: A Welfare Analysis', **7** *Journal of Regulatory Economics*, 309-235.

Gorton, Gary and Mullineaux, Donald J. (1987), 'The Joint Production of Confidence: Endogenous Regulation and Nineteenth Century Commercial Bank Clearinghouses', **19** *Journal of Money, Credit, and Banking*, 457-468.

Gravelle, Hugh (1985), 'Economic Analysis of Health Service Professions: A Survey', **20** *Social Sciences and Medicine*, 1049-1061.

Greif, Avner (1989), 'Reputation and Coalitions in Midieval Trade: Evidence on the Maghribi Traders', **49** *Journal of Economic History*, 857-882.

Holen, Arlene S. (1965), 'Effects of Professional Licensing Arrangements on Interstate Labor Mobility and Resource Allocation', **73** *Journal of Political Economy*, 492-498.

Horowitz, Ira (1980), 'The Economic Foundations of Self-Regulation in the Professions', in Blair, Roger D. and Rubin, Stephen (eds), *Regulating the Professions: A Public-Policy Symposium*, Lexington, MA, Lexington Books.

Katz, Avery (1996), 'Taking Private Ordering Seriously', **144** *University of Pennsylvania Law Review*, 1754-1763.

Kay, John (1988), 'The Forms of Regulation', in Seldon, Arthur (ed.), *Financial Regulation - or Over-Regulation*, Institute of Economic Affairs, 33-42.

Kessel, Reuben A. (1970), 'The A.M.A. and the Supply of Physicians', **35** *Law and Contemporary Problems*, 267-283.

Klein, Daniel B. (ed.) (1997), *Reputation: Studies in the Voluntary Elicitation of Good Conduct*, University of Michigan Press.

Kissam, P.C. (1980), 'Anti-Trust Law, the First Amendment, and Professional Self-Regulation of Technical Quality', in Blair, Roger D. and Rubin, Stephen (eds), *Regulating the Professions: A Public-Policy Symposium*, Lexington, MA, Lexington Books.

Lees, D.S. (1966), *The Economic Consequences of the Professions*, London, Institute of Economic Affairs, 48 p.

Maurizi, Alex R. (1974), 'Occupational Licensing and the Public Interest', **82** *Journal of Political Economy*, 399-413.

Milgrom, Paul R., North, Douglass, C. and Weingast, Barry R. (1990), 'The Role of Institutions in the Revival of Trade: the Law Merchant, Private Judges, and the Champagne Fairs', **2** *Economics and Politics*, 1-23.

Moore, Thomas G. (1961), 'The Purpose of Licensing', **4** *Journal of Law and Economics*, 93-117.

Ogus, Anthony (1995), 'Rethinking Self-Regulation', **15** *Oxford Journal of Legal Studies*, 97-108.

Ostry, Sylvia (1978), 'Competition Policy and the Self- Regulating Professions', in Slayton, Philip and Trebilcock, Michael J. (eds), *The Professions and Public Policy*, Toronto, University of Toronto Faculty of Law.

Pashigian, B. Peter (1980), 'Has Occupational Licensing Reduced Geographical Mobility and Raised Earnings?', in Rottenberg, Simon (ed.), *Occupational Licensure and Regulation*, American Enterprise Institute.

Paul, Chris W. (1982), 'Competition in the Medical Profession: An Application of the Economic Theory of Regulation', **48** *Southern Economic Journal*, 559-569.

Pirrong, Stephen Craig (1995), 'The Self Regulation of Commodity Exchanges: The Case of Market Manipulation', **38** *Journal of Law and Economics*, 141-206.

Plott, Charles R. (1965), 'Occupational Self-Regulation: A Case-Study of the Oklahoma Dry Cleaners', **8** *Journal of Law and Economics*, 195-222.

Quinn, John (1982), 'Multidisciplinary Legal Services and Preventive Regulation', in Evans, Robert G. and Trebilcock, Michael J. (eds), *Lawyers and the Consumer Interest: Regulating the Market for Legal Services*, London, Butterworths, ch.11.

Rees, Joseph (1988), *Reforming the Workplace: A Study of Self-Regulation in Occupational Safety*, University of Pennsylvania Press.

Rothbard, Murray N. (1973), *For a New Liberty*, London, Macmillan.
Schanze, Erich (1988), 'Regulation by Consensus: The Practice of International Mining Agreements', **144** *Journal of Institutional and Theoretical Economics*, 152-171.
Shaked, Avner and Sutton, John (1981a), 'Heterogeneous Consumers and Product Differentiation in a Market for Professional Services', **15** *European Economic Review*, 159-177.
Shaked, Avner and Sutton, John (1981b), 'The Self-Regulating Profession', **47** *Review of Economic Studies*, 217-234.
Shepard Lawrence (1978), 'Licensing Restrictions and the Cost of Dental Care'', **21** *Journal of Law and Economics*, 187-201.
Smith, Denis and Tombs, Steve (1995), 'Beyond Self-Regulation: Towards a Critique of Self-Regulation as a Control Strategy for Hazardous Activities, **32** *Journal of Management Studies*, 619-636.
Trautwein, Hans-Michael and Rönnau, Andreas (1993), 'Selfregulation of the Medical Profession in Germany: A Survey', in Faure, Michael, Finsinger, Jörg, Siegers, Jacques and Van den Bergh, Roger (eds), *Regulation of Professions: A Law and Economics Approach to the Regulation of Attorneys and Physicians in the US, Belgium, Netherlands, Germany and the UK,* Antwerpen, Maklu, 249-306.
Trebilcock, Michael J. (1982), 'Competitive Advertising', in Evans Robert G. and Trebilcock, Michael J. (eds), *Lawyers and the Consumer Interest: Regulating the Market for Legal Services*, London, Butterworths, ch. 5.
Trebilcock, Michael J. (1983), 'Regulating Service Quality in Professional Markets', in Dewees, Donald N. (ed.), *The Regulation of Quality: Products, Services, Workplaces and The Environment*, Butterworths, ch. 4.
Tuohy, Carolyn and Wolfson, Alan (1978), 'Self-Regulation: Who Qualifies?', in Slayton, Philip and Trebilcock, Michael J. (eds), *The Professions and Public Policy*, Toronto, University of Toronto Faculty of Law.
Umbeck, John (1981), *A Theory of Property Rights with Applications to the Californian Gold Rush*, Iowa State University Press.
Van den Bergh, Roger and Faure, Michael G. (1991), 'Self Regulation of the Professions in Belgium', **11** *International Review of Law and Economics*, 165-182.
Weingast, Barry R. (1980), 'Physicians, DNA Research Scientists, and the Market for Lemons', in Blair, Roger D. and Rubin, Stephen (eds), *Regulating the Professions: A Public-Policy Symposium*, Lexington, MA, Lexington Books.
White, William D. (1979), Dynamic Elements of Regulation: The Case of Occupational Licensure', **1** *Research in Law and Economics*, 15-33.
Wilson, R.A. (1987), 'Returns to Entering the Medical Profession in the UK', **6** *Journal of Health Economics*, 339-363.

Other References

Akerlof, George, A. (1970), 'The Market for "Lemons": Qualitative Uncertainty and the Market Mechanism', **84** *Quarterly Journal of Economics*, 488-500.
Arrow, Kenneth (1963), 'Uncertainty and the Welfare Economics of Medical Care', **53** *American Economic Review*, 941-973.

Ayres, Ian and Braithwaite, John (1992), *Responsive Regulation: Transcending the Deregulation Debate*, Oxford, Oxford University Press.
Baggott, Rob and Harrison, Larry (1986), 'The Politics of Self-Regulation: The Case of Advertising Control', **14** *Policy and Politics*, 143-160.
Baggott, Rob (1989), 'Regulatory Reform in Britain: The Changing Face of Self-Regulation, **67** *Public Administration*, 435-454.
Baldwin, Robert (1987), 'Health and Safety at Work: Consensus and Self-Regulation', in Baldwin, Robert and McCrudden, Christopher (eds), *Regulation and Public Law*, London, Weidenfeld and Nicholson, ch.7.
Bardach, Eugene and Kagan, Robert A. (1982), 'Mixing Public and Private Regulation', in Graymer, LeRoy and Thompson, Frederick (eds), *Reforming Social Regulation: Alternative Public Policy Strategies*, London, Sage Publications, ch.10.
Baumol, William, J., Panzar, John C. and Willig, Robert D. (1982), *Contestable Markets and the Theory of Industry Structure*, New York, Harcourt Brace Jovanovich.
Black, Julia (1996), 'Constitutionalising Self-Regulation', **59** *Modern Law Review*, 24-55.
Black, Julia (1997), *Rules and Regulators*, Oxford, Clarendon Press.
Bratton, William, Mccahery, Joseph, Picciotti, Sol and Scott, Colin (eds) (1997), *International Regulatory Competition and Coordination: Perspectives on Economic Regulation in Europe and the United States*, Oxford, Clarendon Press.
Cane, Peter (1987), 'Self Regulation and Judicial Review', **6** *Civil Justice Quarterly*, 324-347.
Carver, Charles, S. and Scheier, Michael F. (1981), *Attention and Self-regulation: A Control Theory Approach to Human Behavior*, Berlin, Springer-Verlag.
Coase, Ronald H. (1960), 'The Problem of Social Cost', **3** *Journal of Law and Economics*, 1-44.
Dawson, Sheila, Willman, Paul, Clinton, Alan and Bamford, M. (1988), *Safety at Work: The Limits of Self-Regulation*, Cambridge, Cambridge University Press.
Demsetz, Harold (1968), 'Why Regulate Utilities?', **11** *Journal of Law and Economics*, 55-65.
Fisher, Andrew (1997), 'The Licensing of Taxis and Minicabs', **7** *Consumer Policy Review*, 158-161.
Fishman, James J. (1993), 'A Comparison of Enforcement of Securities Law Violations in the UK and US', *Company Lawyer*, 163-172
Grabosky, Peter and Braithwaite, John (1986), *Of Manners Gentle: Enforcement Strategies of Australian Business Regulatory Agencies*, Oxford, Oxford University Press.
Harden, Ian and Lewis, Norman (1986), *The Noble Lie: The British Constitution and the Rule of Law*, New York, Hutchinson.
Hogan, Daniel B. (1979), *Regulation of Psychotherapists: A Study in the Philosophy and Practice of Professional Regulation*, Cambridge, MA, Ballinger.
Kay, John and Vickers, John (1990), 'Regulatory Reform: An Appraisal', in Majone, Giandomenico (ed.), *Deregulation or Re-regulation: Regulatory Reform in Europe and the United States*, London, Frances Pinter.
Latin, Howard (1985), 'Ideal versus Real Regulatory Efficiency: Implementation of Uniform Standards and "Fine-Tuning" Regulatory Reforms', **37** *Stanford Law Review*, 1267-1332.
OECD (1985), *Competition Policy and the Professions*, Paris, Organisation for Economic Co-operation and Development.

Office of Fair Trading (1982), *Opticians and Competition*, HMSO.

Page, Alan C. (1986), 'Self-Regulation: The Constitutional Dimension', **49** *Modern Law Review*, 141-167.

Page, Alan C. (1987), 'Financial Services: The Self-Regulatory Alternative', in Baldwin, Robert and McCrudden, Christopher (eds), *Regulation and Public Law*, London, Weidenfeld and Nicholson, ch.13.

Quirk, Paul J. (1981), *Industry Influence in Federal Regulatory Agencies*, Princeton University Press.

Schmitter, Philippe C. (1985), 'Neo-Corporatism and the State', in Grant, Wyn (ed.), *The Political Economy of Corporatism*, London, Macmillan, 32-62.

Schwartz, Alan and Wilde, Louis L. (1979), 'Intervening in Markets on the Basis of Imperfect Information: A Legal and Economic Analysis', **127** *University of Pennsylvania Law Review*, 630-682.

Tollison, Robert D. (1982), 'Rent Seeking: A Survey', **35** *Kyklos*, 575-602.

Tullock, Gordon (1967), 'The Welfare Costs of Tariffs, Monopolies and Theft', **5** *Western Economic Journal*, 224-232.

Waterson, Michael (1988), *Regulation of the Firm and Natural Monopoly*, Oxford, Basil Blackwell.