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THE ECONOMY OF OBLIGATION: INCOMPLETE CONTRACTS AND THE COST OF THE WELFARE STATE

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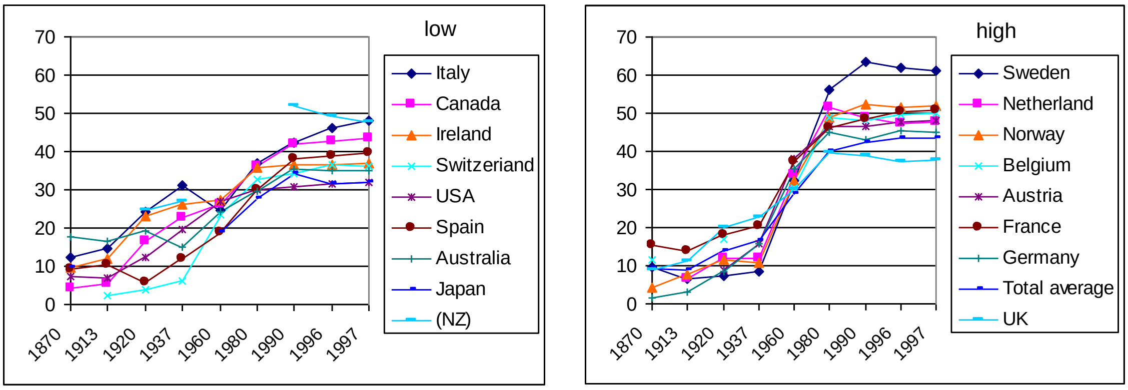
Abstract

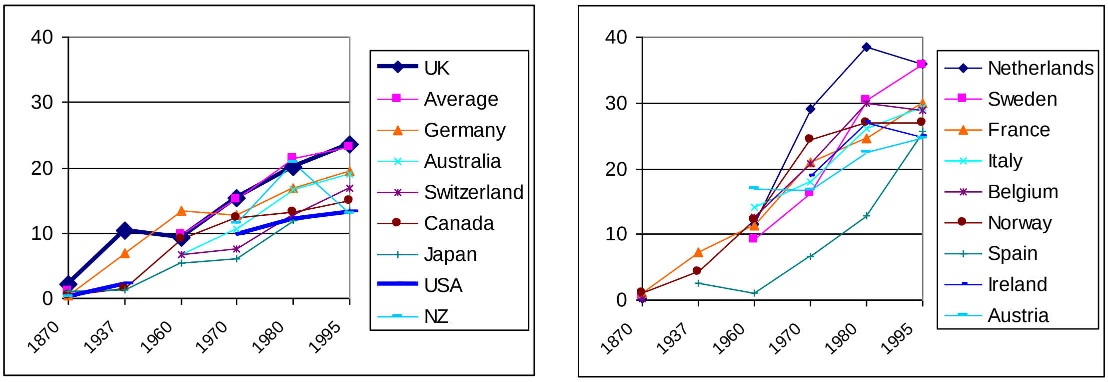
Western governments typically pay out some 30 percent of GDP for social purposes. This is financed by taxation on a pay-as-you-go (PAYGO) basis. How efficient are these transfers, and can market or other mechanisms do it better? The problem arises since no individual stands alone. During the life cycle there are several periods of unavoidable dependency, in which there is no earning and little to bargain with: motherhood, infancy, childhood, education, illness, disability, unemployment, old age. The problem is how to transfer resources from 'producers' to 'dependants' over the life cycle. The market solution is for individuals to accumulate financial assets and to transfer them over the life cycle by means of long-term contracts with financial intermediaries.

But law, economics, psychology, political science, and history, all suggest that long-term contracts are not reliable. People are myopic. Financial intermediaries exact high rents, and market entitlements are volatile. Equity markets do not have sufficient capacity to support life-cycle transfers. Governments convert private life-cycle transfers into intergenerational cross-sectional ones, financed by PAYGO. The resource base is much larger than financial markets, and is made up of the whole of the tax base. Costs are low, transfer levels are not rigid, are fixed by political consent, and can be adjusted. The national income resource base is stable. The constraints are (1) the demand for security (2) taxable capacity (3) integrity and competence of government (4) potential capture by finance. Because of these constraints, although government can do it better, it cannot do it alone, and the whole repertoire of transfer is required.

Governments in affluent market societies present two puzzles. Why are they so large, and why not any larger? Between the 1930s and the 1970s, rich-country governments increased their share of national income allocation between two- and four-fold. For the next two decades, despite the dominance of market-liberal doctrines, their share of national income held steady, while welfare spending continued to rise (figure 1).



(a) General government expenditure as percentage of GDP.



(b) Transfers and subsidies as percentage of GDP.

FIGURE 1. Government allocation as share of GDP, c. 1870-1990s.

Source: Vito Tanzi and Ludger Schuknecht, *Public Spending in the 20th Century: A Global Perspective* (Cambridge: Cambridge University Press, 2000), tables III.1, pp. 52-3 II.4, p. 31.

What do governments actually do? After World War II they came to focus on two main functions (figure 2). First, on core public goods like administration, law enforcement, and defence (in the UK, about one quarter of expenditure c. 2000-2005). The remainder, almost three-quarters, was spent on discharging remote or contingent obligations: delivering on past obligations, or providing for future ones—inter-generational transfers like pensions and education, life-cycle contingencies like medical treatment, disability, unemployment; and also infrastructure, i.e. roads, science, culture, environmental protection, and sport.

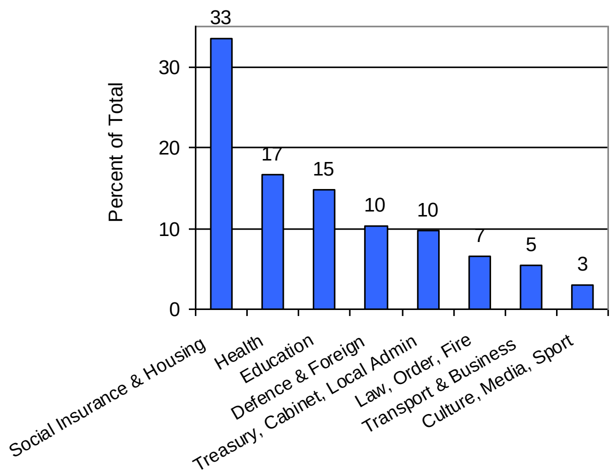


FIGURE 2. Mean UK government expenditure by category, 2000-2005

Sources: Great Britain, HM Treasury, *Public Expenditure Statistical Analyses 2007*, ch. 1, esp. table 1.5.
http://www.hm-treasury.gov.uk/economic_data_and_tools/finance_spending_statistics/pes_publications/pespub_pesa07.cfm

I argue that government can manage such long-term obligations more effectively than financial markets, because private long-term contracts are insecure. Government pay-as-you-go (PAYGO) finance transforms long-term obligations into current ones, and reduces reliance on contracts. More recently, the capacity of governments to perform has been undermined by market-liberal norms.

THE RICH AND THE REST

In the course of the life cycle, every person goes through periods when they cannot provide for themselves. Infancy and childhood, early motherhood, education, illness, unemployment, disability, and old age, are all costly and time-consuming. Several social institutions can provide for these dependencies, including family, charity, 'clubs' (mutual insurance or aid associations), employers, legal trustees and fiduciaries, governments, house property, financial markets, insurance payouts and tort awards. Each of these has its limitations. The focus here is on comparing the roles of government and financial markets.

The best provision for welfare dependency is to be rich. Their risks are diversified, their wealth exceeds their consumption. They demand attention and care without having to provide them in return. But only a minority can be cared for like the rich. Those who attend to the rich cannot all be rich themselves. Imagine the opposite: everyone equal in endowments and ability, and the only output is care (there are other needs, but this is the one that counts). This resembles a baby-sitting circle. If some couples only receive sitting but never give it in return, the others will only contribute under duress. The problem resembles a variant of Samuelson's overlapping generations model, with two life stages, production and dependency, and two co-existent generations, the active and the old, with only one good (care), which cannot be stored, and no capital. The old have nothing to bargain with. This can be remedied by intergenerational reciprocity or by money.[1]

These sketches demonstrate how the interests of the rich can be at odds with those of the rest. Without reciprocal entitlement, the role of the many is to service the few, with no confidence of being cared for in return. The fewer the rich, the more secure they are in being attended to. Edmund Burke wrote, 'all the classes and descriptions of the Rich—they are the pensioners of the poor.'[2] The rich have done well from market competition, and advocate it for the rest. In the United States, a well-funded 'personal responsibility crusade' advocates that everybody should stand

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[1] Paul A. Samuelson, 'An Exact Consumption-Loan Model of Interest with or without the Social Contrivance of Money', *The Journal of Political Economy*, 66 (1958), pp. 467-82.

on their own feet.[3] But not everyone can do so all the time. Social mobility in Britain and the USA is declining, and inequality has risen.[4] The 'ownership society' exalts private success, but discourages other routes to security. If the winners can limit non-market entitlements, it makes the rest more dependent upon them.[5]

LAW

The advocates of 'personal responsibility' would have individuals provide for the contingencies of dependency by entering into long-term contracts with financial intermediaries.[6] Such contracts aspire to lock in the future, but the future is elusive. Law suggests that contracts are indeterminate.

Market liberal thinkers assume that markets operate smoothly by means of freely entered contracts, enforceable in law. In fact, contracts are far from secure. There are two legal views of contract, the ideal and the real. The first is the 'classic' legal model of contract, the standard textbook theory.[7] Two parties enter into a voluntary agreement and both of them benefit. This assumes 'freedom of contract'. Agreement is a 'meeting of wills', or of 'minds'.[8] It is binding: *Pacta sunt servanda*—agreements must be kept. Sir George Jessel, a senior British judge, pronounced in 1875:

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[2] Edmund Burke, *Thoughts and Details on Scarcity Originally Presented to the Right Hon. William Pitt in the Month of November 1795* (London: F. and C. Rivington, 1800), p. 2.

[3] Jacob S. Hacker, *The Great Risk Shift: The New Economic Insecurity and the Decline of the American Dream*, rev. and expanded edn. (New York: Oxford University Press, 2008), p. 8 and *passim*.

[4] Cheti Nicoletti and John F Ermisch, 'Intergenerational Earnings Mobility: Changes across Cohorts in Britain', *The B. . Journal of Economic Analysis & Policy*, 7 (2007), 1-36; Robert J. Gordon and Ian Dew-Becker, 'Controversies About the Rise of American Inequality: A Survey', *NBER Working Papers*, 13982 (Cambridge, MA, 2008); Frank Levy and Peter Temin, 'Inequality and Institutions in 20th Century America', *NBER Working Papers*, 13106 (2007).

[5] Avner Offer, *The Challenge of Affluence: Self-Control and Well-Being in the United States and Britain since 1950* (Oxford: Oxford University Press, 2006), pp. 298-9.

[6] Hacker, *Great Risk Shift*, *passim*.

[7] John Adams and Roger Brownsword, *Understanding Contract Law*, 5th edn. (London: Sweet & Maxwell, 2007), ch. 1; James Gordley, *The Philosophical Origins of Modern Contract Doctrine* (Oxford: Clarendon Press, 1991), ch. 8.

[8] Gordley, *Philosophical Origins of Modern Contract Theory*, pp. 162ff. ; Patrick S. Atiyah, *The Rise and Fall of Freedom of Contract* (Oxford: Clarendon Press, 1979), pp. 405-408.

> If there is one thing which more than another public policy requires it is that men of full age and competent understanding shall have the utmost liberty of contracting, and that contracts when entered into freely and voluntarily shall be held sacred and shall be enforced by the Courts of Justice.[9]

These are market-liberal principles: abiding by promises underpins personal responsibility, and autonomy of the individual. Contract binds the parties in a 'private law' which they write themselves, and gives rise to 'private ordering', a spontaneous and benign system that is independent of the state. Advocates of the classical contract prefer plain readings. 'Justice is blind', and should be. A strictly literal reading of contracts makes outcomes predictable, and facilitates co-operation and exchange. For one author, the term 'sanctity of contract' evoked a pre-modern world of mediaeval oaths and gentlemanly honour.[10] It transcended mere self-interest. The mutual reliance of the parties creates an ethical duty, which is widely acknowledged, although with ample qualifications.[11] Agreement, however, presents an opportunity for one party to take advantage of the other's commitment. Economists call such defection 'moral hazard' or 'opportunism', implying that contracts are *morally* binding. Keeping promises is a virtue.

But the modern market-liberal ethos is not virtue, it is calculating self-regard. Even as Jessel spoke, contracts had already been stripped of moral obligation by the

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[9] He was Master of the Rolls and Head of the Court of Appeal, and had been Solicitor-General. *Printing and Numerical Registering Co. v. Sampson* (1875) *Law Reports* 19, Eq. 462, at 465.

[10] David Hughes Parry, *The Sanctity of Contracts in English Law* (London: Stevens, 1959), ch. 1.

[11] Atiyah, *Rise and Fall of Freedom of Contract*, pp. 1-2; Charles Fried, *Contract as Promise: A Theory of Contractual Obligation* (Cambridge, MA: Harvard University Press, 1981); Richard Epstein, 'Contracts Small and Contract Large: Contract Law through the Lens of Laissez-Faire', in Francis H. Buckley, ed., *The Fall and Rise of Freedom of Contract* (Durham, NC: Duke University Press, 1999), pp. 24-60; Thomas Scanlon, 'Promises and Practices', *Philosophy and Public Affairs*, 19 (1990), 199-226.

courts.[12] The American jurist Oliver Wendell Holmes, Jr. (later Supreme Court Justice) wrote provocatively in 1881 that a person was free to break his legally binding promise, subject only to the payment of damages.[13] James Gordley highlights 'virtue' as an Aristotelian norm that was discarded at the onset of modern jurisprudence in the 17th century, and is still conspicuous in its absence.[14]

There is a void at the centre of classical contract theory. If the will is free, why can it not change its mind? Why should promises be kept? Fear of punishment alone is not a powerful sanction. What makes agreement binding? Insisting on the literal text implies that current intentions both anticipate and dominate any future contingencies.[15] But why should prior choice override current preference?[16] Holding parties strictly to their promises, 'might operate harshly and unfairly in many instances.'[17]

In contrast to the formalism of classical contract theory, it has long been argued that contract is inherently indeterminate. 'No legal system has ever carried into practice the theory of absolute contractual liability.'[18] Even Jessel had exempted the incompetent and the under-aged. An array of doctrines and devices allow jurists and judges to relax the stipulations of contract.

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12 Parry, *Sanctity of Contracts*, pp. 12-13, Atiyah, *Rise and Fall of Freedom of Contract*, pp. 653ff; Patrick S. Atiyah, *Promises, Morals and Law* (Oxford: Clarendon Press, 1981), ch. 1.
13 Oliver Wendell Holmes, *The Common Law* (Boston: Little Brown, 1881), p. 301.
14 Gordley, *Philosophical Origins of Modern Contract Theory*, esp.pp. 244-246.
15 Ian R. Macneil, 'Contracts: Adjustment of Long-Term Economic Relations under Classical, Neoclassical and Relational Contract Law', *Northwestern University Law Review*, 72 (1978), 854-905, p. 863. His term for this dominance is 'presentiation'.
16 Patrick S. Atiyah, *Essays on Contract* (Oxford: Clarendon Press, 1986), p. 126.
17 Parry, *The Sanctity of Contracts*, p. 39.
18 Grant Gilmore, *The Death of Contract* (Columbus: Ohio State University Press, 1974), p. 44; Michael J. Trebilcock, *The Limits of Freedom of Contract* (Cambridge: Harvard University Press, 1993).

‘Freedom of contract’ is valued by those with market power: ‘the terms of all contracts are determined by the relative bargaining power’.[19] For example, there is no general duty of disclosure to prevent one party from and taking advantage of the other’s ignorance.[20] A written contract binds even if the person signing could not have read it. A printed standard contract might appear unfair to a one judge, and be upheld as efficient by another. Corporations enter contracts but have no personal ‘will’. Exemption clauses, especially one-sided ones, are pervasive: stronger parties include clauses which allow them to change the terms unilaterally.[21] Claims of error or mistake provide one escape from liability, and default or bankruptcy provide another.

The choice of court can affect outcomes. Judges have biases and personalities, and lawyers strive be heard by sympathetic ones. In the United States, most judges stand for election.[22] Federal judicial appointments are politically partisan.[23] Court conventions vary: the United States has fifty distinct state jurisdictions, and a Federal one as well. [24] Mitigations are numerous, and are open to judicial discretion. When judges exercise discretion, they undermine certainty. The abundance of options may give rise to passivity: ‘Courts act passively... because they do not know how to be

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19 James Gordley, ‘Contract, Property and the Will -- the Civil Law and Common Law Tradition’, in Harry N. Scheiber, ed., *The State and Freedom of Contract* (Stanford, CA: Stanford University Press, 1998), pp. 66-88, at pp. 87-8.

20 Adams and Brownsword, *Understanding Contract Law*, p.161.

21 Brian Grow and Robert Berner, ‘Credit Cards: Behind the Consumer Rage’, *Business Week* (11 May 2009 pp. 48-51.

22 John A. G. Griffith, *The Politics of the Judiciary* (Manchester: Manchester University Press, 1977); Ronald Dworkin, *Justice in Robes* (Cambridge, MA: Belknap Press of Harvard University Press, 2006); Gretel C. Kovach, ‘Mixed Opinion on a Judge Accused of Misconduct’, *New York Times*, 8 March 2009; George D. Brown, ‘Political Judges and Popular Justice: A Conservative Victory or a Conservative Dilemma?’ *William and Mary Law Review*, 49 (2008), pp. 1543-620.

23 ‘Who’s Filibustering Now?’, *New York Times* editorial, 9 March 2009.

24 William C. Whitford, 'A Comparison of British and American Attitudes Towards the Exercise of Judicial Discretion in Contract Law', in David Campbell, Hugh Collins and John Wightman, eds., *Implicit Dimensions of Contract: Discrete, Relational and Network Contracts* (Oxford: Hart, 2003), pp. 187-206, at p. 199.

active.'[25] Evidence is challenged. Contracts must be offered and accepted correctly, and are set aside for ignorance or error, misrepresentation and duress. Agreements are ambiguous, contain implied terms, and are open to dispute. The courts can decide whether non-performance is justified by circumstance. In the United States, lay juries participate in civil trials. When agents are not be aware of their own interests, e.g. children or the mentally disordered, then paternalist intervention is warranted. A contract might impose harm on bystanders. 'Public policy', a principle invoked by Jessel, is open-ended. Judgements are not always fully enforced.

Among jurists, the debate on contract is persistent and partisan.[26] The sway of classical contract has been shrinking since the 19th century.[27] On the one hand, fairness undermines certainty, on the other, a harmful finality may not be worth having. This discourse does not inspire confidence in the capacity of contracts to deliver public policy. Contract validity was widely discussed during the public controversy over bankers' bonuses in spring 2009.[28]

Contract doctrines rely on case law. But cases are atypical. Businessmen settle disputes by other means.[29] The 'real deal' diverges from the 'paper deal', the implicit contract from the formal one. Instead of litigation, business people seek to re-align their interests. This is known as 'relational contracting '. It looks beyond written

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[25] Schwartz, 'Legal Contract Theories and Incomplete Contracts', pp. 79-80.

[26] Gilmore, *The Death of Contract*; Atiyah, *Rise and Fall of Freedom of Contract*; Hugh Collins, 'The Sanctimony of Contract', in Richard Rawlings, ed., *Law, Society and Economy* (Oxford: Oxford University Press, 1997), pp. 63-90; Francis H. Buckley, ed., *The Fall and Rise of Freedom of Contract* (Durham, NC: Duke University Press, 1999).

[27] Adams and Brownsword, *Understanding Contract Law*, pp. 7-13, 211-235.

[28] Mary Williams Walsh and Jonathan Glater, 'Contracts Now Seen as Being Rewritable', *New York Times*, 31 March 2009.

[29] Stewart Macaulay, 'The Real and the Paper Deal: Empirical Pictures of Relationships, Complexity and the Urge for Transparent Simple Rules', in David Campbell, Hugh Collins and John Wightman , eds,, *Implicit Dimensions of Contract: Discrete, Relational and Network Contracts* (Oxford: Hart, 2003), pp. 51-102.

intentions to enduring interests, and takes context into account.[30] If the classic contract is like a duel, a 'relational' contract is recursive. The parties do not aim to prevail, but to keep the deal going. The law of contract finds it difficult to deal with extended time frames. Long-term contracts typically specify arbitration, rather than litigation.[31]

It is possible to make too much of judicial indeterminacy – very few civil cases ever come to trial. In the United States at least, both legal conservatives and radicals appear to agree that the distinction between obligations arising from contract (i.e. voluntary agreement by parties) and from tort (obligations imposed by law) is no longer very meaningful.[32] To measure litigious activity, it is convenient to deal with them together. In the United States, several million disputes a year required at least the threat of litigation to resolve. In 2005, some 7.6 civil claims were filed in intermediate courts, and more than 10 million in lower ones. But only a tiny fraction of cases (about 3 per cent in intermediate courts, and approximately 33,000 cases a year including federal ones) ever came to trial. [33] On another measure, only 1.8 per

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;Ibid., 'Non-Contractual Relations in Business: A Preliminary Study', *American Sociological Review*, 28 (1963), pp. 55-67; Hugh Beale and Tony Dugdale, 'Contracts between Businessmen: Planning and the Use of Contractual Remedies', *British Journal of Law and Society*, 2 (1975), pp. 45-60.

[30] Ian R. Macneil, *The New Social Contract: An Inquiry into Modern Contractual Relations* (New Haven: Yale University Press, 1980).

[31] Nagla Nassar, *Sanctity of Contracts Revisited: A Study in the Theory and Practice of Long-Term International Commercial Transactions* (Dordrecht: Martinus Nijhoff, 1995).

[32] Gilmore, *Death of Contract*, p. 87; Paul H. Rubin, *Tort Reform by Contract* (Washington, D.C: AEI Press, 1993), pp. 1-2; Andrew Robertson, 'On the Distinction between Contract and Tort', in Andrew Robertson and Michael Bryan , eds., *The Law of Obligations: Connections and Boundaries* (London: Cavendish Publishing, 2003), pp. 87-110.

[33] Intermediate courts: unified and general jurisdiction state courts, and federal courts. Lynn Langton and Thomas H. Cohen, 'Civil Bench and Jury Trials in State Courts, 2005', *Bureau of Justice Statistics, Special Report* (Washington, DC, 2009), pp. 1-3; Admnistrative Office of U.S. Courts, *2008 Annual Report*, table 5-7, p. 48; R. LaFountain, R. Schaufer, S. Strickland, W. Rafery, C. Bromage, C. Lee and S. Gibson, *Examining the Work of State Courts, 2007: A National Perspective Fom the Court Statistics Project*, (Washington, DC: National Center for State Courts, 2008), p. 17 (extrapolated). John B. Henry, '*Fortune* 500: The Total Cost of Litigation Estimated at One-Third Profits', *The Metropolitan Corporate Counsel* (February, 2008), p. 28, reports a similar percentage from different sources, without making a distinction between state and federal courts.

cent of Fortune 500 corporate law cases reached final judgement.[34] In England the proportion of cases coming to trial was higher, but there were still only about 17,000 trials a year in the intermediate courts.[35]

Insurance companies were the most likely source of contractual or legal redress. If disputes were not taken to trial, it is tempting to assume that this was because they were resolved 'in the shadow of the law': If the law was straightforward, companies would seek to settle rather than litigate. But the avoidance of trials can be interpreted differently, as a wariness of judicial uncertainty. The investment in civil cases was massive. The scale of tort awards in the USA in 2002 was about one per cent of GDP, with legal costs (excluding the costs of the courts) coming to an additional 0.75per cent, making it a costly form of welfare transfer.[36] Claims were resisted stubbornly: the average Fortune 500 case lasted three years.[37] A separate study of medical malpractice suits showed 'For every dollar spent on compensation, 54 cents went to administrative expenses (including those involving lawyers, experts, and courts).'[38] The debate on tort in the USA is partisan, but supporters and opponents both agree that only about half the sums awarded actually reach the claimants.[39] At issue is not only uncertainty, but also expense. Intermediaries imposed a massive rent on legal restitution, a pattern that recurs in other forms of market provision.

ECONOMICS

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[34] Henry, '*Fortune* 500: The Total Cost of Litigation', p. 28.

[35] 17,318 trials or claim hearings in 2005 in Crown Courts, excluding small claims; the numbers in higher (Queen's Bench) and appellate courts appears to be much smaller, but details are not available. Great Britain, Department for Constitutional Affairs, *Judicial Statistics 2005*, *Parliamentary Papers* [Cm 6799] (London, 2006), table 4.8, p.58, p. 39.

[36] Calculated from Tillinghast-Towers Perrin, *U.S. Tort Costs: 2003 Update: Trends and Findings on the Costs of the U.S. Tort System* (Stamford, CT: Tillinghast-Towers Perrin, 2004), p. 17, excluding insurance company expenses.

[37] Henry, '*Fortune* 500: Total Cost of Litigation'.

[38] D. M. Studdert, et al., 'Claims, Errors and Compensation Payments in Medical Malpractice Litigation', *New England Journal of Medicine*, 354 (2006), 2024-33, p. 2024.

The focus of economics, as of classic contract law, is on self-regarding individuals who maximize their advantage in market settings. As in law, exchange is voluntary and benefits the parties in proportion to their bargaining power. Each party maximizes 'net present value', the discounted sum of future payoffs. As in classic contract, they are assumed to know the future at the point of agreement, so have no reason to ever change their minds (this is the assumption of time-consistency, which is an attribute of formal rationality). Hence there is no need for enforcement. In any case, 'Economic models of renegotiation assume that either party can costlessly enforce any term in the original contract.'[40] The Coase theorem, 'with zero transaction costs', is such an 'invisible hand' efficiency model.[41] It postulates that trading will deliver assets to those who can use them best, regardless of initial endowment. The analogous 'incentive theory' also assumes perfect information and costless enforcement.[42] Suggestive as this might be, it does not greatly correspond to reality.

The other version of the Coase theorem assumes that transactions are costly.[43] Agents do not have perfect foresight, and act with limited information and bounded reason. They do not deal fairly, but with 'opportunism and guile'. Contracts cannot anticipate every contingency, so are inevitably incomplete.[44] Parties are not equally well-informed, and private knowledge provides a bargaining advantage.

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[39] American Association for Justice, 'Problems with the Towers Perrin Annual Study' (2008), in http://www.justice.org/cps/rde/xchg/justice/hs.xsl/5458.htm, accessed: 26 June 2009.

[40] Alan Schwartz, 'Legal Contract Theories and Incomplete Contracts', in Lars Werin and Hans Wijkander, eds, *Contract Economics* (Cambridge, MA: Blackwells, 1992), pp. 76-108, at p. 96.

[41] R. H. Coase, 'The Problem of Social Cost', *Journal of Law and Economics*, 3 (1960), 1-44.

[42] Eric Malin and David Martimort, 'Transaction Costs and Incentive Theory', in Eric Brousseau and Jean-Michel Glachant, eds, *The Economics of Contracts: Theories and Applications* (Cambridge: Cambridge University Press, 2002).

[43] Under several flags, including 'New Institutional Economics', 'Property Rights', and 'Transaction Cost' economics. Thráinn Eggertsson, *Economic Behavior and Institutions* (Cambridge: Cambridge University Press, 1990).

[44] Philippe Aghion, and Richard Holden, 'Incomplete Contracts and the Theory of the Firm: What Have We Learned over the Past 25 Years?', *Journal of Economic Perspectives*, 25 (2011), pp. 181-97.

Those who come forward to deal have an incentive to conceal risk ('adverse selection'), while those who sign up are tempted to defect afterwards ('moral hazard'). To offset these problems, the incentives of agents can be aligned with the interests of principals. This sounds clever, but corporate managers can outwit incentive designers: 'no good regulatory solutions for inevitably incomplete contracts exist.'[45] Contract designs that rely on self-interest signal an assumption that agents will place their own personal objectives before any other obligations.[46] But a market driven exclusively by self-interest cannot work. 'Judges and the police may indeed be paid, but the system itself would disappear if on each occasion they were to sell their services and decisions.'[47]

The two versions of the Coase theorem reflect an historical shift in economic behavioural assumptions from co-operation to cheating. The traditional assumption of market harmony was reasserted in the 1970s with models of efficient markets and rational expectations.[48] In contrast, new models of asymmetric information and game theory demonstrated that the better-informed party had an incentive to cheat. Good faith could no longer taken for granted. In the 1990s, behavioural economics began to investigate the propensities to co-operate and to dissemble, and found that both were pervasive.[49] In dealing with strangers, neither deceit nor decency can be assumed, which increases uncertainty.

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[45] Schwartz, 'Legal Contract Theories and Incomplete Contracts', p. 100.

[46] Sumantra Ghoshal, 'Bad Management Theories Are Destroying Good Management Practices', *Academy of Management Learning & Education*, 4 (2005), 75-91.

[47] Kenneth J. Arrow, 'Gifts and Exchanges', *Philosophy and Public Affairs*, 1 (1972), 343-62, pp. 345-6, 356-357; citation at p. 357.

[48] Kevin D. Hoover, *The New Classical Macroeconomics: A Sceptical Inquiry* (Oxford: Basil Blackwell, 1990); Kevin D. Hoover, ed., *The New Classical Macroeconomics* (Aldershot: Elgar, 1992); Arjo Klamer, *The New Classical Macroeconomics: Conversations with the New Classical Economists and Their Opponents* (Brighton: Wheatsheaf, 1984).

[49] Colin Camerer and Ernst Fehr, 'Measuring Social Norms and Preferences Using Experimental Games: A Guide for Social Scientists', in Joseph Henrich *et al.* eds, *Foundations of Human Sociality:*

PSYCHOLOGY

Hume thought that it human nature had a fatal preference for the present over the future.[50] Adam Smith wrote that for good choices, willpower was as vital as reason.[51] Empirical research confirms these insights.[52] Immediate desires are urgent, later ones are not. Inconsistency between present desires and future ones can make a choice intractable. It is difficult to override immediate desires but equally difficult to know how much they should be overruled.[53] Myopia undermines prudential provision.

Finance is replete with examples of time-inconsistency. Investors pile in when markets are high, and cash out when prices are low. Passive enrolment raises participation in pension plans. Insurance policies impose mandatory payments. Investors diverge from the rational-choice assumptions of finance theory.[54] If clients are myopic, they also likely to undersave, and to withdraw funds prematurely from their accounts.[55]

Myopia is hard to overcome. Commitment is costly. Orthodox economists have conceded the point: education, for example, which confers a capacity for

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Economic Experiments and Ethnographic Evidence from Fifteen Small Scale Societies (New York: Oxford University Press, 2004), pp. 55-95.

[50] David Hume, *A Treatise of Human Nature*, ed. David Fate Norton and Mary J. Norton (Oxford: Oxford University Press, 2000) (Oxford: Oxford University Press, 2000), Bk. 3, pt ii, section vii.

[51] Adam Smith, *The Theory of Moral Sentiments* (Oxford: Clarendon Press, 1976), Pt IV, ch. 2.

[52] George Loewenstein, Daniel Read and Roy F. Baumeister, *Time and Decision: Economic and Psychological Perspectives on Intertemporal Choice* (New York: Russell Sage Foundation, 2003); Offer, *Challenge of Affluence*, chs. 3-4.

[53] Thomas C. Schelling, 'Self-Command in Practice, in Policy and in a Theory of Rational Choice', *American Economic Review*, 74 (1984), 1-11, p. 9.

[54] Richard H. Thaler , ed., *Advances in Behavioral Finance* (New York: Russell Sage Foundation, 1993); Nassim Taleb, *Fooled by Randomness: The Hidden Role of Chance in Life and in the Markets*, 2nd edn. (London: Penguin, 2007);

[55] David I. Laibson, Andrea Repetto and Jeremy Tobacman, 'Self-Control and Saving for Retirement', *Brookings Papers on Economic Activity*, 1 (1998), pp. 91-172; Richard H. Thaler and Cass R. Sunstein, *Nudge: Improving Decisions About Health, Wealth and Happiness* (New Haven, CT+: Yale University Press, 2008).

foresight, is worth acquiring by the well-off more than the poor.[56] 'Patience capital' embodies the capacity to defer.[57]

Cognitive biases are a challenge to the lawyers' 'will theory' and 'freedom of contract'. They show that choice is fallible. But choices still have to be made. When calculation is difficult, people fall back on 'commitment devices', social institutions and conventions like education, insurance, and marriage.[58] Classical contract and economic rationality might themselves be seen as such devices, evolved to as tools to master commitment: Not models of human nature, but attempts to cope with its limitations. Government is another instrument of commitment. One of its functions is to help individuals to cope with myopia, to act as their commitment agent.

OPPORTUNISM AND GUILE

Trying to lock in the future by means of long-term financial contracts is both expensive and insecure. A common assumption in the discourse on future provision is that the prudent approach is to 'fund' future liabilities in advance by building up a stock of financial assets. The assumption is that this overcomes the problem of fewer workers in the future to pay for future pensions. This is a misconception. Apart from housing, which endures for long periods of time, future consumption will have to be provided by future workers, regardless of whether they are paid from future taxes, or from the future yields of securities. The cost will depend on how much these future workers are able to charge, and that is independent of the source of payment. If there

[56] Gary S. Becker and Casey B. Mulligan, 'The Endogenous Determination of Time Preference', *Quarterly Journal of Economics*, 112 (1997), 729-58.
[57] Matthias Doepke and Fabrizio Zilibotti, 'Patience Capital and the Demise of the Aristocracy', *C.E.P.R. Discussion Papers* 5106 (London, 2005).
[58] Offer, *Challenge of Affluence*, pp. 48-52.

are fewer workers, their output will cost more.[59] As David Willets once put it, it is not possible to bake bread today, to eat in twenty years' time.

Financial contracts are hedged in with difficulties. Contract timing is difficult to get right. It comes too late for the ageing—no time left to build up entitlements. For the sick, disabled, and unemployed, the contingency has already arrived. The young are not yet competent to sign. Future needs, decades hence, are difficult to anticipate.

Financial entitlements endure for many years, and transaction costs absorb much of the outlay. Initial marketing, administration, trading charges, taxes, returns on company capital, salaries and bonuses all have to be paid for. A pension saver, for example, faces three types of cost: a management charge, usually expressed as a percentage of the accumulated asset value, the cost of shifting between providers (few investors stay the course with one firm), and the cost of taking out an annuity.[60] The management cost is the 'charge ratio', expressed as a percentage of the aggregate contributions to the fund. As a rule of thumb (assuming a fund return of five per cent real), a management fee of one per cent of assets translates into a charge ratio of 20 per cent, i.e. reduces the total accumulated by that magnitude.[61] More straightforwardly, a one-per cent-of-assets management charge reduces yield by one percentage point. Typical charges on equity-based private-account pensions range between one and two per cent of assets every year.[62] Charge ratios vary widely, e.g. between about 10 per cent (Bolivia) and 35 per cent (Australia, Mexico, UK). Extra

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[59] N. A. Barr, and Peter A. Diamond, *Reforming Pensions: Principles and Policy Choices* (New York ; Oxford: Oxford University Press, 2008), 102-104.

[60] J. Murthi, P. Orszag and M. Orszag, 'The Charge Ratio on Individual Accounts: Lessons from the U.K. Experience', *Birbeck College Working Paper* 99-2 (London, 1999).

[61] Edward Whitehouse, *Paying for Pensions: An International Comparison of Administrative Charges in Funded Retirement-Income Systems* (London: Financial Services Authority, 2000), p. 77; Orszag, 'Administrative Costs', table 1, p. 7.

[62] Mitchell, 'Administrative Costs', table 10. p. 10.

transfer and annuity costs, as well as dealing charges, are not included. In the UK in 1999, taking all costs, and based on the first decade's experience of personal private pension accounts, the *average* charge ratio, estimated conservatively, came to 43 per cent. This is consistent with published trade assumptions.[63] Some funds charged much more. The cost of investing in managed equity trusts and life offices in the UK came, implicitly, to about one third of the payoff: an investment of £1.50 was required to obtain the market rate of return on £1.[64] The UK government treats such levels of costs as reasonable – its voluntary 1999 'stakeholder pension' for low earners permitted management costs (before dealing charges) of up to 1.5 per cent, implying a charge ratio of more than 30 per cent (the public has largely kept away). The most recent compulsory pension plan for low earners (NEST) is similarly handicapped. Its charges are very reasonable: 1.8 percent of every contribution plus an annual 0.3 percent on the total. But the insurance industry successfully lobbied for a cap of £4,400 of contributions per year, to prevent 'unfair competition'.[65]

John C. Bogle, a senior American financial market insider, has railed about the cost of market investment. As the long-time head of a low-cost index fund, he may be partial—but his expertise is authentic. He points to additional costs of herd behaviour (bad market timing, bad stock selection), survivor bias (some firms fail), up-front and redemption fees, manipulative and costly marketing, and excessive churning, which generates brokerage fees and tax liabilities. His data indicate that the average investor

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63 J. Murthi, P. Orszag and M. Orszag, 'Administrative Costs under a Decentralised Approach to Individual Accounts: Lessons from the United Kingdom', in Robert Holzmann et al., eds., *New Ideas About Old Age Security: Towards Sustainable Pension Systems in the 21st Century* (Washington, DC: The World Bank, 2001), pp. 308-35, at pp. 331, 324.

64 'One must invest about £1.50 in an actively managed unit trust or through a life office in order to obtain the market rate of return on £1' (Kevin R. James, 'The Price of Retail Investing in the Uk', Financial Services Authority, *Occasional Paper* 6, (London, February 2000), p. 5); see also p. 7.

65 National Employment Savings Trust [NEST], *All the Facts* (London, 2012), p. 21; Bureau of Investigative Journalism, 'Insurance Lobby Weakens Pension Plan for Low Paid' (9 July 2012),

gets only 54 per cent of the stock market annual return, and 33 per cent of the fund's final gross value.[66] Corporate managers in listed companies manipulate returns so as to maximize their own payoffs at shareholder expense.[67] Intermediaries and agents, whether fund managers or corporate executives are no longer fiduciaries, but are in it for themselves. Bogle writes of a 'a skimming operation', 'fleecing machine', 'giant scam', 'looted funds'.[68] Another insider's account is called *A License to Steal.*[69]

Equities have outperformed fixed-income securities consistently for more than a century.[70] This is the prime justification for entrusting entitlements to financial markets. But gross returns are misleading. The recent crisis, for example, destroyed five decades of equity advantage.[71] High returns require long-term abstinence to achieve. Asset prices incorporate a high prospective risk premium, which implies a high time-discount rate. If the investor is risk averse then risk adjustment reduces a rate of return which has already been lowered by costs and taxes. The investor ends up with close to the riskless (government bond) rate of return – which is what should

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http://www.thebureauinvestigates.com/2012/07/09/insurance-lobby-weakens-pension-scheme-for-low-paid/

[66] John C. Bogle, *The Battle for the Soul of Capitalism* (New Haven ; Yale University Press, 2005), ch. 7, and table 7.3, p. 167. Costs can be reduced by investing in low-cost index funds, but only a minority do so.

[67] Ibid., part I, esp. pp. 22-28.

[68] Ibid., pp. 212, 229.

[69] Anonymous andTimothy Harper, *License to Steal: The Secret World of Wall Street and the Systematic Plundering of the American Investor* (New York: HarperBusiness, 1999).

[70] J. Bradford DeLong and Konstantin. Magin, 'The U.S. Equity Return Premium: Past, Present and Future', *Journal of Economic Perspectives*, 23 (2009), 193-208; Elroy Dimson, Paul Marsh and Mike Staunton, *Triumph of the Optimists: 101 Years of Global Investment Returns* (Princeton, N.J. ; Oxford: Princeton University Press, 2002); Jeremy J. Siegel, *Stocks for the Long Run: The Definitive Guide to Financial Market Returns and Long-Term Investment Strategies*, 4th edn. (New York: McGraw-Hill, 2008).

[71] John Authers, 'Is It Back to the Fifties?' *Financial Times*, 25 March 2009.

be expected. There should not be any free lunch.[72] Holding stocks for long does not reduce the risk. It merely makes the loss greater when the loss finally occurs.[73]

Government pay-as-you go systems are between one and two orders of magnitude cheaper to run than stock-market provision. In the USA in 1999, Social Security administrative expenses amounted to 0.5 per cent of benefit payments.[74] This is about 1/50th of the management charges on individual private pension accounts. A more pessimistic estimate for average OECD pay-as-you-go costs (3 per cent of contributions), still suggests that they are ten times cheaper than individual market-based pension accounts.[75] Government creates large risk pools, it deals uniformly with large numbers of people and it does not need to sell: it can mandate participation to suppress free riding. A similar advantage of public over private was found in health: private insurance administrative costs in the USA were estimated at 12 per cent of spending, compared to 1.3 per cent in the tax-financed health service in Canada.[76]

A contract for delivery decades hence is uncertain. For a pension contract the risks include: market volatility, costly annuities, inflation, outliving savings, mismanagement, opportunism, default, regulatory and political risk. Take volatility:

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[72] Jason Furman, 'Would Private Accounts Provide a Higher Rate of Return Than Social Security?' *Center on Budget and Policy Priorities*, 2 June 2005 (Washington DC, 2005).

[73] Zvi Bodie, 'Letter: Are Stocks the Best Investment for the Long Run?' *The Economist's Voice*, 6, 3 (2009), 1-2.

[74] United States, Social Security Administration, 'Annual Statistical Supplement, 2000 to the Social Security Bulletin', (Washington DC, 2000), table 4.A1, Old-Age and Survivors Insurance, 1937-1999, p. 136.

[75] Assume the rate of return of private pension funds to be 5 per cent: an administrative charge of 1.5 per cent of assets would be comparable to 30 per cent of contributions (calculated from Olivia Mitchell, 'Administrative Costs in Public and Private Retirement Systems', in Martin Feldstein, ed., *Privatising Social Security* (Chicago: Chicago University Press, 1998), pp. 403-52, tables 10.1, 1.10) i.e. roughly about ten times as much as the public system (where payments are about the same as contributions).

[76] S. Woolhandler, T. Campbell and D. U. Himmelstein, 'Costs of Health Care Administration in the United States and Canada', *New England Journal of Medicine*, 349 (2003), pp. 768-75; American health costs are far higher than in OECD countries, and health outcomes are substantially inferior (Carlos Angrisano et al., *Accounting for the Cost of Health Care in the United States*, (Mckinsey Global Institute, 2007)); Alan M. Garber and Jonathan Skinner, 'Is American Health Care Uniquely Inefficient?' *Journal of Economic Perspectives*, 22 (2008), 27-50.

Burtless ran a simulation of a personal-account pension invested in the American stock market over the period 1871-1999. A worker invests six per cent of income annually for forty years with two per cent wage growth a year. The best outcome is almost six times higher than the worst one, depending on the times of entry and exit. The simulation delivered an initial replacement rate for a joint survivor annuity ranging between 14 per cent of the four best earning years, to 78 per cent, with one-quarter of cases falling below 26 per cent.[77] This is actually a considerable overestimate of the payout, which assumes no charges, transaction costs, or taxes. The worker might invest more to get a higher return, but the volatility would not change.

Risky counterparties are likely to offer the most attractive terms, and it is easy to be misled by marketing spin.[78] Taking discount rates at five per cent, market horizons are only twenty years, and shorter at higher rates.[79] Life cycles and contracts are longer than that. Stock-picking funds underperform the index and are five times more costly than passive index tracking ones, but most private savers choose these active funds, largely in response to marketing.[80] As entitlements build up, savers can face decades of moral hazard – the firm has a steady income stream, and a standing temptation to defect. For example, income protection single-premium policies were widely bundled with insurance and credit in Britain. The Financial Services Authority found that half the policies restricted the ability to claim, or provided very limited cover. Premiums were several times higher than payouts. The regulator fined some

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[77] Gary Burtless, 'Social Security Privatisation and Financial Market Risk: Lessons from Us Financial History', in Toshihiro Ihori and Toshiaki Tachibanaki , eds,, *Social Security Reform in Advanced Countries: Evaluating Pension Finance* (London: Routledge, 2002), pp. 52-80, at table 4.1, p. 66. Single life annuities were about 30 per cent higher.

[78] Barry Schwartz, *The Paradox of Choice: Why More Is Less*, (New York: Ecco, 2004).

[79] For life insurance, Harold J. Schleef, 'The Joint Determination of Marginal Rate of Return and Interest Adjusted Cost for Whole Life Insurance', *Management Science*, 29 (1983), 610-21, p. 620.

companies, had premiums repaid, and after much delay, is phasing the contract out.[81] Financial intermediaries and corporate managers take advantage of outsiders, e.g. by means of 'market timing' (selling outside market hours using breaking information).[82] Even insiders are alarmed. Warren Buffet has described mutual fund directors who buy management services from themselves, as looters.[83] The practice is pervasive and legal, but criminal fraud and mismanagement are also endemic. Maxwell, Enron, Tyco, Worldcom, Global Crossing, Madoff, and Stanford, have all stolen money directly from pensioners, savers, and shareholders.

When the time comes to claim, clients may find themselves disqualified by small print.[84] Insurers resist claims aggressively.[85] Corporations threaten claimants with litigation, and (like several American airlines) can escape from pension liabilities by temporary bankruptcy.[86] Contracts are sometimes used as risk allocation devices. A private person who loses the gamble will suffer the force of the law, but corporate managers are protected by limited liability and bankruptcy. Government guarantees

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[80] Henry J. Aaron, 'Social Security: Tune It up, Don't Trade It In', in Benjamin M. Freidman, ed., *Should the United States Privatize Social Security?* (Cambridge, MA: MIT Press, 1999), pp. 55-112, at p. 71; Bogle, *Battle for the Soul of Capitalism*, pp. 94, 202.

[81] Great Britain, Financial Services Authority, 'FSA Update on Payment Protection Insurance (PPI)', 4 Nov. 2005, http://www.fsa.gov.uk/pages/library/communication/pr/2005/115.shtml, accessed 26 June 2009; Josephine Cumbo, 'FSA Steps up Campaign on Ppi Products', *Financial Times*, 24 February 2009.

[82] Bogle, *Battle for the Soul of Capitalism,* ch. 7.

[83] Warren R. Buffet, Chairman's Letter, Berkshire Hathway Inc. 2003 Annual Report, p. 8, http://www.berkshirehathaway.com/letters/2003ltr.pdf, in Bogle, *Battle for the Soul of Capitalism*, pp. 228-29. (accessed 3 March 2009).

[84] E.g. Reed Abelson, 'Many with Insurance Still Bankrupted by Health Crises', *New York Times*, 1 July 2009.

[85] Henry, '500 Corporations: The Total Cost of Litigation Estimated'; Chad Terhune, 'Wrangling over 'Reasonable' Fees', *Business Week* (1 March 2008), pp. 28-30; Dean Baker, 'Insurance Fraud: The Lack of Transparency in the Us Healthcare Industry Means Insurance Companies Can Abuse Patients by Denying Their Claims', *The Guardian*, 16 June 2008; Brian Grow, Robert Berner, and Jessica Silver-Greenberg, 'Fresh Pain for the Uninsured: As Doctors and Hospitals Turn to GE, Citi, and Smaller Rivals to Finance Patient Care, the Sick Pay Much More', *Business Week* (3 December 2007).

[86] Louis Kaplow, and Steven Shavell, *Fairness Versus Welfare* (Cambridge, Mass ; London: Harvard University Press, 2002), ch. IV, section B/1; Ben Stein, 'When You Fly in First Class, It's Easy to Forget the Dots', *New York Times*, 29 January 2006.

for bank deposits, pensions, and life insurance attempt to correct this asymmetry, but in doing so provide opportunities for corporations to take on even more risk.

How much saving is enough? Time-inconsistent allocation offers no guidance.[87] Actual levels of assets in private pension savings accounts are inadequate as a main resource for retirement. In the UK private sector in 2004-5, more than half the workers were making no pension contribution.[88] In the USA almost half of all retirees in 2012 had no retirement savings, and even the top quarter (in terms of income) of those aged 50-64 had median retirement savings of only $52,000, far short of the amounts required to sustain retirement.[89] Subsidies for saving went largely to high earners: 'Overall, around 70% of defined-contribution pension and IRA assets are held by the richest fifth of Americans.'[90]

Contracts also face political and regulatory risk.[91] The Thatcher government capped the growth of state pensions, and later cut them down. Since 1993 the British Treasury has reduced tax relief on dividend income for occupational pension funds by £150-225bn.[92]

STOCK MARKETS ARE TOO SMALL TO SUPPORT FUTURE DEPENDENCY

Advocates of 'personal responsibility' in the United States, and their counterparts in Britain, have worked hard to transfer social insurance management into stock market

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[87] Offer, *Challenge of Affluence*, pp. 48-9.

[88] Apart from National Insurance contributions, Adair Turner, Jeannie Drake and John Hills, 'Implementing an Integrated Package of Pension Reforms: The Final Report of the Pensions Commission' (London, 2006) , slide 2, pension-commission-final-slideshow.ppt [copy available on request].

[89] Joelle Saad-Lessler and Teresa Ghilarducci, 'Near Retirees' Defined Contribution Account Balances' (New York: Schwartz Center for Economic Policy Analysis, The New School, July 2012). https://docs.google.com/file/d/0B35b9afh6ZgZODkya0ZOTUl3RXc/edit#

[90] Hacker, *Great Risk Shift*, p. 123, citing congressional testimony by Peter Orszag, 2004.

[91] Austan Goolsbee, 'In Retirement Planning, There Is Nothing Certain About Death and Taxes', *New York Times*, 9 November 2006.

[92] Terry Arthur and Corin Taylor, 'The UK Pensions Crisis', *The TaxPayers' Alliance*, Research Note 38, 3 November (London, 2008).

funds.[93] But it is not widely appreciated that stock markets are not large enough to carry the weight of social insurance. Financial markets have no spare capacity to take on this role. In the 1990s, almost fifty per cent of financial wealth belonged to the top one per cent, and more than more than 90 per cent of financial wealth belonged to the top quintile.[94] These assets are already spoken for, and are not available for transfers to those outside these groups. Even in the USA, with the smallest welfare state and largest stock market among rich societies, the total reported earnings of the equities market was less than half the level of government transfers. Average government transfer payments (11.4 per cent of GDP) from 1989 to 2005 were more than twice as large as the average flow of stock market earnings (4.6 per cent).[95] Over the period 1960-2000, average annual stock market realized rates of return (4.06 per cent) were only slightly higher than the annual growth of real government transfers per capita (3.69 per cent), but volatility was three times as high (figure 3 below).[96] Net of management and transaction costs, stock market returns would have been much lower.[97]

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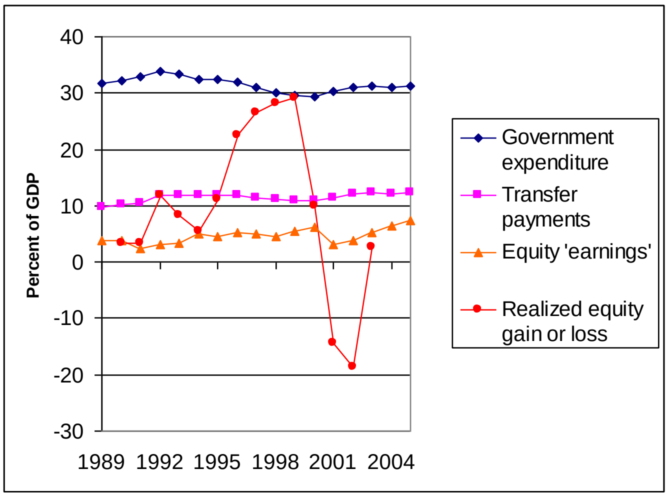
[93] Hacker, *Great Risk Shift*, ch. 2; Martin M. Feldstein, 'Structural Reform of Social Security', *Journal of Economic Perspectives*, 19 (2005), 33-55; Peter G. Peterson, *Gray Dawn: How the Coming Age Wave Will Transform America-and the World* (New York: Times Books, 1999).

[94] Edward N. Wolff, *Top Heavy: The Increasing Inequality of Wealth in America and What Can Be Done About It* (New York: New Press, 2002), fig. 3-3, p. 13.

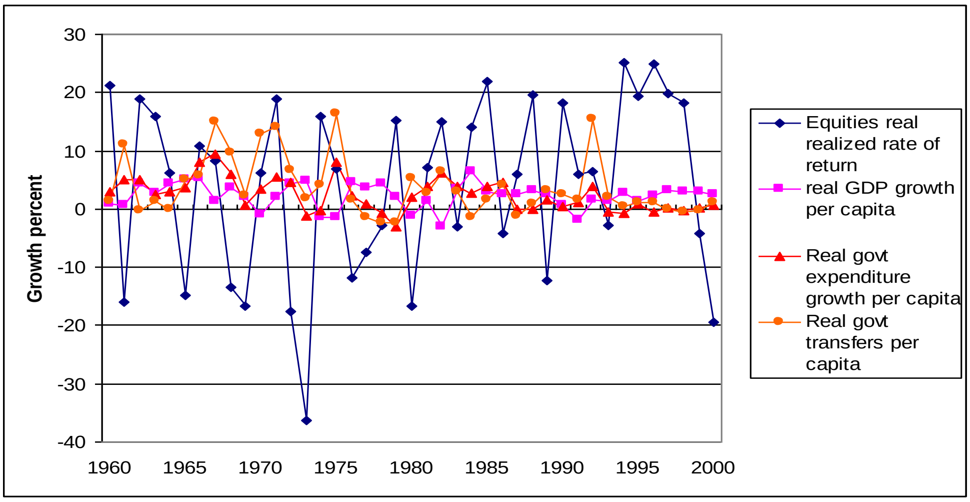
[95] Level of earnings of S&P 500 extrapolated to whole of stock market capitalization. Robert J. Shiller, 'Stock Market Data Used in "Irrational Exuberance"' Updated (2006), in http://www.irrationalexuberance.com/, accessed 1 April 2009; Thorsten Beck and Asli Demirgüç-Kunt, 'Financial Institutions and markets across Countries and over Time – Data and Analysis' *World Bank Policy Research Working Paper* (Washington DC, 2009), http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:20696167~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html.

[96] Figure 3 sources. Realized rates of return are calculated as (capital gains or losses +dividend payments)/ previous year's asset prices.

[97] Arguably, asset prices already embody net revenue expectations, so the rate of return assumed here is set too high. The data are taken from December of every year, by which time most dividends would have been paid.



a) USA revenue flows as percent of GDP



b) USA asset/endowment/transfer growth rates

FIGURE 3. USA equity market, GDP and government expenditure volatilities, in current prices.

Sources: Robert J. Shiller, 'Stock Market Data Used in "Irrational Exuberance"' Updated (2006), in http://www.irrationalexuberance.com; UK Stock market capitalization in Thorsten Beck and Asli Demirgüç-Kunt, 'Financial Institutions and Markets across Countries and over Time – Data and Analysis' *World Bank Policy Research Working Paper* (Washington DC, 2009), http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:20696167~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html; accessed 2 July 2009; Susan B. Carter et al., *Historical Statistics of the United States Millennial Edition Online*, ed. Matthew Sobek (New York: Cambridge University Press, 2006); US, Bureau of Economic Analysis, Industry Economic Accounts Information Guide, 'Annual Industry Accounts', http://www.bea.gov/industry/iedguide.htm#aia, accessed 16 March 2009.

PAYGO provides a flow of transfer out of current income. The ratio of workers to dependents is increasing in affluent societies as result of ageing, and it is sometimes argued that investing old-age savings in equities can solve this problem. Workers would accumulate financial assets which would either pay them a pension or be cashed in. What is not appreciated that apart from housing and land, which retain their value over time rather well, this does not solve the problem of ageing. Dependent people still have to be supported by workers. In the case of PAYGO, this is a tax claim on workers, in the case of accumulated assets, this is a financial claim. Current workers can bargain both claims down, either by resisting higher taxes, or by insisting on pay increases. It is not clear that one kind of claim is a priori more effective than the other, which makes a case for having both.

One version of funding is for workers to accumulate financial assets, and liquidate them over their retirement. We have already seen that financial assets are owned very unequally. Financial capital consumption might work for the minority of the better-off, but in the aggregate would add very little to the funds available for transfer. The reason is simple. Asset values represent the present value of revenue flows (including capital gains). Hence, over a long period, there should be little difference between the two. Retirement assets need to be liquidated over the expected period of retirement plus a few years (to protect against living too long). Some of the assets end up as bequests. If that period is twenty years, any benefit of consuming assets over revenue is likely to be small. Another approach is to assume that the retired own one-fourth of all assets. If these are liquidated over twenty years, the annual payoff would not be substantially larger than the revenue flow from the same asset base. Stock market returns are much more volatile than GDP (figure 3b). In contrast to stock markets, the tax base is stable. Real budget social transfers per capita have grown steadily, and have hardly ever declined.

WHY PAYGO WORKS

Governments succeed where markets fail because they do not commit to long-term contracts. Welfare state entitlements are 'relational contracts', not classical ones. They are not adversarial but cooperative, and are designed to endure over the long-term: contracts are re-opened when circumstances change.[98] They operate on a PAYGO basis and avoid the problems of future delivery. Transfer levels reflect a political equilibrium between taxpayers and recipients. Politicians and voters are also myopic. PAYGO avoids myopic bias by not requiring a long future commitment. Transfers take place in the present. A financial balance is a hoard. Once spent, it is gone. In contrast, a public pension entitlement also insures for longevity and inflation. PAYGO is a claim on 'the community's indestructible real tax base'.[99] In effect, it is a claim on a share of GDP—how much to be revealed when it becomes due for payment.

Dependants have little to trade with. So how can they compel delivery? Despite being a minority, their bargaining power is not zero. Their needs are salient in a way that claims in some remote future are not. Claimants are present and able to bargain. Welfare entitlements often rely on a record of contributions. The old, the ageing, and parents vote disproportionately. From 1964 to 2006, of those between 18 and 24, less than a third voted in congressional elections, about one-half of those aged 25-44, and 62 per cent of those older than 45.[100] An implicit contract rests on the norm of reciprocity. The old have paid taxes in the past, and fair dealing entitles them to something in return. The young who pay now can expect to benefit in the

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[98] David Campbell, Hugh Collins and John Wightman, eds., *Implicit Dimensions of Contract: Discrete, Relational and Network Contracts* (Oxford: Hart, 2003); Ian R. Macneil, 'Relational Contract Theory: Challenges and Queries', *Northwestern University Law Review*, 94 (2000), 877-908; Ian R. Macneil and David Campbell, *The Relational Theory of Contract: Selected Works of Ian Macneil* (London: Sweet & Maxwell, 2001); special issue of *Wisconsin Law Review*, 3 (1985).

[99] Samuelson, 'The Exact Consumption Loan Model', p. 482, n. 23.

[100] US Census Bureau, Voting and Registration, Table A-1, 'Reported Voting and Registration by Age', http://www.census.gov/population/www/socdemo/voting.html, accessed 3 July 2009.

future. If there were no social insurance, families would carry much of the burden,[101] and government welfare provides insurance against this liability. Family dependency risks are 'lumpy' and today's family webs too thin and frail in many cases to absorb them. The government's promise may be a 'soft' one, but 'hard' contracts of financial service companies are not more robust.

There is good deal of alarm about the solvency of American and European welfare systems.[102] But if taxpayers can't pay, they won't pay. Long before collapse, the terms get revised. American Social Security payouts were raised under Nixon, and were lowered under Reagan, in both cases in line with changing actuarial expectations, and are now reasonably secure, and provide quite substantial replacement rates. They form the bulk of retirement income for most people. They will be revised again if necessary. The Thatcher government (more radical than Reagan in this respect) began its administration by detaching pensions from wage levels, and linking them to prices instead. [103] It reduced the benefits of the earnings related state pension (SERPS), and nudged savers towards financial intermediaries by means of tax incentives.[104]

The relational contract gets modified to reflect voters' changing level of generosity. Entitlement was not thrown out. It was tightened. Contribution-based entitlement was replaced by a means-tested one, but still an entitlement by another name (in this case, 'Minimum Income Guarantee'), with no requirement to build up

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[101] Offer, *Challenge of Affluence*, pp. 88-9.

[102] This is largely an American trope, directed both at American social security, and at European welfare states. E.g. Peterson, *Gray Dawn*; Laurence J. Kotlikoff and Scott Burns, *The Coming Generational Storm: What You Need to Know About America's Economic Future* (Cambridge, Mass. ; London: MIT Press, 2004). But compare, Willam Wolman and Anne Colamsoca, *The Great 401(K) Hoax* (Cambridge, MA: Perseus Publishers, 2003).

[103] Nicholas Timmins, *The Five Giants: A Biography of the Welfare State*, Rev. & updated edn. (London: HarperCollins, 2001), p. 373.

[104] James Banks et al., 'State Pensions and the Well-Being of the Elderly in the UK', *Institute of Fiscal Studies* no. WP016 (London, 2006), pp. 2-7.

contributions. It has remained a good deal. Samuelson considers that PAYGO beneficiaries cannot expect more than the increase in national income per head in return for their contributions.[105] But overall, in 2003, for £32bn that were paid in that year as National Insurance contributions, UK pensioners received £46bn retirement pensions, a notional 'rate of return' of 43 per cent. The total of contribution-earned transfers was £58bn (a notional return of 81 per cent), with means-tested benefits on top of that.[106] If distribution was still dire, it was because of rising inequality and poverty in Britain during the Thatcher years. The well-off would like to expose public employees to same market rigours experienced by private sector ones.[107] In the meantime, the New Labour tax on occupational pensions hastened the decline of final salary schemes, and they survive mostly in the public sector.[108] Wealthy-country governments have not repudiated the relational contract in recent decades, but there is no guarantee that they never will. In the United States, medical treatment still falls outside it. In 2007, one in ten children, and one in five non-elderly adults had no health insurance. Such adults were 25 per cent more likely to die.[109] Excess deaths due to lack of insurance have been estimated at up to 45,000 a year, which is slightly more than fatalities from traffic accidents and a third more than deaths from gunshot.[110]

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[105] Samuelson, 'The Exact Consumption-Loan Model'.
[106] In 2003. Great Britain, National Statistics, *United Kingdom National Accounts 2003* (London, 2003) table 13 (App. 1).
[107] Alice Miles, 'We Can't Go on Paying Gold-Plated Pensions', *The Times*, 17 December 2008; Goff, Sharlene Goff, 'Public Sector Staff Set for Wealthier Retirement', *Financial Times*, 15 November 2008.
[108] Nicholas Timmins and Kate Burgess, 'Defined Benefit Pensions Fall Further', *Financial Times,* 25 August 2008.
[109] Committee on Health Insurance Status and its Consequences, Institute of Medicine of the National Academies, Board on Health Care Services, *America's Uninsured Crisis: Consequences for Health and Health Care* (Washington DC: The National Academies Press, 2009), pp. 3, 102.
[110] Andrew P. Wilper, Steffie Woolhandler, Karen E. Lasser, Danny McCormick, David H. Bor, and David U Himmelstein, 'Health Insurance and Mortality in US Adults', *American Journal of Public Health*, 99 (2009), 1-7. There may be some overlap between the uninsured and other casualties.

OBLIGATION AND MARKET LIBERALISM

Welfare state entitlement was challenged from the 1960s by the re-emergent doctrine of market liberalism.[111] It can be interpreted as a desire by society's winners (and their acolytes) to withdraw from the relational contract: the most enduring theme has been the quest for lower taxes.[112] It was also a bid by finance to capture social insurance from the state. This was a deliberately constructed gradualist programme, misleadingly labeled by some of its proponents as 'A "Leninist" Strategy". In a candid talk in 1986, the President of the Heritage Foundation said that 'the ideal solution [for social security] is privatisation'. His Foundation had been promoting tax exempt Individual Retirement Accounts as an intermediate step, which once introduced was very difficult to turn back.[113] In an interview in 2006, Stuart Butler, a vice-president of the market-liberal Heritage Foundation, and a movement strategist, made no bones about it:

> What we say is "Let's essentially privatize the risk management for health or retirement." You give people other vehicles to manage the risk of living too long or being sick. You wean people gradually off social insurance risk management into private risk management without making them fearful about it. You have to do it in steps and have some government protection, at least in the beginning.[114]

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[111] Most prominently at the academic level by the Public Choice school. See James M. Buchanan, 'Public Choice: The Origins and Development of a Research Program', *George Mason University, Center for Study of Public Choice* (Fairfax, VA 2003); Richard A. Musgrave, 'Leviathan Cometh--or Does He?' in H. Ladd and E. Tideman , eds,, *Tax and Expenditure Limits* (Washington, D.C.: Urban Institute Press, 1981), pp. 77-120.

[112] Jonathan Chait, *The Big Con: The True Story of How Washington Got Hoodwinked and Hijacked by Crackpot Economics* (Boston: Houghton Mifflin, 2007).

[113] Peter J. Ferrara, *Social Security: The Inherent* Contradiction (San Francisco, CA: Cato Institute, 1980); Stuart Butler and Peter Germanis, 'Achieving a "Leninist" Strategy', *Cato Journal*, 3, 2 (Fall 1983), 547- 561; Edwin J. Fuelner, 'Comments on "Marketing the Free Market", Mont Pelerin Society St. Vincent Meeting, September 1986,Hoover Institution, MPS 26.7, fos. 3-4.

[114] Interview with Stuart Butler, May 11, 2006, in Hacker, *Great Risk Shift*, p. 56.

The prizes were a surge in financial intermediation, tax cuts for the wealthy, and more dependence for everybody else. Privatisation of social insurance undermines pay-as-you go entitlements, and shifts market risks onto people who are not in a good position to bear them.

Capture has not succeeded more because markets are not effective managers of social risk. The privatized American health care system, for example, has only a few impartial defenders left. Capture was justified by a range of academic and other doctrines (efficient markets, public choice, monetarism, rational expectations, ‘leviathan’, supply-side economics) but the role of theory should not be exaggerated. It might be more an effect than a cause. Its function was to argue from first principles that government is inferior to ‘markets’ (in quotes, because existing institutions were typically compared with utopian market models). The real driver was politics.

Market liberalism can be seen as a quest by the wealthy to impose rents on the rest of society. In the early 1970s, corporate profits were declining.[115] From the 1980s, the liquidity that flowed into stock markets lowered returns and created a shortage of yield. American equity price/earnings ratios rose from 16 to 43 (1990-2000), and market capitalization tripled to 1.6 times GDP.[116] The paucity of stock-market yield was must have been one factor that drove finance so avidly into mortgages. The public services also presented a large business opportunity.

Market liberalism aspired to capture government tax revenues, to get access to household incomes, and to divert them into corporate cash flows. As corporate revenues these flows could deliver markups, and be managed, traded, leveraged, and

[115] Figures and 1970s references cited in Jack L. Miller and John Gowdy, ‘Vertically Integrated Measures of the Rate of Profit in United States 1950-90’, *Review of Income and Wealth*, 44 (1998), 555-62; Deepankar Basu, and Panayiotis T. Manolakos, 'Is There a Tendency for the Rate of Profit to Fall? Econometric Evidence for the U.S. Economy, 1948-2007', Department of Economics, University of Massachusets [Department of Economics Working Paper 2010-04] (Amherst,MA, 2010).

financial-engineered to enrich financial operators, ancillary services, and their acolytes in the political, business, academic and media elites.[117] In the United Kingdom, the transition was abrupt. 'Since 1970, the UK economy has expanded 130 per cent in real terms, while output of the financial intermediation sector has almost trebled.'[118] In the United States, the share of financial intermediation in GDP approximately doubled between 1970 and 2005 to about 8 per cent; in the UK it grew less, but rose to a higher level of 14 per cent of GDP (figure 4 (a)). A large spike in the 1980s, may have traced the expansionary bubble of financial liberalization in the Thatcher decade.[119] Between 1966 and 2006, banking assets (i.e. loans) rose an order of magnitude, from 0.5 to more than five times GDP.[120] The share of manufacturing and extraction in GDP fell by more than half from 36 per cent, while the 'transactions' sector (finance, business services, and imputed rentals of owner-occupation) increased by the same proportion, up to 36 per cent of GDP (fig. 4b). The other two sectors ('other services' and government) remained generally flat.

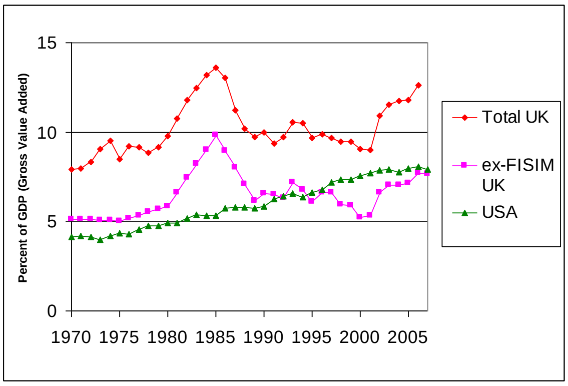
[116] Shiller, 'Stock Market Data'.

[117] See, e.g. James K. Galbraith, *The Predator State: How Conservatives Abandoned the Free Market and Why Liberals Should Too,* (New York: Free Press, 2008); Peter Oborne, *The Triumph of the Political Class* (London: Simon & Schuster, 2007); David Cay Johnston, *Free Lunch: How the Wealthiest Americans Enrich Themselves at Government Expense (and Stick You with the Bill)* (New York, NY: Portfolio, 2008).

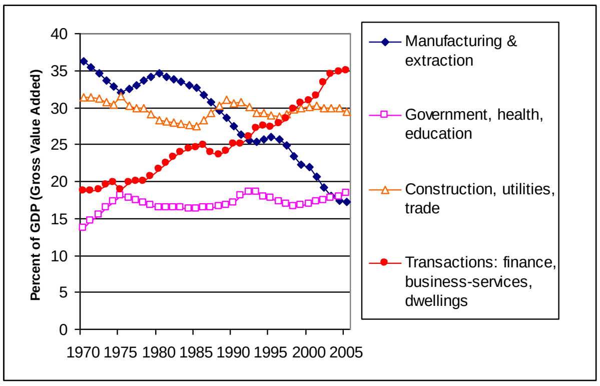
[118] HM Treasury Great Britain, The UK Economy: Analysis of Long-Term Performance and Strategic Challenges (London, 2008), p. 47.

[119] Regression analysis does not single out any single sector that contracted at the same time. It could be a data artefact.

[120] Andrew G. Haldane, and Piergiorgio Alsessandri, 'Banking on the State', Bank of England [unpublished paper] (delivered Chicago, 25 Sept. 2009, chart 1, 14.



(a) Gross value added in financial intermediation



(b) Gross value added by sector, UK

FIGURE 4. Gross Value Added by Financial and Transaction Sectors in UK and USA, 1970-2006.

Source: (a) Great Britain, National Statistics, National Accounts Blue Book, Gross Value Added Financial intermediation, series ABML, NSRV, QTPR, see http://www.statistics.gov.uk/statbase/Product.asp?vlnk=1143&More=N; USA, Bureau of Economic Analysis, Industry Economic Accounts Information Guide, Annual Industry Accounts, Value Added by Industry, http://www.bea.gov/industry/iedguide.htm#aia
(b) calculated from Great Britain, National Statistics, National Accounts Blue Book, Gross Value Added by Industry at Basic Prices.

Note: FISIM is an estimate of financial services not charged for directly, but derived from the margin between borrowing and lending.

In the USA, the rise of transacting was exemplified in runaway health spending. In the UK, it was housing and pensions. In 1980 government-owned housing was put up for sale (about thirty per cent of the housing stock). Two years later, joint stock companies were allowed to enter housing finance, which was previously serviced by mutual building societies. In 1988 ten of the top societies converted themselves into joint stock banks. They wasted no time in taking on more risk.[121] Cheaper credit pushed up house prices, and housing costs captured a growing share of household income. By the time of the banking crisis of 2008-9, the privatized societies had all been taken over or failed, but most of the remaining mutual ones remained

[121] M. Stephens, 'Building Society Demutualisation in the Uk', *Housing Studies*, 16 (2001), 335-52, pp. 336, 338-341.

independent and solvent.[122] Privatization shifted much social insurance and utility business to the private sector within the space of a decade. Any efficiency gains were modest, with shareholders and managers benefiting at the expense of consumers.[123] Inequality rose very sharply, with the household income Gini coefficient increasing permanently from about .25 to about .35 in a decade, and a doubling of poverty rates to some 20 per cent. Private corporations gained about seven percentage points of national income value added at the expense of employees.[124]

LIFE INSURANCE

Life insurance has been sold for more than two centuries, and is the most established use of private contracts to deliver remote obligations. But those who pay the premiums cannot evaluate performance: they are dead. For beneficiaries, the benefits are a windfall. Life insurance attracts tax subsidies and is used as a vehicle for saving. In the British 'with-profits' (or 'endowment') system, policyholders also get bonuses based on investment performance. Compensation for a death is incidental. Such contracts are meant to smooth returns from rising stock markets, to finance mortgages and pensions. Figure 5 shows the level of life insurance premiums as a percentage of GDP in six affluent countries since 1960. Before1980 the level of premiums paid was about 3 per cent of GDP in Britain, and lower in other countries. After financial liberalisation in the 1980s, premiums took off. Over these countries as a whole, premiums never rose above 5 per cent of social expenditure. In the UK however, by the late 1990s, the level was more than twice as high, and more than half of all government social expenditure.

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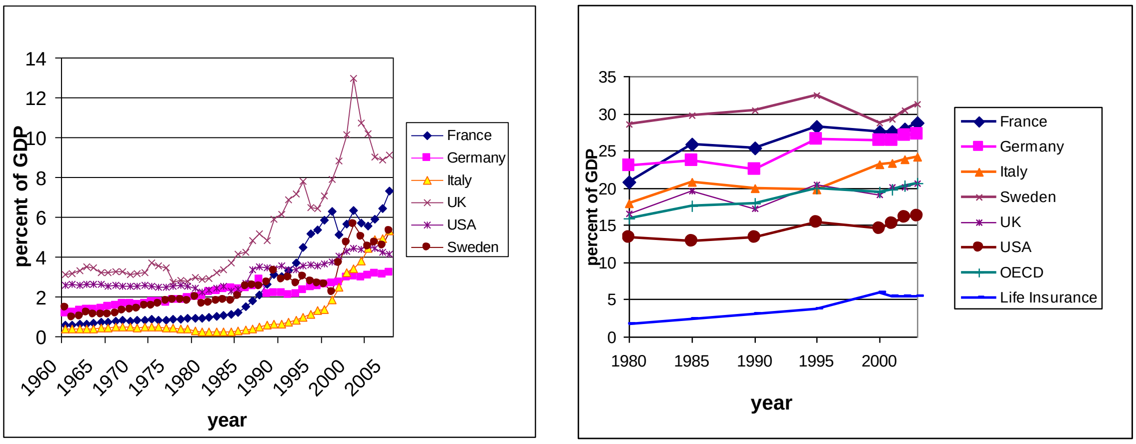
[122] Avner Offer, 'British Manual Workers: From Producers to Consumers, c. 1950-2000', *Contemporary British History*, 22 (2008), 537-71, pp. 550-552.
[123] Massimo Florio, *The Great Divestiture: Evaluating the Welfare Impact of the British Privatizations, 1979-1997* (Cambridge, MA: MIT Press, 2004), e.g. pp. 359, 363.



(a) (b)

FIGURE 5. (a) Life Insurance Premiums and (b) Social Expenditure as percentage of GDP.

Sources: Thorsten Beck and Asli Demirgüç-Kunt, 'Financial Institutions and markets across Countries and over Time – Data and Analysis' *World Bank Policy Research Working Paper* (Washington DC, 2009). http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:20696167~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html; Organisation for Economic Co-operation and Development, 'OECD Social Expenditure Database' (Paris, 2008), in http://titania.sourceoecd.org/vl=964847/cl=24/nw=1/rpsv/statistic/s22_about.htm?jnlissn=1608117x, accessed 2 July 2009.

The contractual frailty of this approach soon became apparent. Terminal payoffs were often lower than the principal that mortgage borrowers had to repay. Advisers were paid by commission, and steered savers to the policies most profitable to them. In response to complaints, government regulators found pervasive mis-selling, and forced insurers to compensate.[125] By 2004, some 430,000 homebuyers received £1 billion in compensation.[126] Pension mis-selling was greater still: 1.7

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[124] Offer, *Challenge of Affluence*, fig. 12.1. p. 272; income share calculated from Great Britain, National Statistices, *Economic Trends Annual Supplement*, 26 (London, 2000), table 1.4, p. 29.

[125] BBC News, *Mortgage Mis-Selling: How to Claim* (3 October 2000), in http://news.bbc.co.uk/1/hi/business/954535.stm, accessed: 13 March 2009.

[126] Lorna Bourke, 'Check Your Compensation for Endowment Mortgage Mis-Selling', *Daily Telegraph*, 14 September 2004

million policyholders had their cases reviewed, at a cost to insurers and financial advisers of almost £12 billion in compensation.[127]

Equitable Life is a British mutual life assurance company, founded in 1762 and owned by its 425,000 policyholders in 2000. In that year it went through an upheaval that demonstrates some of the risks that savers faced. The trigger was contractual ambiguity.[128] The society's pension saving policies were converted into annuities on termination, and in the late 1960s it began to guarantee annuity rates in pursuit of market share. In 1983, it stopped setting aside reserves to support this liability.[129] In the 1990s interest rates fell, and it reduced final bonuses to guaranteed policyholders (but not to the others) in order to meet the extra cost of their annuities. It then went to court to validate this policy, but the House of Lords found against it.[130] Equitable Life closed for new business, froze accounts, and cut benefits.

The society had offered a 'relational' argument: it was trying to equalize outcomes between different types of policyholders, all of whom paid similar premia and had similar membership status. Counsel had endorsed their policy, it was upheld by a lower court, and by a minority opinion in an intermediate one. The decision could have gone the other way. *The Times'* economics editor called it 'economically illiterate'.[131] The House of Lords chose a classical rather than a relational

[127] Financial Services Authority Great Britain, '11.8 Billion Compensation for Pensions and FSAVC Reviews' (27 June 2006), in http://www.fsa.gov.uk/Pages/Library/Communication/PR/2002/070.shtml, accessed: 17 March 2009; BBC News, 'Pensions Scandal Costs £11.8 Billion' (27 June 2002), in http://news.bbc.co.uk/1/hi/business/2070271.stm.

[128] The main sources are a sequence of public inquiries, including Lord Penrose, *Report of the Equitable Life Inquiry*, *Parliamentary Papers*, House of Commons [HC 290], 8 March (London, 2004), esp. ch. 19; Parliamentary and Health Service Ombudsman Great Britain, *Equitable Life: A Decade of Regulatory Failure: Fourth Report*, *Parliamentary Papers*, House of Commons [HC 815-I], 16 July (London, 2008), esp. section 5.

[129] R. H. Ranson and C. P. Headdon, 'With Profits without Mystery', *Transactions of the Faculty of Actuaries*, 42 (1990), 139-86.

[130] *Equitable Life Assurance Society* v. Hyman, 2000.

[131] Anatole Kaletsky, 'Regulation Killed the Pensions Industry', *The Times*, 16 October 2006.

interpretation of the contract, and it had a ‘classical’ effect: it brought an end to an ancient and effective institution. The ‘winners’ did not do too well either.

But a different decision might not have saved the society. It had taken on excessive risk, and regulators had failed to stop it. The Financial Ombudsman upheld policyholder complaints, and government accepted liability. The Lords expounded a classic view of contract, but the ombudsman invoked a relational one. Although the society was mutual, it failed to avoid the pitfalls of market provision. Individual pension accounts in the UK began to contract after these setbacks (figure 5).

Another form of private pension was also in terminal decline: corporate final-salary (‘defined-benefit’) pensions had suffered several shocks in succession: £400 millions embezzled by Robert Maxwell in 1991, 140,000 contributors who lost their pensions when their companies failed, levies on pension company investment in the 1990s, and the closure of company schemes, in the USA as well.[132] UK pension policy was now ailing. Some occupational or and corporate club-like final salary schemes might appear to remain healthy. They pool the risk like a small state, and rely substantially on PAYGO. But their robustness is only as strong as the market power of the ‘club’, be it a corporation like General Motors, or an occupation like that of British University teachers. Such market power is vulnerable over periods of decades. The best security remains to be rich. This was underlined by the £730,000 annual pension carried off by Sir Fred Goodwin at the age of 50, after presiding over the collapse of the Royal Bank of Scotland in 2008.

Pensions, mortgages, health, infrastructure -- in each one of these areas market solutions have run into problems, and have had to be punished or bailed out by government. The interim judgement is that market provision of remote and

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132 Robin Blackburn, *Age Shock: How Finance Is Failing Us* (London: Verso, 2006), pp. 125-145.

contingent obligations has not been adequate. And when the market works, it relies on explicit or implicit state guarantee or subsidy.

THE CAPACITY TO GOVERN

Politicians and voters are myopic too. PAYGO reduces the need to lock in the future. But the state can fail.[133] The commitment state works best in affluent countries, and even there it encounters resistance. The well-off have an interest in keeping others dependent. Finance has sought to actively weaken government. This has a broad social appeal. Majorities oppose inheritance taxes, although only a few end up paying them.[134] In 2005 a survey claimed that people trusted financial companies with their pensions more than they trusted government.[135] Ronald Reagan's chronic budget deficits were designed to "starve the beast."[136] A more subtle strategy is to 'dumb the beast,'[137] which is achieved by capping public service pay, and draining talent away.[138] Market incentives in government services have subverted public service norms.[139]

PAYGO is no magic bullet. If government defects, or if the taxpayer does, relational entitlement is a poor bulwark. It is underpinned by the taxpayer's consent. Beyond that level of provision, individuals have to take on more risks themselves. Given the uncertainty of all claims on the future, it is prudent to diversify. Those who

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[133] Antonio Rangel, 'How to Protect Future Generations Using Tax-Base Restrictions', *American Economic Review*, 95 (2005), 314-46.

[134] Larry M. Bartels, *Unequal Democracy: The Political Economy of the New Gilded Age* (Princeton: Princeton University Press, 2008), ch. 6, 'Homer gets a Tax Cut'.

[135] Helen McCarthy, ABI (Association of British Insurers), 'The State of the Nation's Savings 2005' (London, 2005), slides 10-11. [available on request]

[136] Bruce Bartlett, '"Starve the Beast": Origins and Development of a Budgetary Metaphor', *Independent Review*, 7 (2007), 5-26.

[137] Heard in a conference.

[138] New York Times editorial, 'A Rudderless S.E.C.' *New York Times*, 3 December 2002; Stephen Labaton, 'S.E.C. Chief Pursues Tougher Enforcement', *New York Times*, 23 February 2009.

[139] Ewan Ferlie, Laurence E. Lynn, and Christopher Pollitt, eds., *The Oxford Handbook of Public Management* (Oxford: Oxford University Press, 2005); Julian Le Grand, *Motivation, Agency, and*

can afford it will have a portfolio: government entitlements, financial instruments, housing, family resources, human and social capital. A robust social contract is the ultimate safety net. Only a minority can be rich, and they depend on society too.

CONCLUSION

Rich societies can afford to anticipate remote contingencies. Kenneth Arrow gives two reasons why private markets for insurance may be faulty. One is moral hazard. 'The second is that such markets would require complicated and specialized contracts which are costly.'[140] The state can sidestep this difficulty by converting personal transfers over the life cycle into intergenerational transfers now. Paradoxically, pay-as-you-go is suited for delivering on long-term obligations. The elegance of this approach helps to account for its ubiquity. It also indicates the scope that government has to act as a commitment agent. Other wants compete with the demand for long-term security, and this places a limit on taxable capacity. When waiting times are short, the market is often superior. Where the state is venal, distrusted, or undermined, there is less security and equity all round. In these circumstances, the market is also likely to fumble. The financial crisis which began in 2007 demonstrates the unfitness of finance to manage social insurance, but the cost of the bailouts may disable governments as well from discharging that role.

Public Policy: Of Knights and Knaves, Pawns and Queens, pbk. edn. (Oxford: Oxford University Press, 2006).

[140] Kenneth J. Arrow and Robert C. Lind, 'Uncertainty and the Evaluation of Public Investment Decisions', *American Economic Review*, 60 (1970), 364-78.

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