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Book Reviews

The Company of Strangers: A Natural History of Economic Life
Paul Seabright
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Larry Summers' recent travails notwithstanding, it is becoming more and more permissible in polite society to speak about 'human nature.' The reason is the emergence of the discipline of evolutionary psychology, which seeks to explain how human nature was formed. It does so by identifying the sorts of selective pressures that confronted literally hundreds of generations of our ancestors who, for much of human history, subsisted in small hunter-gatherer bands. These pressures selected certain traits and characteristics that help define what it means to be human.

Given what we know about the evolution of our species, contemporary society is, to say the least, improbable. Paul Seabright tells us that our ancestors were shy, murderous apes who lived in small groups for purposes of risk-sharing and defense, and who were rightfully suspicious of outsiders. When we look at modern society, we see a vast division of labor that has created social cooperation on a massive, literally global, scale. Even more incredibly, this vast system of mutually advantageous exchange seems to have developed on its own, a spontaneously organizing complex social order. Our very existence depends on the smooth functioning of this order. But even more surprising given our origins, this means that we must trust and rely upon total strangers to perform their specific tasks every day, just as they depend upon us to do ours.

Economists like Adam Smith (who spoke of the pin factory) and Frederic Bastiat (who marveled at Paris getting fed), Henry Hazlett (who gave us a parable about pencil production) and Friedrich Hayek (who spoke of how price signals coordinate dispersed knowledge), have identified the power of the division of labor and invited us to marvel at the great coordinating mechanism of the market order. But given what we know of our evolutionary past, the marvel becomes so immense as to constitute a puzzle. How did the shy murderous apes pull it off?

It is this question that forms the motivation for Paul Seabright's *The Company of Strangers: A Natural History of Economic Life*. An economist by training, Seabright draws on his own field as well as on recent findings in biology, economic history, anthropology and psychology to weave together a fascinating story. Seabright writes for the general public. Although the book contains transition sections where extensive references to the various technical literatures may be found, his general approach is to make a statement, then to provide examples, factoids and anecdotes that illustrate his point. The book is filled with economic reasoning, but has very little economic jargon. Indeed it provides a painless way for non-economists, or even those who hold the field in contempt, to be fed a little of the discipline, perhaps without their even knowing it. Stealth economics at its best!

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The book is divided into four parts. The first section is a single chapter entitled 'Who's in Charge?' (Seabright's answer—no one), in which the marvel of the vast extended and interconnected spontaneous order that is the market system is extolled. Here Seabright also introduces the key concept of 'tunnel vision,' which he defines as 'the capacity to play one's part in the great complex enterprise of creating the prosperity of a modern society without knowing or necessarily caring very much about the overall outcome' (p. 15). We are all part of a huge network, but what really matters to us is how things are going with the few people with whom we interact on a daily basis, at work, home and play.

Part Two, the best part of the book, explains how this unlikely order developed. Seabright notes that in *homo sapiens* two traits co-evolved, murderousness (!) and intelligence. Intelligence is adaptive because it allows one to figure out how to avoid risky situations. Murderousness is adaptive if one's weaker rival for a sexual partner is intelligent; the rival might feign subservience only to return when one is absent. Better to kill him outright, since the display behaviors and pecking orders that serve to adjudicate rivalries in many other species are less effective in man.

Working against this very human characteristic is the fact that living together in larger numbers conveys considerable survival advantages. It allows sharing of risks and of scale economies (both come into play in a hunt), accumulation of knowledge about effective techniques, and specialization and exchange. All of these require trust, however, something that may not come easily to a murderous, intelligent ape. Initially such risk-sharing, specialization and exchange probably took place among those who shared similar genetic material, and only later extended to familiar non-relatives. The big step would be to extend it still further, to true strangers. In Seabright's novel account, the necessary step towards the great society was for humans to start treating strangers like 'honorary friends.' How did it happen?

The key is found in two human dispositions, one towards rational calculation; the other towards reciprocity. Rational calculation is self-interested behavior. Reciprocity, less familiar to economists, is the instinctive inclination to do unto others (either good or bad) as they have done unto you. There are various theories as to how a disposition towards reciprocity developed (pp. 61–63), but it is clearly the key element in getting humans to begin trusting strangers. If most humans have such a capacity, mutual trust can develop and becomes self-reinforcing. Likewise, reciprocating behavior means that those who defect unscrupulously on agreements can anticipate being sanctioned if caught, something that a calculating animal would want to avoid. This permits the system to remain robust even in the presence of the occasional unscrupulous defector.

More important, these basic human dispositions can be further reinforced by the development of additional social institutions. Seabright identifies three of these in the remaining chapters of Part Two. One is money. Seabright illustrates how a well-functioning monetary economy (one in which people trust that the currency will not lose its value) facilitates specialization and trade, contrasting this with the inefficiencies of barter in the newly established Russian state. Another is the banking system, which initially developed when agricultural surpluses led to hoarding, and then to the dangers of theft, and hence to the need for secure

storage places. The banking system clearly confers manifold benefits, but it just as clearly depends on trust to exist at all. The last is the development of professionalism, which is its own form of tunnel vision. Professionalism means that one does one's job whether the boss is looking or not. This is a moral disposition that allows us to trust that strangers will perform their jobs, thereby lowering monitoring costs and further expanding the possibilities for an extended market order.

Seabright is not Panglossian about such things as tunnel vision and the various institutions that permit the extended order to develop. Monetary systems do not always function well (he includes a picture from the German hyperinflation), and tunnel vision along with its beneficial effects is also what allowed normal German citizens to acquiesce in the atrocities of the Nazi death camps. But the basic message of this section is to show how human nature, when guided by the appropriate social institutions, is indeed capable of producing a sufficient amount of trust that the set of interlocking networks that characterize modern society can begin to function effectively.

Part Three examines the consequences, both positive and negative, of human beings coming together in mass society. The section begins with two chapters, one on cities and the other on the environment, with the use of water providing the major example in the latter. Seabright's ability to draw on many different sorts of literatures are evident, as he conveys both the manifold advantages of city life, cultural, economic and social, with the concomitant costs in terms of disease, congestion and environmental damage. (The little section on 'stench and waste,' in which 18th century city life is graphically described, should not be read close to mealtimes.) Both this chapter and the chapter on water illustrate the problem of externalities; indeed, one of the section headings in the latter is entitled 'scarcity and property rights.'

Chapters Nine and Ten examine various ways, both market and non-market, to address externalities and related problems. The first demonstrates how market prices allow agents to coordinate their behavior and to economize on scarce resources, then suggests that establishing property rights and pricing can help address the problems that externalities create. The second, entitled 'Families and Firms,' looks at various non-market ways of coordinating economic and other activity.

The final two chapters in the section examine two independent problems. The first has to do with the evolution of symbolic reasoning, and its importance for passing knowledge down through the generations. The latter, entitled 'Exclusion: Unemployment, Poverty, and Illness,' takes a troubling look at yet another one of the consequences of tunnel vision: the very human ability to ignore or avoid dealing with those who are left behind by the market order. This chapter discusses both bubbles and information islands as causes of disruption. Seabright concludes the whole section with the following query: 'If a society with no one in charge, characterized by tunnel vision and dependent on a fragile web of trust, cannot protect its environment or look after its excluded, what can be expected from collective action?' (p. 208).

The final part examines the possibilities for collective action. Interestingly, here Seabright argues first as an economic historian, and then as a speculative political philosopher. He shows how the gradual spread of agriculture, which requires more formidable defensive protection, made collective action necessary.

He then contrasts the advantages and disadvantages of organizing a commercial state versus an imperial empire, the former growing through trade; the latter through conquest. Noting the growth of the arms trade and its implications for allowing us violence-prone apes to become yet more violent, Seabright inquires whether states, if they continue to survive, can ever learn to cooperate among themselves: 'can they find ways to create between themselves an analogous version of the trust in strangers that they seek to create among their citizens?' (p. 249). Not far from the surface is the judgment that the behavior of the US government in the post-9/11 world has not been particularly good for inducing trust in other states.

I recommend this book almost without qualification. Although Seabright occasionally overextends his analysis, his wide-ranging command of a variety of literatures, and his knack for finding the perfect anecdote or factoid, more than compensate. My favorite among the latter is his discussion of smiling and laughing as signals of one's trustworthiness (pp. 58–61). It is a brilliant discussion, one that in the end may even explain why businessmen closing deals (surely the essence of risky but calculating activities) so often end up inebriated (hence laughing, and thereby signaling their trustworthiness).

I will close with one complaint. Seabright has read extensively in a number of different fields. The one area he seems not to have read much is in the history of economic thought. He mentions Adam Smith and David Ricardo (for the division of labor and comparative advantage), but the references are cursory. Few other economists from the past are mentioned. Perhaps the most glaring lacuna is F. A. Hayek. Hayek wrote about the spontaneous extended market order, about the coordinating function of prices, about the importance of institutions, and about social and cultural evolution in much the same way as Seabright does. In his later years, he even asked exactly the same question as Seabright: How, given our origins in hunter-gatherer tribes, did we overcome our 'instincts' towards small-group solidarity and develop the set of norms and values that permitted us to exchange with strangers? Yet in this very Hayekian book nowhere is he mentioned.

This complaint might be answered simply by saying that the book is intended for a general audience and, as such, extensive referencing of predecessors would be out of place. My fear, though, is that Seabright, like so many recently trained economists, has never been exposed to the history of his discipline. It is ironic that such a lacuna exists in a book that makes so much of the fact that human progress depends on passing on past knowledge. But it is also very sad.

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Is the Market Moral? A Dialogue on Religion, Economics and Justice

Rebecca M. Blank & William McGurn

Washington, DC, Brookings Institution Press, 2004, pp. 151, $16.95 paperback
ISBN 0-8157-1021-6

Mainstream economics—based on the General Economic Equilibrium model—pictures the market as the locus where exchanges of goods and services among

rational agents take place under the assumption of perfect competition. Price fluctuations, ensured by non-intervention on the part of the government, unions, associations of consumers or producers, generate the maximum efficiency, i.e. the optimal allocation of resources. In this view, considerations on the ethical motivations underlying human behaviour, as well as value judgements on the outcome of the functioning of markets, are ignored, in view of a *definition* of economics as the discipline that studies problems of choice in the context of scarcity of resources.

The fundamental objection to this view lies in the fact that (i) human behaviour is significantly affected by individual moral beliefs and, at the same time (ii) ethics is likely to interact with and modify these beliefs. This book falls within a line of research that tries to bring the ethical discourse into economic analysis, overcoming the traditional ethics-*or*-economics dichotomy. In particular, it is devoted to providing answers to the fundamental question in its own title, posing a challenge to the mainstream view that conceives the market as a *neutral* mechanism (hence, neither moral nor immoral) for buying and selling goods and services.

It presents a debate between Rebecca M. Blank, professor of economics at the University of Michigan, and William McGurn, the *Wall Street Journal's* chief editorial writer. They support two different views on the compatibility between the operation of market mechanisms and Christian ethics, although they share the Christian faith. (Blank is a Protestant, McGurn a Catholic.) Blank (pp. 22–26) argues that five theological imperatives conflict with support for market economies. First, from the point of view of Christian ethics, the idea that individuals are solely self-interested is unacceptable: 'concern for others' is the cornerstone of Christian morality and egoism is its opposite. Hence, in so far as the operation of market economies rests on self-interested behaviour (and economic models—accepting this assumption—show that self-interested behaviour leads to the best outcomes), the political support for the economies is not admissible in the light of the principle of 'concern for others'. Second, the Christian model of behaviour is based on 'self-giving love', which is outside both the effective functioning of market economies and economic models. Third, while economics takes for granted that *more is better*, Christian ethics conceives 'abundance' not as abundance of material goods but as 'abundance of the Spirit' (p. 24). Four, while economics sees that more *choice* is better, Christians cannot support some choices, such as the production and consumption of pornography, prostitution or abortion. Finally, Christian teachings emphasise the 'concern for the poor' and this clashes with economics on two levels: first, this principle establishes that some choices (those that assist the poor) have a greater value than other choices; second, it undermines the moral appeal of the economist's claim that workers tend to be paid according to their marginal productivity.

In Blank's view, these considerations do not lead to a moral rejection of the market: 'The key question,' she clarifies (p. 13), 'is not "Should there be a market?" but "What are the limits to markets as an organizing structure for economic life?"' Her response is to call for public intervention moulded on Christian principles and devoted to promoting 'the common good' and 'human development' by inducing individuals to behave according to 'prosocial' values and by

limiting access to goods and services (and by regulating contracts) which conflict with human dignity. 'When market values (efficiency, productivity, incentives), become core secular values,' she writes (p. 52), 'the church needs to serve as a counterweight'.

The position of William McGurn is very different from Blank's. His approach to the issue is twofold, involving empirical and theoretical aspects. On the empirical level, McGurn's argument rests on evidence that 'the more open the country was to trade and investment, the better its poor did' (p. 66). It is true, he recognises, that three billion people live on less than two dollars a day. But he also notes that the other part of the world population enjoy higher living standards, and, perhaps more significantly, that in the course of recent history, the poor's numbers have significantly decreased. On the theoretical plane, McGurn starts by assuming that 'economic freedom is a good' (p. 62), and that work is the instrument by which the dignity of man is preserved. Hence, without external intervention, the joint operation of capital and labour generates constant increases in social wealth, which, albeit unintentionally, guarantees an increase of wellbeing for all individuals who take part in market mechanisms. Accordingly, 'the worker also contributes to the wealth of [his or her] neighbor' (p. 62). Since the market is assumed to be the mechanism which generates the maximum level of production, and since production is distributed also in favour of the poor, the market has the twofold positive effect of raising incomes and, strictly linked with this, of promoting freedom. Moreover, the increase in incomes and the greater degree of individual freedom act, in turn, as disincentives to dishonest behaviour: in this sense, the market is moral.

McGurn's argument appears questionable, for the following reasons. First, he takes for granted that a deregulated market economy is the institutional arrangement that allows the maximum rate of growth. This is not obvious, on either theoretical or empirical grounds, although this is not the place to discuss this issue. Second, McGurn's thesis ultimately rests on the idea that the market is moral because it promotes an increase in the living standard of all the individuals involved in it. Even if this statement is acceptable both on theoretical and on empirical grounds, the question '*is economic growth a moral end*?' is left open, and Rebecca Blank's objection ('more is not necessarily better') remains valid. Also, apart from moral considerations, the so-called paradox of happiness indicates that high incomes are not necessarily associated with high levels of individual 'wellbeing'.

Third, in approaching the question of child labour, McGurn maintains that if it is forbidden by law, 'we may . . . be forcing children into something worse' (p. 132). More generally, he believes that laws tend to reflect social consensus rather than generate it. But what does generate social consensus? He points out (p. 83) that 'Culture has to come first. Because the market depends on virtues—self-restraint, honesty, courage, diligence, the willingness to defer gratification—that it cannot itself create.' In his view, the creation of 'social capital' ultimately depends on moral teachings within the church. This argument appears weak in two respects: (i) presumably, Christian teachings can only influence believers (or may not have *significant* effects on non-believers), but of course true believers do not need persuasion; (ii) policy matters, and, as Blank notes,

'economic structures are deeply embedded with political and economic structures and cannot be readily separated from them' (p. 94).

Fourthly, in dealing with the minimum wage question, McGurn observes that 'if the minimum wage is set above the market wage, we are going to have—almost *by definition*—fewer jobs' (p.132, italics added). Unfortunately, this effect is by no means a purely definitional issue. It crucially depends on the *assumptions* about firms' technology: of course, the fact that the neoclassical model proposes a theory of labour demand based on marginal productivity of labour (with the consequent inverse relationship between wage and employment) does not imply that the inverse relationship between wage and employment is a 'scientific truth'. Hence, McGurn's argument is legitimate only if the neoclassical model of the labour market is sound. It should be stressed that these criticisms do not concern McGurn's very able exposition: the arguments put forward by Rebecca Blank appear closer to the 'standard' view of Christian ethics and, also for this reason, seem not only more familiar but also more convincing.

This book addresses a fundamental topic, which, in my view, is (or should be) at the *core* of economic analysis. Economics cannot avoid *explicitly* taking the ethical discourse into consideration, independently of its possible religious foundations: ethical issues are implicit in the methodological foundation of mainstream economics (i.e. ethical individualism), and the lack of debate on this issue may generate the (false) conviction that economics is a 'science', that value judgments are completely irrelevant, that the market is a 'neutral actor'.

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Hollywood Economics: How Extreme Uncertainty Shapes the Film Industry
Arthur De Vany
London & New York, Routledge, 2004, pp. 308, $43.95 paperback
ISBN: 0-415-31261-2

This engaging and readable book is the product of two decades of work in which Arthur De Vany has relentlessly looked at the statistics of the movie business rather than taking widely held beliefs (for example, about the impact of stars on a film's revenues) as self-evidently true. The results should be disquieting for those who like to think of industries in terms of equilibrium states and normal distributions of risks and returns, but they will enthrall heterodox economists who have taken seriously the work of Frank Knight or George Shackle on uncertainty and non-replicable decisions.

This is an industry in which there are wild gyrations in the earnings of production companies, directors and actors, where the distribution of earnings is extremely skewed but impossible to predict on the basis of production costs or the presence of star actors or directors. Only 22% of movies make any money, and a mere 6.3% of movies earn 80% of total profit (p. 214). Average earnings are dominated by the 'winner takes all' blockbuster movies, whose earnings display high variance, although the patterns of probabilities generated by the

industry's non-linear dynamics remain consistent over many decades and across different national movie markets. Superstar movies are less likely than non-star movies to produce extreme losses (p. 222), but unless a studio executive is responsible for a very large number of movies, there are great risks of making losses by paying superstars fees that capture most of the expected value of profits that the movies might generate. Most will be out of their jobs before they have produced enough movies that have been big hits (p. 226).

The strangeness of Hollywood economics arises because movies are 'experience goods'. In other words, until you have seen a film, you cannot know for sure whether it is worth seeing. Which decision rules do people use for resolving the uncertainty? Do they rely upon the presence of star actors or saturation advertising and the opening of the film on many screens, or reports of initial box office revenues as signs that it should be worth attending, or do they rely upon reports from critics and peers who have already seen it? De Vany's work suggests that a big opening with big stars is no guarantee of high earnings, and ultimately information cascades of good or bad reports about a film drive its earnings. If a film has a big opening and is poorly received, its losses may be exacerbated: its big advertising budget is a sunk cost, there are many first- or second-week moviegoers to spread disparaging comments about it, and if it initially shows on many screens to rapidly deteriorating audiences, then poor earnings per screen will result in it having a bigger chance of being discontinued after the cinemas have met their contractual minimum screening obligations. Some low-budget films start small but grow through word of mouth into long-screening, big earners.

If the film studios were still allowed to own cinemas or to be able to sell forward batches of unmade films for an entire year to particular cinemas, rather than renting each finished film individually, their scope for flexibility in managing the screening of their films and their ability to diversify their risks would both be increased. In the current regulatory environment, however, this is ruled out. The larger studios have the potential to select films on a portfolio basis using probabilities, unlike small production companies for whom a single film may be a 'crucial', make-or-break decision in Shackle's sense. However, De Vany argues that the big players typically make their choices sequentially, not on a portfolio basis, mistakenly believing they can predict and control which particular projects will do well.

The book's origin mainly in previously published papers means that there is some duplication between the chapters. This could have been avoided by reworking the material more thoroughly. Space thereby saved could have been used to explore issues that *Hollywood Economics* does not address in any detail, such as how Hollywood copes with the unpredictability of completion times and operates using temporary teams (briefly raised on page 239) as a 'Marshallian business district', or the kinds of decision rules that consumers use to choose between movies about which they have received favourable reports and the economic psychology of what determines their enjoyment of a movie. Regarding the last of these, Scitovsky's (1976) suggestions about the difference between comfort and pleasure provide a fertile starting point for thinking about differences between European 'art-house' movies and Hollywood blockbusters, and about the role of the typical 'Hollywood ending.' It is clear that the psychology of decision-making intrigues De Vany, but presently he only discusses it in respect

of the impact of various cognitive biases on choices about which movies to produce (pp. 97, 268–270). I hope that De Vany will extend his work into such areas and incorporate such considerations in future editions with his characteristically clear and engaging writing style.

The book certainly deserves to run to more than just one edition. It will be useful to teachers of industrial and regulatory economics because of its excellent discussions of dynamics and contracting issues in this industry and of how a failure to understand them seems to have resulted in mistaken verdicts in the *Paramount* antitrust cases of the 1940s and 1950s against vertical integration and block booking. Evolutionary economists will find it useful for showing their students how complexity and chaos affect the working of economic processes. It should also be a great asset for anyone trying to teach statistics to business and economics students, both as a means of engaging their attention and for showing why such knowledge is worth acquiring.

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Reference

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Hayek's Challenge: An Intellectual Biography of F. A. Hayek
Bruce Caldwell
Chicago & London, *University of Chicago Press*, *2004*, pp. 489, $55.00 hardcover
ISBN 0-226-09191-0

This is a challenging work; indeed, the reader's challenge starts with the title. *Hayek's Challenge* is subtitled 'an intellectual biography' of Hayek, and the publisher describes it as 'the first full intellectual biography' of Hayek. But Caldwell himself appears to disagree: it was 'never my goal' to write 'a comprehensive intellectual biography' (p. 177n). Further, the book has a 'secret title': *Caldwell's Challenge* (p. 4). To assess what Caldwell has done, it is important to be clear about what he was *trying* to do. He spells out in engaging autobiographical passages that his own interest is very much in the area of methodology, and that this book is an intellectual biography in a very precise and restricted sense: specifically, it is a methodological history, an account of Hayek's search for an understanding of scientific method adequate for the investigation of complex spontaneous orders. The story told is of Hayek's journey from 'Austrian presuppositions' to 'a place that was unique' (p. 12). Hayek's contributions to politics, economics and psychology are brought in only to the extent that they are required to illustrate and explain Caldwell's methodological narrative. Once this is understood, Caldwell's concentration on certain issues, and his relative neglect of substantial aspects of Hayek's legacy—which would betray a severe lack of balance in a conventional intellectual biography—becomes understandable and, indeed, in my opinion, wholly justified.

The nature of the project explains the structure of the work. The book consists of an introduction and three parts: a prehistory of Hayek, introducing us to the Austrian school of economics; the main story of 'Hayek's Journey'; and a final results-and-prospects section. The first part documents the emergence of the Austrian school through struggle with its intellectual antagonists—historicists, positivists and socialists. Caldwell highlights the contributions of Carl Menger and Max Weber. This long—five chapters and more than a hundred pages—first section is both necessary to understand the subsequent biographical story, and also an original contribution to our understanding of the Austrian school. The story is well told and it sets the scene for the following part, the core of the book. 'Hayek's Journey' consists of eight chapters on the development of Hayek's methodological view, starting from the early years in Vienna and at the LSE, to the preoccupation with complexity and evolution characteristic of his mature standpoint. Part 3, 'Hayek's Challenge' consists of a retrospective and appraisal of Hayek's 'multiple legacies', and a final chapter in which Caldwell shows how, he believes, Hayek's contributions to methodology illuminate the history of twentieth century economic thought.

A number of points may be made in appraisal of Caldwell's achievement. On the credit side, Caldwell, who is the general editor of Hayek's collected works, is extremely knowledgeable about his subject matter, and is profoundly in sympathy with it. Moreover, he is a congenial storyteller and the narrative flow carries the reader effortlessly along. Given the inherent difficulties of the material, this is a signal achievement. This is in fact a book to which Hayek scholars and students will need to refer, and indeed to which they undoubtedly will refer, with pleasure, for years to come.

On the debit side, we are faced with a number of issues involving the critique of Hayek. It is perhaps asking too much to expect a biographer to deal with every criticism that has been levelled at his subject, but even so, this book seems to me to be very light on critical reflection on Hayek. Throughout the book, Caldwell insists that he wants to 'make sense' of Hayek, implying that this is something that Hayek's critics aren't interested in doing. 'In part 2,' he writes, 'I seldom paused to assess his substantive claims. Rather, I focused on making sense of the journey' (p. 323). Part 3 ostensibly sets out to remedy this. Chapter 14, 'Journey's End—Hayek's Multiple Legacies', presents 'an assessment of Hayek's methodological legacy', with other issues only dealt with to the extent that an appraisal of the *methodological* legacy involves commenting on his contributions to other fields (p. 323).

Given that this chapter is a summary by a leading Hayek scholar of Hayek's contributions to the question of what constitutes truly scientific study of organic society, the modesty of Caldwell's claims on Hayek's behalf is quite remarkable. It does seem to me that he damns Hayek with the faintness of his praise. Every so often he confesses that 'Hayek's recourse to history must appear a little disingenuous' (p. 328), 'There was a blunderbuss quality to Hayek's attack' (p. 340), 'Hayek clearly did not succeed' in providing 'a finished political philosophy' (p. 347), 'Putting the best face on it ... Hayek's reconstruction of the process of cultural evolution ... was ... incomplete' (p. 355), and so on.

Mostly, however, it is what Caldwell doesn't say that raises eyebrows. Caldwell sets out his appraisal of Hayek's methodological contribution in nine

sections: monetary theory and the trade cycle, Robbins and Hayek, *Homo Economicus*, 'Economics and Knowledge', the 'Scientism' essay, the sensory and other orders, Hayek's political theory, cultural evolution and group selection, and the theory of spontaneous orders. In almost every case, Caldwell's final verdict is strangely muted. On monetary theory and the trade cycle, Caldwell reports Hayek's view that any such theory should be based on four methodological precepts, of which the only one commanding significant assent today is the very one which Hayek himself later dropped, namely the requirement that macroeconomic theory should have microeconomic foundations in general equilibrium theory. On Hayek's encounter with Robbins, Caldwell 'suspects' that Hayek shared Robbins's view of Mises, 'but, as usual, compelling evidence is hard to find' (p. 329). The inconclusive section on *Homo Economicus* hardly mentions Hayek at all. The next section argues that 'Hayek's varied insights into the "knowledge problem" probably constitute his most enduring legacy in economics', but Caldwell does not assess that contribution, merely reporting his own 'inclination' to think that the central Austrian contribution is the critique of socialism (p 338). Caldwell concludes the section on a very weak note, by conceding that everyone involved in the socialist calculation debate, Hayek included, took an ideological stance, but suggesting without further discussion that Hayek's ideological stance was 'more perceptive' (p. 339). One could continue.

Mostly, Caldwell ignores criticism of Hayek—after all, in his view, the critics are not trying to 'make sense' of him—but in one or two places Caldwell does attempt a defence. An instance concerns Hayek's adoption of a group selection mechanism to underpin his evolutionary theory. It is remarkable that Caldwell can set out precisely what is wrong with group selection (p. 353), and still defend Hayek on the next page. The problem is that in the competitive struggle between groups, groups of altruists are vulnerable to subversion from within by individuals adopting a self-seeking strategy. In Maynard Smith's terms, altruist strategies are not 'evolutionarily stable'. Hence even if groups of altruistic individuals would do better than groups of selfish individuals, such competition between groups cannot get started. To believe that individuals will act in the social interest, rather than their own, contradicts the rational, materialist kernel of methodological individualism, that social outcomes have to be consistent with self-seeking individual behaviour. Caldwell's response is weak in the extreme: 'Because Hayek's conception of the individual allowed for considerably more complex human responses, his framework is less susceptible to this objection [i.e. that self-seeking individual behaviour undermines group selection]' (p. 354). For 'Hayek was never a doctrinaire methodological individualist. He was willing to seek explanations on many different levels ... there is no inconsistency' (p. 356). But even if Hayek were right that individuals might act in an altruistic manner, as Caldwell seems to suggest here, how could they possibly know what it was in the interest of society for them to do? On Hayek's account, they only have knowledge specific to their circumstances and do not have access to the big picture, to knowledge of society as a whole. The issue of group selection is thus a major problem for the appraisal of Hayek's methodological standpoint, and Caldwell's account does little to rescue Hayek's approach.

Group selection is closely, indeed intimately, connected with the issue of 'Panglossianism' in Hayek. Caldwell writes:

> The price system alone is not enough to explain the coordination that we observe; it is only one of a number of social institutions that help coordinate the actions of market participants. Hayek's later work in political philosophy was, in part, designed to identify the fuller set of institutions whose presence would create an environment that would least hinder the coordination of knowledge. The phrasing *least hinder* is intentional—there was nothing Panglossian in Hayek's vision. (p. 338)

> Hayek never claimed optimality for markets. This is why I characterized him earlier as seeking that set of institutions that *least hinder* coordination. (p. 349)

But this is illogical. Talk of sets of institutions 'least hindering' something implies either that every set hinders it to some extent, or we are only interested in those that hinder it. Surely, if every set of institutions hinders agent coordination, the set which hinders it least *is* optimal; if on the contrary some sets promote coordination, to focus on the set that 'least hinders' it would be perverse.

The premise that every set of institutions hinders coordination, is also meaningless: hinders coordination relative to what? Something—*X*—can only be said to hinder something relative to a situation in which *X* is absent. Where did Hayek ever suggest that coordination would be better in the absence of institutions? Hayek did not believe that: he clearly believed that institutions enabled coordination and some institutions did it better than others. And Caldwell concedes the point: on the previous page he says 'Market prices *permit* . . . knowledge to be used by others, thereby *assisting* in the mutual *coordination* of plans. . .. The price system . . . is . . . one of a number of social institutions that *help coordinate* the actions of market participants' (p. 337; my emphasis). And a few pages earlier: Hayek's 'preferred approach was to examine the sorts of institutional arrangements that . . . might *best allow individuals to coordinate* their actions' (p. 333; my emphasis). Hayek believed that at least some institutions aided coordination, and he was concerned—as indeed are we all—with finding the set that does the best job. There's nothing Panglossian about that. The Panglossianism comes in when Hayek argues that spontaneous forces—in particular the group-selection evolutionary process—are intrinsically favourable to the development of human society and tend to generate the optimal sets of institutions we're looking for.

Caldwell concedes (p. 356) that it would be natural for Hayek's readers to conclude that his descriptions of the emergence of markets are accompanied by normative claims; in other words, that he commits the naturalistic fallacy. However, according to Caldwell, this would be mistaken—'as Whitman (1998) has carefully documented'. But Whitman's claim that Hayek avoided the naturalistic fallacy cannot be accepted (see Denis, 2002). On the contrary, once the passages Whitman cites are read in context, the Panglossian interpretation of Hayek becomes even stronger. In sum, Caldwell's defence of Hayek on the issue of the Panglossian results of his group-selection evolutionary theory is far from convincing.

Caldwell interprets Hayek's methodological development as a pilgrimage starting from standard Austrian assumptions, and ending up somewhere unique. On this journey he was driven by the goal of developing a scientific approach

to the study of society as a complex system, an approach he hoped would provide intellectual support for capitalism. Now the question is, whether in fact he ever reached this goal, or was he still searching for it at the end of his life? Was Hayek's final view really his final view, or was it just as far as he had happened to get? Caldwell doesn't answer this critical question. To do so he would need to examine whether the forces that had carried Hayek so far, were finally reconciled, and the journey over.

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New Television, Old Politics: the Transition to DTV in the United States and Britain
Hernan Galperin
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When the definitive history of the 20th century is written, America's transition to digital TV (DTV) may come to be viewed as the classic illustration of what can go wrong with a high tech industrial policy. For more than 20 years this transition has been taking place. It has already been the subject of half a dozen books and countless popular articles, let alone thousands of pages of Congressional Testimony and tens of thousands of pages of FCC comments. Hernan Galperin, an assistant professor at the Annenberg School for Communications, University of Southern California, brings this story into the 21st century and adds a novel comparative analysis. By comparing how the DTV transition was managed in both the United States and Great Britain, Galperin gives us many additional insights into the technological, economic and political factors driving this worldwide transition.

What may be most remarkable in this story is that the United States, famous for its free markets and rhetoric about media deregulation, chose to manage the broadcast industry's transition to DTV via a highly regulatory regime favoring incumbent broadcasters over free markets. Britain, in contrast, gave far fewer subsidies to its incumbent broadcasters and used the transition to foster competition.

Galperin charts a complex set of factors that led to the divergence in US and British DTV policies. These include regime type (the US presidential system versus the UK parliamentary system of government), normative models guiding broadcast policy, and path dependency effects derived from the pre-existing broadcasting regimes. For example, Galperin argues that the British parliamentary

regime allowed its politicians a greater measure of freedom from the political pressure of the broadcast lobby.

A striking feature of the DTV transition is policymakers' changing justifications for it and evolving policies to speed it along. In the US, for example, it was designed in the late 1980s to fend off Japanese competition and make a major contribution to a robust US high-tech and consumer electronics industry. By the late 1990s, the primary justification had changed to speeding the return of spectrum for advanced wireless services.

The technology also evolved dramatically during the course of the transition. Originally, the transition was characterized as a transition to high definition TV. Later it was characterized as a transition from analog to more advanced digital technologies that could make much more efficient use of the spectrum, including more than six standard definition TV channels in the spectrum previously occupied by only one standard definition TV channel.

Galperin does an excellent job of charting the various arguments of the political actors involved in the DTV transition and packaging them into a coherent account of the political economy of DTV policy. Where he tends to fall short is in taking the arguments of the various actors at face value. Over the last 20 years, broadcasters and policymakers have provided a bewildering array of justifications for their actions. But Galperin does not adequately explore the extent to which those justifications may have been smokescreens for other motives. For example, he states that policymakers were generally more enthusiastic than TV broadcasters about the DTV transition. This is a reasonable conclusion based on the political actors' descriptions of their own motives. But it ignores the huge economic windfall—in the form of additional rights to use spectrum—that broadcasters hoped to achieve as a result of the DTV transition. It also ignores the massive, below-the-public-radar lobbying campaign that the broadcasting industry waged to win such rights.

In the end, explaining the DTV transition may be a lot simpler than Galperin makes it out to be. The broadcast industry happens to occupy the most valuable spectrum of the information age. It is potentially worth tens of billions of dollars—but only if, through lobbying, the broadcasters can win more flexible rights to use it. The latest generation of digital TV technology, for example, allows up to 20 TV channels to be carried on spectrum that could previously only carry one TV channel using analog technology. In the US, broadcasters won that entire digital windfall for themselves. In the UK, they were forced to share it with new competitors. US broadcasters were more successful in this effort largely because of the critical role of local TV media in Congressional politics. Few members of Congress could afford to risk alienating their local TV broadcaster on a vital pocketbook issue such as DTV. Galperin covers all this, but it tends to get lost in his encyclopedic account.

Another weakness is that the book only covers the DTV transition in the US and Britain. Since Galperin wrote the book, DTV transitions have rapidly progressed in other countries. In particular, the DTV transition in Berlin, Germany (subsequently copied in other regions in Germany) is now widely recognized as the most successful DTV transition in the world. Galperin touches on these DTV transitions in his last chapter, but he has left this type of expanded comparative analysis wide open for future research.

When Galperin began researching his book in 1998, he was worried that the DTV policy debate would be resolved before his book was published. Fortunately for him, that has turned out to be a far too optimistic assessment. The DTV transition in the United States now looks like it won't be over until at least 2009. Even then, the policy debate over how to transition TV broadcasters into the Internet world is likely to continue for many years, perhaps decades, afterward. If the past is the prologue to the future, then Galperin's book portrays a pretty dismal portrait of that future.

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More Damned Lies and Statistics. How Numbers Confuse Public Issues
Joel Best
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Statistics are an essential tool for understanding and evaluating reality; data analysis is fundamental for the scientific method. Today, more and more data are available in many domains. However, data are also (and, for Joel Best, above all) a possible source of errors and misunderstanding and even a tool for deception. Statistics can in fact be used to lie or mislead. This is often the case in political and social debates. In this sequel to his 2001 book *Damn Lies and Statistics*, Joel Best offers examples (all drawn from the US, but the argument has wider applicability) of deliberate misinterpretation of data by politicians, journalists, non-profit organizations and researchers.

Such manipulation is possible because statistics are intrinsically ambiguous and because, in spite of that, people trust them. Our culture relies heavily on the idea that statistics are factual: someone has monitored a particular situation and measured its relevant aspects. Thus, numbers become something magical. People see them as the simple solution to their decision-making problems and as an easy shortcut to decisions. Most of us are unaware of a whole series of problems embedded in the very nature of the data, connected to difficulties in defining concepts, and to the fact that the perception of any phenomenon passes through cultural filters. No phenomenon can be measured until it has been defined, but all definitions are inevitably arbitrary and depend on the cultural environment. The choices that people make in counting are therefore necessarily shaped by many factors: some methods 'are cheaper than others, some are a better fit for the people doing the counting, some may seem more likely to lead to the results they hope to find' (p. 169), and so on. For example, the collection of statistics on missing children raises a number of basic questions with many possible answers: *What is a child? What is the upper age limit for being counted? How long must a child be missing to be counted?* And once we have answered these definitional questions, we then have to count the missing children. The same situation can be viewed in different ways, so that an objective evaluation of the problem is extremely difficult. Reliable comparisons over time or from one place to another are almost impossible.

Since the gathering of data involves these difficulties and is costly, and since we need statistics to make decisions, attention is usually focused on what can be easily measured and counted. For example, the number of a researcher's publications is a common measure of the quality of the research. Not only is this highly misleading, but it creates an incentive for researchers to grind out more and more publications, even at the cost of diminished quality.

Large private organizations depend on statistics to manage their day-to-day operations. Managers rely upon numbers to understand what is happening and to guide related decisions; they face the same problems of data interpretation and misrepresentation (for example by colleagues or subordinates).

Statistics are essential to making the complexity of reality tractable, but they can *over*simplify it—especially if they are used badly. This simplification can lead to paradoxical results when data no longer function as an aid to decision-making but become the main engine driving action, thus taking the place of what they should measure. This paradoxical transformation is encouraged by the tendency of people and organizations to develop routinized practices in order to save mental effort.

Best does not propose that the use of data and statistics be abandoned. The first and most effective antidote to the problems discussed above is to be aware of them. Moreover, it is necessary to maintain critical standards when dealing with statistics: 'There are better and worse way of counting' (p. 168). We should also accept the idea that most social issues are difficult to understand; every study needs to be verified by other analyses using different methods. This is as true for scientists as for any other user of statistics; scientists have their own views, limitations and need for recognition and reward, and therefore have motives for the intentional or unconscious misuse of statistics. Certainly, it is also fundamental to know the tools of analysis and how to use them (first of all simple graphs and percentages!).

Best makes a case for programmes to promote 'statistical literacy' to enable people to appraise the data they encounter in their everyday lives: 'shouldn't we be able to immunize young people, so that they will be able to think critically about the numbers they encounter?' (p.170). He argues that more courses of study should include statistical training. New textbooks will be needed: most of the problems Best discusses are seldom examined in statistics handbooks, which deal almost entirely with calculations and techniques, and which are designed to be used in courses for professional statisticians. A number of new handbooks now available indicate that something is changing, but much remains be done.

Finally, it is worth noting that, though this book was written for non-experts and does not deal directly with issues concerning economics or organizational science, it examines problems that arise frequently in those disciplines and that expose important cognitive and behavioural human limitations. In processing data, human beings can easily be trapped in wrong perceptions and misguided practices. These phenomena have been widely studied in cognitive and behavioural economics. Best doesn't mention this work, but it indirectly supports his main ideas.

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