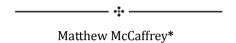
INCENTIVES AND THE ECONOMIC POINT OF VIEW: THE CASE OF POPULAR ECONOMICS



Abstract

This paper critically examines some underlying assumptions of the "popular" economics writing of recent years, e.g. the Freakonomics literature. I examine two problems that emerge from these writings. First, popular economics is myopic in that it views incentives as the fundamental economic concept. This focus can place misleading emphasis on only one relevant economic problem, while neglecting other important facts, such as (a) institutional arrangements that determine the pattern of incentives, and (b) economic laws that render the pattern irrelevant. Second, the literature includes hidden value judgments resulting from assumptions about incentives. As a result, economic analysis is sometimes falsely confused with ethics, or includes normative judgments not implied by economics proper. This problem in turn influences the portrayal of economics as a science.

Key words: incentives; economic law; Freakonomics; value judgments

JEL Classification: A11, A20, D01

INTRODUCTION

In recent years a curious idea has permeated economic thought and teaching: the idea that economics is fundamentally the study of incentives. In particular, the spread of a certain kind of "popular" economics writing in the last two decades has firmly

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established this notion for economists and laypersons alike. This is a strange development, considering that "incentives" as a specialized concept are relatively new in economics. To take one example, Jean-Jacques Laffont and David Martimort note that Joseph Schumpeter's exhaustive *History of Economic Analysis* does not contain a discussion of incentives (2002, p. 2). Furthermore, Laffont and Martimort's own discussion of incentives in the history of economic thought reveals relatively little until well into the twentieth century (2002, pp. 7-27). And even *The New Palgrave: A Dictionary of Economics* (1987) does not contain an entry for "incentives."

Why then the shifting focus of economic research? At a deeper, formal level, this trend is largely the result of the success of agency theory, which came into its own together with the development of the theory of the firm². This branch of economics, however, has only partially influenced popular views of incentives, which have at least one other significant inspiration. That is the incentive theory inspired by Gary Becker and many Chicago economists, which introduced incentive thinking to behavior typically considered outside the scope of economics, creating fields such as the economics of discrimination, crime and punishment, the family, and so on (Becker, 1993)³. Becker's work launched decades of research into the economic aspects of all parts of human society, in both the academic and popular spheres,

¹ It does, however, contain entries for two components of agency theory, "incentive compatibility" and "incentive contracts." These, incidentally, reinforce the point made below that incentive theory tends to assume incentives matter only in the context of agency relations.

 $^{^2\,\}text{It}$ is worthwhile to observe that while the term was not used much historically, the fundamental concept has been common for some time (e.g. in the law of demand). Yet prior to the 20^{th} century, I am not aware of any economist who defined economics as the study of incentives, or afforded any similar concept the kind of attention that contemporary economists do. In any case, I do not argue that incentives are unimportant, only that they should not be emphasized too much.

³ For discussions of Becker's contributions and influence, especially in regard to incentive theory, cf. Fuchs (1994), Sandmo (1993), and Rosen (1993).

and it is from this work that the popular literature on incentives in economics has largely grown. The purpose of this paper is not to explore the history of incentives in economics, or decide whether the evolution of the concept ultimately represents an advance in economic reasoning. Rather, I wish only to explore one way the concept of incentives has caused confusion in economic writing.

I will examine what I believe are some shortcomings of popular economics writings, as opposed to academic research. In practice, popular writings often influence economics teaching at the undergraduate level, and popular works are also worth considering given the wide attention they enjoy among laypersons, economists, and policymakers. I take as my main source the literature that in recent years has played such a large role in emphasizing incentives in economic reasoning. There are numerous approaches to this topic, but I consider Landsburg (1993), Levitt and Dubner (2005; 2009), and Cowen (2007) as representative, and my commentary mostly has these books in mind. Notable examples of the popular literature that emphasize incentives less are Harford (2007), Frank (2007), and Wheelan (2010). This last group of writers is often more successful in avoiding the difficulties suggested in this paper, and I occasionally use their works as foils for the first series of authors.

It is important to note that the economists listed above do not agree on all points, and certainly do not represent "schools of thought." For this reason I will limit the discussion to those points on which there appears to be consensus, and attempt to avoid falsely homogenizing opinions⁴. Popular economics as I characterize it is not an ideological movement or a well-defined methodological position. It is closer to what might be called a general "economic point of view." The theme of the literature is to make economics intelligible for those without formal training, and to teach the

⁴ I will therefore also occasionally refer to some general principles and assumptions of popular economics without always citing each author. I note too that this paper is not a critique of the empirical results (or speculations) of these economists. It is concerned with their economic outlook, and not with any particular case study.

reader how to "think like an economist," or perhaps to "discover your inner economist." While its roots are in academic writing, the literature itself is designed for popular audiences and non-specialists. To reflect this, the style and tone of these works are distinctly journalistic. Given the high degree of formalization and abstraction in economics, and the barriers to understanding they create, it should not come as a surprise that a literature has sprung up for the purpose of explaining (perhaps, justifying) what economics is about and why it is relevant for those outside the profession. Considering the number of bestsellers popular economics has generated, it appears that the ideas in these works have made a serious impression on public opinion.

The construction of the major contributions is quite consistent. Each book mentioned above consists of a series of separate case studies regarding seemingly mysterious and often bizarre behavior. The authors attempt to bring together these disparate topics through the application of basic principles of economic reasoning. The idea is that with a little economic analysis, even the strangest events can be explained, often as simple incentive problems. Why popcorn costs more at movie theaters, why sumo wrestlers cheat, why most drug dealers live with their mothers, and why people don't go to the gym as often as they say they will are all examples of typical questions addressed in these books. And, according to the authors, each can be understood and solved through economic analysis.

To examine this literature, it is necessary to bring together several prominent ideas in popular writings. The most obvious theme linking these works together is the notion of incentives. The purpose of this paper is to consider critically the role incentives play in popular writing. I argue first, that to treat incentives as an independent and foundational concept is confusing in that it diverts attention away from more fundamental aspects of economic theory. I further argue that the popular literature on incentives includes hidden value judgments concerning economic policy that potentially influence the objectivity and scope of economic analysis. This paper should not be viewed as a

comprehensive critique of popular works, which are often insightful and undoubtedly written in good faith. It is intended only as a cautionary discussion for theorists and policy analysts.

ECONOMICS AS AN INCENTIVE PROBLEM

The popular economics literature often explicitly defines economics in terms of incentives. Take the following example: "Economics is, at root, the study of incentives: how people get what they want, or need, especially when other people need the same thing" (Levitt & Dubner, 2005, p. 20)5. Or consider the dictum of Steven Landsburg, the founding father of popular economics: "Most of economics can be summarized in four words: 'People respond to incentives.' The rest is commentary" (Landsburg, 1993, p. 3). Furthermore, there is the following assessment of the importance of incentives, not merely for economics, but for life in general: "Incentives are the cornerstone of modern life. And understanding them – or, often, ferreting them out – is the key to solving just about any riddle" (Levitt & Dubner, 2005, p. 13; emphasis in original). Incentives acquire an almost mythological status: "An incentive is a bullet, a lever, a key: an often tiny object with astonishing power to change a situation" (Levitt & Dubner, 2005, p. 20). If we look past the hyperbole, it is clear that for these economists incentives are the serious core of economic theorizing and policy analysis. The empirical studies that form the bulk of popular economics sometimes elaborate on the theme by particular incentives. Importantly though, investigating economists who emphasize incentives as the fundamental

⁵ This position is reiterated in Levitt and Dubner (2009). Cowen similarly states: "The central concept of economics is not money but rather incentives" (2007, p. 2). Wheelan does not define economics as the study of incentives, but holds them to be one of the most important economic concepts (2010, pp. x-xi, and throughout). Landsburg's own definition has become influential enough to be enshrined as a matter of course in principles-level economics teaching (Mankiw, 2012, p. 7).

economic concept do not always discuss incentives in their case studies. This is not a criticism; in fact, quite the contrary. It is, however, revealing, in that it highlights the difficulties of applying an economics defined as the study of incentives.

Before discussing any possible difficulties with this view, a few words must be said about incentive theory in general. In formal theory, incentives are generally restricted to the sphere of contracts, within the context of a principal-agent relationship (Laffont & Martimort, 2002). In one sense then, if economics is merely the study of incentives, economics reduces to the study of contractual relations. It is obvious, however, that economic problems extend far beyond this sphere⁶. To focus on contractual incentives would be to render economics narrow to an extreme. Contractual incentives, as important as they are, are not the beginning of economic theorizing but a step far down the theoretical road. The popular economics literature has absorbed this insight and partially avoids this trap (perhaps unconsciously), using a broader notion of incentives that can be applied to essentially any kind of human decision making⁷. As can easily be seen, this is in fact the central idea of the literature: essentially all human behavior, no matter how strange or trivial, can be understood with reference to incentives (as in the above comment from Levitt and Dubner). But despite the ease with which most economic problems can be superficially explained by incentives, if we look closely we find that they are inadequate as the foundational concept of economics, at least without additional conceptual tools. Let us explore this claim further.

What exactly are incentives in the popular view? Consider a representative definition: "An incentive is simply a means of urging people to do more of a good thing and less of a bad thing"

⁶ For instance, Crusoe engages in economic activity, as do societies that have not yet developed contract relations, and we could mention many examples from modern economies as well. More generally, all purposeful human behavior can be the subject of economics.

 $^{^{7}\,\}mathrm{However},$ I argue below that popular economics inappropriately implies behavior similar to agency.

(Levitt & Dubner, 2005, p. 21). Of course, one of the basic truths of economics is that the only reason an individual behaves one way and not another is because he or she expects to receive the greatest benefit from the chosen course of action. So incentives are simply expected increases in welfare associated with particular behavior: the concept "incentives" refers to the idea that people do what they believe will make them better off. This is evident from another definition: "Quite simply, an incentive is anything that motivates human behavior, or encourages an individual to make one decision rather than another" (Cowen 2007, p. 2). If we wish to speak about incentives in the real (empirical) world, the concept reduces to investigating what people valued at a particular point in the past, or a prediction about what they might value in the future. Incentives are about preferences, and therefore occupy a significant place in value theory, which is of course a cornerstone of economic reasoning. There are, however, several reasons why emphasizing incentives alone is troublesome for understanding economic science.

First, this view of incentives – incentives are things people believe make them better off – means that an independent concept like "incentives" is somewhat redundant, essentially a rephrasing of basic value theory. Instead of "incentives" it would be perhaps more accurate to speak of (perceived) human ends. Whatever the chosen terminology, multiplying basic concepts leads to confusion, as may be the case when using "incentives" to replace the terminology of purposeful action. It is important not to become distracted by a more abstract term that conceals the phenomenon to be explained, namely, human beings using scarce means to improve their welfare.

Second, emphasizing incentives in and of themselves does not imply much about the range of potential incentives, i.e. the institutional arrangement and its effects. Incentives do not exist in a vacuum. They are to a large extent the product of institutions, which cannot be ignored in practical analysis⁸. Economists must

⁸ This does not imply economics cannot ever abstract from institutions. But institutions are fundamentally intertwined with the definition of economics.

therefore be cautious when attributing importance to incentives when in fact there might be more fundamental problems to address. This fact is especially important in the arena of economic policy: it is a trope of policy analysis to note the danger of policies that attempt to alter incentives, while leaving the institution providing those incentives intact. This point is particularly relevant for popular economics because, as argued below, policy recommendations are at the heart of much of popular writing. Studying incentives alone does not necessarily provide explanatory (or predictive) power because incentives are only one component of basic theory, along with other aspects of human action and concepts such as institutions. Although the popular approach to incentives is broader than that found in formal theory, even at its most expansive it is insufficient to stand on its own. Any discussion of incentives in the real world implies something about the presence or absence of property rights regimes, the price system, competing forms of social organization, and so on.

Continuing this line of thought with an example, there is another difficulty with the view that economics is in essence an incentive problem. Specifically, the incentive view implicitly denies there can be economic relations that make the arrangement of incentives irrelevant. We can best highlight this fact with a brief illustration from the history of economic thought. Consider the dispute in the twentieth century concerning the feasibility of a socialist economy. In explaining the problems of socialism, many economists focus on the arrangement of incentives and the lack of appropriate incentives under a socialist system (Hurwicz, 1973; Evans & Friedman, 2011)⁹. Indeed, this is likely to be the point of

Whether we define economics in terms of action, choice, incentives, resource allocation under conditions of scarcity, or whatever, none of these exists in a vacuum independent of prevailing institutions such as property rights or government. Furthermore, it appears hasty to exclude institutions from economic writing designed for popular audiences—writings intent on explaining "the economic point of view" or "what economics is really about."

⁹ is is in contrast to the view of earlier economists such as Oscar Lange, who almost entirely ignored incentive problems under central planning (Laffont & Martimort, 2002, pp. 23-25).

view of the type of economic reasoning that takes incentives as its fundamental explanatory principle. Cowen, for example, implies this view regarding Soviet socialism (2007, pp. 45-46).

Yet the problem of socialism is deeper than incentive problems. as Ludwig von Mises (1981, 1998), Friedrich Hayek (1948a, 1948b), and others (e.g. Machai, 2007) demonstrated. A functioning socialist economy is impossible because the centralization of ownership and decision-making prevents the formation of meaningful prices for capital goods. Although there are certainly problems with the arrangement of incentives under socialism, the core difficulty is not one of human performance or motivation, but rather of placing the entire economic system under the control of one organizing will. Any incentive problems arise from this fact. The ultimate problem is that no amount of tinkering with the rewards and punishments of socialist managers can result in the emergence of a meaningful, functioning price system. Only replacing public with private ownership of the means of production can completely accomplish that 10. It is encouraging that some popular writings acknowledge this idea in one form or another. Harford, for example, discusses Chinese socialism and its transformation into a freer economic system, noting the importance of the price system for command economies in addition to the incentive problems of socialism (2007, pp. 218-239). Consistent with his partial focus on incentives. Wheelan also appears to take a middle-ground position. mentioning both incentive and price-system problems (2010, pp. xvii, 4-5, 85-86)11. These authors provide a more nuanced view of the issue than an incentives-only approach is capable of doing.

 $^{^{10}}$ Although, as in the case of Chinese socialism, there are degrees of private control, some of which are closer to a market system, and that provide a more beneficial allocation of resources than pure socialism.

¹¹ There is possibly some minor confusion among these authors regarding the different economic problems under socialism, and how they relate to each other. For example, in a discussion of state versus private ownership of firms in China, Harford makes the odd claim that "What mattered was not who owned the companies, but that the companies were forced to compete in a relatively free market" (Harford, 2007, p. 231). But it is unclear what "free market" means without reference to private and public ownership.

In a narrow sense, we might say it is institutions, not incentives, which are important (in the case of socialism, the institution of private property). Taking a broader view, the example of the socialist calculation debate is instructive because it demonstrates aptly that there are certain economic relations that precede – and delimit – problems of incentives. These relations are economic laws, a broader but more fundamental notion than institutions. Seen in this light, the view that incentives are the essence of economics takes a risk: it might be seen as a sort of "fatal conceit." The conceit is the belief that society can be perfectly arranged by carefully manipulating incentives, and that all that is required are a group of sufficiently informed minds with the will to organize it. This is precisely the sort of position Mises, Hayek, and others so effectively disputed. Extra care should be taken then not to resurrect the idea by overemphasizing incentives.

It appears misleading then to define economic analysis as the study of incentives, because even though they appear to adequately explain much of the strange and exotic behavior described in popular economics, they sometimes fail to address deeper issues that economies face, such as the problem of prices and monetary calculation under socialism. This is perhaps why popular writing focuses on the unusual in human behavior: individual guirks are more interesting than "mundane" topics such as price formation, capital theory, entrepreneurial calculation, and many other core components of economics. Incidentally, this does not imply that popular economics is misguided because it moves economics away from "pure" formal theory, in favor of simpler arguments and more colloquial language. Economic science must certainly be able to address real-world problems, and often this requires abandoning the models of formal theory. If anything, this tactic is an advantage of popular writings, because it allows for a richer presentation of economic ideas. There is a problem of undue simplicity in popular economics, but the abandonment of formalization is not the cause of the trouble. Rather, simplicity becomes harmful if it results in overlooking the true foundations of economics, and thus to a myopic focus on only one of many relevant variables in economic reasoning.

THE HIDDEN ASSUMPTIONS OF INCENTIVE ECONOMICS

Other problems arise in popular economics concerning assumptions about the role of economic science in policymaking. Recall the definition of incentives provided by Levitt and Dubner: "An incentive is simply a means of urging people to do more of a good thing and less of a bad thing" (Levitt & Dubner, 2005, p. 21). In its explicit and implicit meaning, this definition is common in the literature¹². Positions with the same implications are found in the sources cited above (see note 5), as well as Landsburg (1993, pp. 3-9). There is a common theme: popular definitions of incentives revolve around the idea that some entity is responsible for arranging incentives within society, that there is someone or something doing the "urging" or "encouraging." It is not clear whether this is an "is" or an "ought" assumption, but either way the point must be clarified. Who or what is this entity? Is it economists, or perhaps the beneficent central planner of textbook economic modeling? Is it simply "society"? Each of these answers poses its own particular problems. Whatever the case, it is important to think carefully about how we perceive incentive arrangements, and clarity is necessary when considering what sort of incentives are implemented, and by whom.

Whatever it is exactly, the directing authority seems to be a principal of some sort, with the individuals in society treated as agents. The assumption of a principal-agent relationship is not a problem in formal theory, when contract models presuppose the planning of incentives, and the scope of planning tends to be limited by or embedded in the price system. The assumption is far more significant when applied to society at large, which (excepting

 $^{^{\}rm 12}$ For an explanation with similar implications that refers to formal agency theory, cf. Lazear (1987).

under conditions of a command economy) has no directing organization. But explaining broad social problems is exactly the goal of popular writing. One way of putting the problem might be to say that popular economics brings its practitioners into the economic analysis, by treating analysts as principals (formulating incentive arrangements to maximize some function) and society as agents (responding to the incentive arrangement, presumably in order to maximize utility). In a genuine case of agency, planning incentives to maximize the principal's output or revenue is a given of the problem. But in the case of society and its analysts (e.g. social scientists or readers of popular economics), the framework of principal and agent does not appear to apply. Agency in the context of popular economics only makes sense from the perspective of policymakers. I will return to this point below.

I must repeat that I am discussing a general view of economics, and the implications of certain habits of thought it engenders. For this reason I focus primarily on definitions. The views of this literature are important because they help form the economics student's impressions of what economics is and how it is studied. I stress that this does not imply popular economics writers secretly advocate a system of social planning. Rather, they have failed to state some of their own assumptions. They want to be broad enough to analyze potentially any situation in terms of incentives (even eclectic or seemingly irrational behaviors), but narrow enough that an audience can still look at economic problems from the perspective of a principal. When examining contractual relations, assuming the perspective of a principal is perfectly appropriate. But when looking at economics and individual behavior outside contracts, there is often no actor who could meaningfully be identified as a principal. And without a principal of some sort, we must abandon the narrow idea of agency and of arranging incentives.

In any case, to take part of the agency approach to incentive theory and impute it to all of economics implies the odd view that there is some sort of overarching authority controlling incentives in society. Further, it might indicate a normative judgment about economic policy. This leads to the problem of value freedom in economics. Are economists dispassionate scientists, or carefully concealed social engineers? The above normative and paternalistic definitions ("urging people to do more of a good thing and less of a bad thing"; "[encouraging] an individual to make one decision rather than another") indicate the economist is perceived not so much as a detached analyst as a committed policy advocate with definite objectives¹³. But if economists are a brand of policy advocate, what is the basis for this position? At the very least these problems should be carefully untangled by popular writers.

Consider a further value judgment of popular economics. Even if it is not assumed that some agency should be arranging the pattern of incentives, there is still a value judgment in the notion that there are things that are economically speaking "good" or "bad." But of course economists qua economists have little to say on this point, which is a matter of ethics. In popular economics it is rarely mentioned that such value judgments are a step outside scientific economics. Levitt and Dubner do mention the distinction between normative and positive theories (2005, p. 13), but imply that economics and moralizing are necessarily at odds with each other. "Moral posturing" is contrasted with "honest assessment of the data." But they ignore the possibility that economics can of course become moral posturing if one's assumptions are not made clear. Honestly assessing the data does not imply that one policy is superior to another; a value judgment is required to make such a distinction¹⁴. Essentially, they peel away one layer of moralizing only to arrive at another.

Let us look at the moral problem of popular economics another way. Even a cursory glance reveals a near obsession in

¹³ This approach is especially odd for Levitt and Dubner, who are critical of the fact that ""Experts"—from criminologists to real-estate agents—use their informational advantage to serve their own agenda" (Levitt & Dubner, 2005, pp. 13-14; emphasis in original). This is not necessarily to criticize any policy objectives these authors might have, only to point out that they in fact exist, and may be implicitly included in their analysis.

¹⁴ Even demonstrating, for example, the Pareto-superiority of one policy over another does not imply that we *should* choose the former. At best, it implies that there would be less resistance to such a choice.

popular economics with various forms of deception: from careful self-deception to cheating and other forms of outright fraud. Because incentives are perceived as the core of economic analysis, and because incentive problems are often analyzed in terms of some form of deception, economics becomes the study of how human beings deceive each other, and further, how people can be inspired to deal honestly¹⁵. It is difficult to escape the impression that in many examples of economic behavior there is some sort of dishonesty, which must be carefully rooted out (positive analysis), so that it can be reformed (normative analysis). In pursuing reform, popular economists wrestle with different methods of coping with incentive problems. Deception thus provides a platform for economic policy recommendations.

Landsburg also draws attention to economics' moral neutrality, but nevertheless introduces the utilitarianism of economic efficiency as an underlying reference point used to accept and reject various policies (Landsburg, 1993, pp. 49-92). It is always assumed that economic reasoning should play an important role both in improving society and as a benchmark for understanding such improvement. The underlying theme tends to be that, with a little data analysis, we can reveal "bad" behavior – whether immoral or inefficient – in order to improve it. It is possible that the popular economics literature tends to overlook ethical assumptions because it deals largely with things that are considered good or bad by the vast majority of people: e.g. health, wealth, and honesty are good;

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¹⁵ Nearly a century ago, in a criticism of the work of Herbert Davenport, Frank Fetter humorously observed a similar problem:

The theme running through the book that variations in terms of private capital do not necessarily reflect production in a social sense – a truth often recognized – still needs occasional repetition. It certainly is repeated [in Davenport's book]: Peruna, as an example of harmful yet valued products, administered in large doses; and burglars with their jimmies, and loose women with their flaunting appeals, appear so often that they make some chapters of this book appear like an evening at the uncensored movies. It would have been well if the author had proceeded more cautiously in extending this notion of predation and exploitation to the whole field of competitive economics. (Fetter, 1914)

illness, poverty, and cheating are bad. Certainly many people would agree. Or perhaps the popular audience merely expects advocacy from economists. Yet these explanations, no matter how intuitive, do not by themselves justify implying that economics is a value-laden science, nor introducing hidden value judgments.

Popular economics appears to contain hidden assumptions both about who does (or should) arrange incentives within society, and about what things people should value. It is reasonable to suggest that economists must first clarify these issues before using them as guidelines for research or teaching; otherwise there is a chance that both economists and the public at large will be misled about the meaning of economic science. The economist qua economist pursues theories that seek to understand incentives, rather than policies to implement them. Economists often claim to be doing exactly this, but scientific objectivity sometimes turns out to consist merely in providing a rationale (in terms of a specific economic benchmark, such as "efficiency") for a particular policy.

CONCLUSION

Economics cannot truly succeed in the popular sphere until practitioners and audiences gain a clearer grasp of its foundations. Within popular economics, too much attention has been paid to the concept of incentives. To say that "incentives matter" ("individuals respond to incentives") is certainly true, but it is so true that it is essentially trivial. Likewise, one must also guard against replacing one inadequate concept with another, equally incomplete one, such as institutions. At the same time, there are broader notions such as economic law that trump narrower concepts like incentives. Economic reasoning has many components, and it can be misleading to reduce the study of economics to only a few of these in an attempt to introduce the subject to a wider audience. I have also shown that popular economics includes hidden assumptions that skew its perception of economic analysis, and potentially alter the significance of its findings.

There are therefore serious difficulties with the economic point of view in popular economics. It is, as Schumpeter said of mercantilism, "popular in the most distressing sense of the word" (1954, p. 348). It is certainly commendable, even necessary, that economists should wish to communicate the essential worldview of their science to a public audience. But it is dangerous to do so if that vision of economics is mistaken, or if it falsely conflates economic and ethical judgments, or conceals the latter. To state a truism, it is not enough that economics be popular, it must also be sound.

REFERENCES

- Becker, Gary S. 1993. The Economic Way of Looking at Behavior. Journal of Political Economy 101 (3): 385-409. Reprinted in *Accounting for Tastes*, Cambridge, MA: Harvard University Press, 1996.
- Cowen, Tyler. 2007. Discover Your Inner Economist: Use Incentives to Fall in Love, Survive Your Next Meeting, and Motivate Your Dentist. New York: Dutton.
- Evans, Anthony J., and Jeffrey Friedman. 2011. "Search" vs. "Browse": A Theory of Error Grounded in Radical (Not Rational) Ignorance. Critical Review 23 (1-2): 73-104.
- Fetter, Frank A. 1914. Davenport's Competitive Economics. Journal of Political Economy 22 (6): 550-565.
- Frank, Robert H. 2007. The Economic Naturalist: In Search of Explanations for Everyday Enigmas. New York: Basic Books.
- Fuchs, Victor R. 1994. Nobel Laureate: Gary Becker: Ideas About Facts. Journal of Economic Perspectives 8 (2): 183-192.
- Harford, Tim. 2007. The Undercover Economist. New York: Random House.
- Hayek, F.A. 1948a. The Use of Knowledge in Society. In *Individualism and Economic Order*. Chicago: University of Chicago Press.
- Hayek, F.A. 1948b. The State of the Debate. In *Individualism and Economic Order*. Chicago: University of Chicago Press.
- Hurwicz, Leonid. 1973. The Design of Mechanisms for Resource Allocation. American Economic Review 63 (2): 1-30.
- Laffont, Jean-Jacques, and David Martimort. 2002. *The Theory of Incentives: The Principle-Agent Model*. Princeton, NJ: Princeton University Press.
- Landsburg, Steven E. 1993. *The Armchair Economist: Economics and Everyday Life*. New York: The Free Press.

THE REVIEW OF SOCIAL AND ECONOMIC ISSUES

- Lazear, Edward P. 1987. Incentive Contracts. In *The New Palgrave: A Dictionary of Economics*, edited by John Eatwell, Murray Milgate, and Peter Newman. London: Macmillan.
- Levitt, Steven D., and Stephen J. Dubner. 2009. Superfreakonomics: Global Cooling, Patriotic Prostitutes, and Why Suicide Bombers Should Buy Life Insurance. New York: Harper-Collins.
- ——. 2005. Freakonomics: A Rogue Economist Explores the Hidden Side of Everything. New York: Harper-Collins.
- Machaj, Mateusz. 2007. Market Socialism and the Property Problem: Different Perspective of the Socialist Calculation Debate. Quarterly Journal of Austrian Economics 10 (4): 257-280.
- Mankiw, N. Gregory. 2012. *Principles of Microeconomics*. 6th ed. Mason, OH: SouthWestern Cengage Learning.
- Mises, Ludwig von. 1998. *Human Action: A Treatise on Economics*, Scholar's edition. Auburn, AL: The Ludwig von Mises Institute.
- ——.. 1981. Socialism: An Economic and Sociological Analysis. Translated by J. Kahane. Indianapolis: Liberty Fund.
- Rosen, Sherwin. 1993. Risks and Rewards: Gary Becker's Contributions to Economics. Scandinavian Journal of Economics 95 (1): 25-39.
- Sandmo, Agnar. 1993. Gary Becker's Contributions to Economics, Scandinavian Journal of Economics 95 (1): 7-23.
- Schumpeter, Joseph A. 1954. History of Economic Analysis. New York: Oxford University Press.
- Wheelan, Charles. 2010. *Naked Economics: Undressing the Dismal Science*. Revised edition. New York: W.W. Norton & Company.