

More Than Enough

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Accounting for Tastes. Gary S. Becker. Harvard University Press, 1996. Pp viii, 268.

If Gary Becker didn't exist, we would have to invent someone like him. For close to four decades he has been taking economic theory beyond its usual domain of applications, almost single-handedly creating the economics of discrimination, human capital theory, the economics of crime and punishment, and the economic theory of the family. In doing so, he has used the sledgehammer rather than the tools of the precision mechanic. He has applied, literally, relentlessly, and often dogmatically, the idea of rational, utility-maximizing behavior within constraints. To test his ideas, he has used the Chicago "as-if" approach (pioneered by Milton Friedman) of validating theories by the accuracy of their testable implications rather than by the plausibility of their assumptions.

The results range from the spectacularly illuminating to the frankly weird. Yet as William Blake says in one of his *Proverbs of Hell* that Becker paraphrases in his Nobel Prize Lecture, "You never know what is enough unless you know what is more than enough."¹ As a good Popperian, Becker has consistently stuck his neck out. He has knowingly taken the risk of appearing crude, jejune and simplistic. And sometimes he is all of these. Yet Becker's simplifications, even when implausible if taken literally, can be more fertile than middle-of-the-road commonsensical approaches. This is particularly true of his recent work on addiction, further discussed below.

I. THE DANGERS OF ANALOGICAL THINKING

The essays collected in *Accounting for Tastes*, three of them previously unpublished, were written between 1974 and the

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¹ William Blake, *Proverbs of Hell*, in Northrop Frye, ed, *Selected Poetry and Prose of William Blake* 125, 126 (Random House 1953). Becker's Nobel Prize Lecture is reprinted in revised form at pp 139-61.

present. They have a rough thematic unity, which may be captured in the ideas of *personal capital* and *social capital*. The utility that people derive from what they do in the present depends on what they did and what was done to them in the past, and on what other people are currently doing. I believe that while these extensions have some usefulness, they soon come up against the limitation on all forms of analogical thinking in science.

The standard concept of physical capital has three features.

(i) It is the result of freely chosen actions, or "investments."

(ii) Each investment lowers utility below what it would otherwise have been, but is nevertheless undertaken because it promises to generate more utility in the future.

(iii) It is reversible, in the sense that it decays unless maintained.

When the idea of capital is extended to *human capital*, acquired by education or on-the-job training, features (i) and (iii) still obtain. Feature (ii) may or may not obtain. Some forms of education are intrinsically rewarding, and chosen partly for that reason. Investment is an indirect strategy: *One step backward, two steps forward*. While this is a feature of many forms of education, it need not be so. In his essay "Of the Education of Children," Montaigne argued, for instance, that it is possible to guide a child towards wisdom and virtue so that each step is pleasurable in itself:² *One step forward, and then one more step forward*. In cases where this disanalogy can be ignored, human capital can be studied using the theoretical tools of standard capital theory.

Then there is the further step to *consumption capital*, acquired by past consumption activities. This idea was introduced by Becker and George Stigler in what Becker calls "our celebrated paper on *De Gustibus*" (p vii).³ We can try to explain behavior on the assumption that consumption (or lack of it) leads to the accumulation (or depreciation) of consumption capital, which enters as an argument into the utility function along with consumption itself. By exposing yourself to classical music you build up a consumption capital that enables you to derive more pleasure from listening to classical music in the present. By consuming addictive drugs you similarly build up a consumption capital

² Michel Montaigne, *Of the Education of Children*, in W. Carew Hazlitt, ed, 1 *Montaigne's Essays* 138, 157-64 (A.L. Burt 1912).

³ The paper, *De Gustibus Non Est Disputandum*, is reprinted at pp 24-49.

that affects the utility of present consumption of drugs in two ways—decreasing the overall level of utility and raising marginal utility.

The idea of consumption capital retains feature (i) of physical capital. It does not always retain feature (ii). Addictive behavior, for instance, is undertaken because it generates utility in the present at the expense of utility in the future: *One step forward, two steps backward*. Consumption capital may or may not retain feature (iii). The important phenomenon of cue-dependent relapse can occur after years or decades of abstinence.⁴ Although the effect of the cues can be extinguished, it takes an effort to do so—there is no spontaneous decay. As in the case of human capital, the importance of this deviation from standard capital theory is an empirical matter.

When we take the further step from consumption capital to the more inclusive concept of *personal capital*, the analogy is definitely stretched beyond the limit of its usefulness (“more than enough”). To say that childhood abuse affects the stock of personal capital (p 7), for instance, is very misleading. It is neither a case of misery now for the sake of pleasure in the future nor of pleasure now causing misery in the future, but of misery now causing more misery in the future: *One step backward, and then one more step backward*. Also, in this case there very often is no spontaneous depreciation. On the contrary, the person might have to invest in years of psychotherapy to undo the initial “investment.” Finally, being a result of coercion, this form of personal capital does not depend on the person’s own choice. Here, then, none of features (i)-(iii) obtains.

Nor does any of these features obtain in the further extension to *social capital*. Being intended to capture “the influences of others on a person’s utility” (p 12), feature (i) is obviously absent. Becker argues that it is present because people can *choose their social network*, e.g. by emigrating, even if they cannot shape it (p 13). But this partial-equilibrium analysis ignores that a network is made up of other people, who should also be assumed to choose *their* networks. Although the intertemporal feature (ii) is not present, one might argue, perhaps, that an interpersonal version of (ii) does obtain. A person who chooses the cooperative behavior in a collective-action situation incurs a cost that is smaller than

⁴ Avram Goldstein, *Addiction: From Biology to Drug Policy* 220-22 (Freeman 1994); Shepard Siegel, Marvin D. Krank, and Riley E. Hinson, *Anticipation of Pharmacological and Nonpharmacological Events: Classical Conditioning and Addictive Behavior*, in Stanton Peele, ed, *Visions of Addiction: Major Contemporary Perspectives on Addiction and Alcoholism* 85-116 (Lexington 1988).

the benefits to the community but larger than the benefits for the cooperator. Yet this fact does not make cooperation into an "investment." Feature (iii), finally, is often absent. If my social capital increases as a result of a preference change in other people, there is no need to maintain it to avoid depreciation.

On the one hand, "everything is what it is and not another thing." On the other hand, everything is a little bit like everything else. I firmly believe that science should be guided by the first principle, not by the second. Unless the analogy between A and B is based in a common causal theory, trying to understand B by using concepts and theories developed for the study of A is likely to fail. Thus, biologists distinguish between homology and analogy as explanatory heuristics. Whereas analogies do not necessarily extend beyond the superficial similarities that were originally noted, homologies, resulting from common causal mechanisms, do allow predictive extensions. Consider the following diagram:

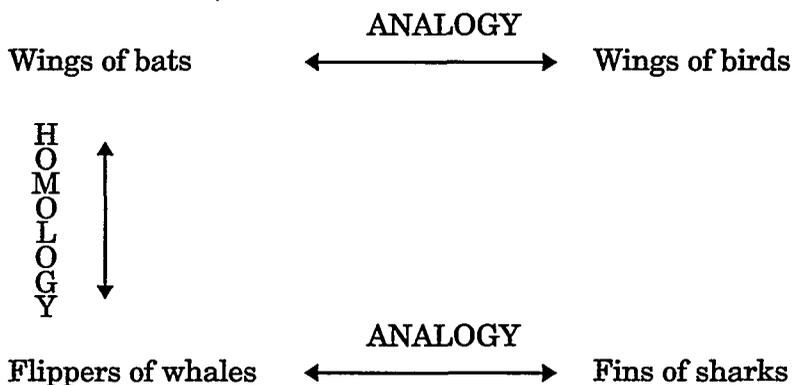


Figure 1

My claim is that personal and social capital relate to physical and human capital as whale flippers to shark fins, or bats' wings to birds' wings. (The idea of "imagination capital," discussed below, is even further removed from the core idea of physical capital.) The jury, I believe, is still out on consumption capital.

II. PREFERENCE FORMATION

In two previously unpublished essays on "Preferences and Values" (pp 3-23) and "Norms and the Formation of Preferences"

(pp 225-30), Becker brings rational choice theory to bear on what is arguably the most important unsolved problem in the social sciences: Why do people have the preferences (desires, goals) they have? Usually, economists think of rational choice as implementing given preferences. To the extent that they think about the origins of the preferences themselves, they usually apply a causal model that involves (say) *social influence* or *dissonance reduction* rather than *choice*. Becker argues, however, that rational choice theory can explain preference formation too. There are three subcases.

(1) The preferences of an agent A can be traced back to a rational choice by some other agent B for the purpose of shaping or changing A's preferences.

(2) The preferences of A can be traced back to a rational choice by A for some purpose other than preference acquisition. (These first two are the easy cases.)

(3) The preferences of A can be traced back to a rational choice by A for the very purpose of acquiring those preferences. (This is the hard case.)

An important application is Becker's analysis of the formation of time preferences. In the following passage, Becker lumps the easy and the hard cases together in a thoroughly confusing way:

[P]eople train themselves to reduce and sometimes more than fully overcome any tendency towards undervaluation. The analysis in this book allows people to maximize the discounted value of present and future utilities partly by spending time and other resources to produce "imagination" capital that helps them better appreciate future utilities (see Becker and Mulligan 1994).

They may choose greater education in part because it tends to improve the appreciation of the future, and thereby reduces the discount on the future. Parents teach their children to be more aware of the future consequences of their choices. Addictions to drugs and alcohol reduce utility partly through decreasing the capacity to anticipate future consequences. Religion often increases the weight attached to future utilities, especially when it promises an attractive afterlife (p 11, citation omitted).

To begin with, consider the first paragraph of this passage. As Becker and Mulligan (1994) remains unpublished, it is hard to know what to make of the idea of "imagination capital." I believe, however, that the very idea of intentional change of time preferences is incoherent. We cannot expect people to take steps to reduce their rate of time discounting, because to want to be motivated by long-term concerns ipso facto *is* to be motivated by long-term concerns, just as to expect that one will expect something to happen *is* to expect that it will happen. If people do not have that motivation in the first place, they cannot be motivated to acquire it.

Let me expand on this argument by comparing a cultivated taste for classical music with the putative cultivation of future-oriented time preferences. Considering the first case, I may believe today that I have the choice between two streams of experiences. If I abstain from cultivating a taste for classical music, the stream will be B,B,B. . . . If I undergo the initially aversive experience of listening to classical music, the stream will be C,A,A (with the preference ordering $A > B > C$). A rational agent will make the investment if and only if the discounted value of the second stream is larger than that of the first, which may or may not be the case.

Considering the second case, suppose for vividness that I am offered a "discounting pill" at a price of \$100, which will reduce my rate of time discounting. If I take the pill I shall be motivated to save \$50 out of my net weekly income of \$500. My consumption stream will be 350,450,450. . . up to retirement, and then continue 450,450. . . because of the return on my savings. Let us call this stream *I*. If I do not take the pill, I shall spend all my current income on consumption goods. My consumption stream will be 500,500,500. . . up to retirement and then continue 100,100. . . because I would now have to live on welfare thanks to my earlier profligacy. Let us call this stream *II*. Let us finally define stream *III* by a consumption of 450 in each period—a life of prudent saving and comfortable retirement without the initial expense of the pill. By assumption, I preferred *II* over *III*, as I was unwilling to defer gratification without the pill. To take the pill, I would have to prefer *I* over *II* and, by transitivity, to prefer *I* over *III*. As long as the rate of time discounting is positive, this cannot happen, since *I* and *III* differ only in that the first has a lower initial consumption.

The only place I can find for motivated preference change is in the context of weakness of will. Suppose a person wants to quit smoking, but finds himself torn between his desire to smoke

and his desire for good health. This conflict does not necessarily generate a second-order desire not to have the desire to smoke. In general, when we desire two incompatible things we decide which is the more important and act on it. Up to now, for instance, I have been able to handle my desire for butter pecan ice cream without wishing I didn't have it. Suppose, however, that I find myself constantly acting against my better judgment. In that case—but in that case only—would I form a desire not to have a desire for butter pecan ice cream and try to do something about it, e.g. by aversion therapy. In Becker's world, however, there is no place for weakness of will (see also below).

Consider now the second paragraph of the quoted passage. Although Becker claims to address the hard case, all the evidence he cites concerns the easy cases. I do not count the reference to education, which is entirely conjectural. The other three pieces of evidence are better documented but also irrelevant. The parent-children example belongs to case (1). There is no doubt that parents are concerned with their children's ability to defer gratification. Becker asserts that they try to affect it by acting directly on the rate of time discounting, e.g. by investing in their education. (Becker does not mention this specific strategy, but it seems to fit well with his analysis.) Robert Frank argues, by contrast, that parents achieve this aim by instilling guilt in their children. In the choice between present and future reward, emotions weigh in as *current representatives of future payoffs* and thus impart greater motivational force to the latter. "If the psychological reward mechanism is constrained to emphasize rewards in the present moment, the simplest counter to a [short-term] reward from cheating is to have a current feeling that tugs in the opposite direction."⁵ I will return to Becker's analysis of parentally induced guilt.

The addiction example belongs to case (2). I return to that case below. Here, let me simply observe that it is doubly misleading—not only for the general reasons given above, but also because it involves a utility-reducing preference change. The religion example also belongs to case (2)—at least I do not expect that Becker would claim that people choose religion for the purpose of inducing a low rate of time discounting. Moreover, I cannot see why the prospect of an attractive afterlife would lower the rate of time discounting, thus making the afterlife even more attractive. This is the converse of the drug example: an activity

⁵ Robert H. Frank, *Passions Within Reason: The Strategic Role of the Emotions* 82 (Norton 1988).

that was chosen because of low discounting of the future then induces an even lower rate and therefore an increased level of the activity. What's the mechanism? In fact, a few sentences further down Becker suggests an oppositely directed causal chain: a person who does not take drugs and therefore discounts the future at a low rate is more likely to develop a belief in the afterlife (p 11).

The essay on norms and the formation of preferences is entirely speculative and, to me at least, totally unconvincing. Becker suggests that the upper class will inculcate religious beliefs in the lower classes as an alternative to buying protection against the predatory behavior of the latter (p 229). To allow themselves to become indoctrinated, the lower classes must receive some form of compensation. Although Becker does not explain what forms this could take, he observes that in order to prevent free riding the compensation would have to be produced jointly with the belief-inculcation. Thus the rich could subsidize the building of churches and the payment of clergy, while also offering (say) cheap day care for regular churchgoers. It would seem to follow from Becker's analysis—although he does not draw this implication—that compensation would only be necessary in the start-up phase. Once the poor are “hooked” on religion, the compensation can be withdrawn, because by now churchgoing is supported by social norms among the poor. These norms do not simply tell you to go to church and to behave in certain ways (the ways desired by the rich in the first place), but also to punish those of your fellow-poor who do not follow the norms.

I find this analysis intrinsically implausible and devoid of empirical support. Had Becker looked at the historical literature, such as the chapter on “The Transforming Power of the Cross” in E.P. Thompson's *The Making of the English Working Class*,⁶ he would have found that for religious indoctrination to work the indoctrinators have to believe in the religion themselves.⁷ Self-consciously manipulative attempts to inculcate religious and political ideologies invariably fail. Becker might respond that for his purposes he only needs to assume the existence of some preachers who already believe in the religion. The rich could then subsidize them in secret, on the condition that the preachers also offer the congregation the selective benefits needed to draw ini-

⁶ E.P. Thompson, *The Making of the English Working Class* 350-400 (Pantheon 1963).

⁷ Jon Elster, *Sour Grapes: Studies in the Subversion of Rationality* 116-17 (Cambridge 1983).

tial non-believers into the churches, to get them hooked. This would be a sheer fantasy, however—a conspiratorial theory unsupported by evidence.

III. THE ECONOMIC ROLE OF EMOTIONS

Although Becker has never addressed the impact of emotions on behavior in a systematic way, several of the essays collected here touch on this issue. In his Nobel Prize Lecture he discusses the interaction of love and guilt in relations between the generations (pp 139-61). In his 1974 paper, "A Theory of Social Interactions" (pp 162-94), he briefly touches on darker emotions such as envy and hatred. In a previously unpublished essay on "Spouses and Beggars" (pp 231-37) he discusses how the emotions of guilt and love may guide search and avoidance behavior. For reasons of space, I consider only the first of these analyses.

If parents love their children, they want them to be well off; hence they will invest in their education. (As we have seen, doing so may raise their human capital as well as lower their rate of time-discounting.) At the same time, they want to be well-off themselves in their old age. They can achieve this end by reducing the amount of bequests they leave to their children, or by investing in actions that induce guilt in the children, so that they will take care of their parents when they grow old. Because they love their children ("although the analysis is easily generalized to include sadists," as Becker asserts on p 157), the parents suffer when their children feel guilty. They also suffer when the children, to relieve their guilt, transfer income to the parents and thereby make themselves worse off. Given these various interconnections, optimal investments by parents in the education and guilt of their children, as well as optimal bequests, are then determined by the appropriate marginal balancing.

The "investment in guilt" sounds puzzling. Although Becker does not specify how it works, it could be spelled out as follows. In raising children, example tends to work better than prescription or manipulation. "Do as I say, not as I do" is notoriously ineffective. To ensure that their children will feel guilty enough to support them, parents may have to incur the cost of supporting their own parents. Yet what is missing in this analysis is that children also feel love for their parents, not only guilt when they fail to support them. (In fact, one reason they love their parents may be that they observe how loving the latter are towards *their* parents.) There is an unjustified asymmetry in assuming that parents transfer income to the children because they love them and want them to be better off, whereas children transfer income

to their parents only to reduce their own guilt. Why assume that what matters for the children is the amount they transfer to their parents rather than the post-transfer income of the parents? I think many children support their parents because they love them. Moreover, I do not think this love is a result of any previous parental investment in filial love. Were Becker to make that argument, we would have to ask him whether the parents' love for their children could not also be result of the children investing in parental love (by "playing cute" and so forth).

Becker's assumptions and arguments here belong, in my opinion, to what I called the category of the "frankly weird." The analogy to the creation of guilt among employees (p 153), for instance, suggests a somewhat peculiar image of family life. Also, if the instillation of guilt were motivated mainly by a desire to manipulate, no one would feel guilty. (Compare the argument about religion above.) Moreover, parental investment in guilt might not be rational at all, if, as is plausible, the guilt is largely an effect of social norms to the maintenance of which any given parent can only make a tiny contribution. And so on. In general, as I said, Becker wants to be judged on the testable implications of his assumptions rather than on their intrinsic plausibility. In this particular case, however, no such implications are offered and tested. Becker has earned the right to engage in idle speculation, but that is what this is.

IV. THE SPECIAL CASE OF ADDICTION

Becker's work on rational addiction is much more sustained and probing. Although I disagree sharply with much of it, it has raised the level of discussion enormously. Before Becker, most explanations of addiction did not involve choice at all, much less rational choice. By arguing that addiction is a form of rational behavior, Becker offers other scholars the choice between agreeing with him or trying to identify *exactly* where he goes wrong. Whatever option we take (I'm going to take the second), our understanding of addiction will be sharpened and focused. In this section I shall argue in quite general terms for the irrationality of addictive behavior, but also address Becker's model more directly. As I have no competence to address the claim that it is supported by data on cigarette consumption (pp 92-110), I shall rely on conceptual arguments and some stylized empirical observations.

The issue of rationality and addiction can be broken down into two questions. First, do (full-blown) addicts behave rationally? If that question is answered in the positive, Becker will

have proved his case. Second, even if the first question is answered negatively, could the choice of an addictive career be rational? To answer this question in the affirmative we would have to show that at the outset of their career addicts have rational beliefs about what addiction will do for their capacity to act rationally. Comparing drug-free consumption stream A, consumption stream B as a rational addict, and stream C as an irrational addict, they might decide that even if they would prefer the (unattainable) stream B to stream C, they nevertheless prefer stream C to stream A. In that case, too, Becker would be vindicated. I shall argue, however, that the answers to both questions are negative.

There are many varieties of addiction. One distinction is between chemical and behavioral forms of addiction, instances of the latter being gambling and overeating. Another relates to the strength of euphoria (in consumption) and dysphoria (in withdrawal), ranging from the weak effects of coffee to the very strong effects of crack. A further distinction relates to the capacity of the drug to alter one's thoughts and moods. Whereas nicotine and coffee enhance cognitive functioning, other drugs undermine it; moreover, alcohol at least has a clear disinhibiting effect. At this stage in the argument, let me focus on crack, the most potent drug in widespread use.

There are two ways of thinking about what crack does to the nervous system. On the one hand, it obviously changes the reward parameters. By all accounts, consumption of crack induces extreme euphoria and, although there are no observable signs of withdrawal, ceasing to consume induces extreme subjective dysphoria. The extreme behavior of crack addicts could very well be seen as rational behavior in the face of these extreme parameter values. On the other hand, one might argue, along the lines of George Loewenstein's recent work on "visceral" motivations, that crack undermines the capacity for rational decision making.⁸ Cognition is subverted, by wishful thinking. In extreme cases, any consequences beyond the present moment are disregarded. Decision making is also subverted, by weakness of will. Cue-dependence, which I mentioned earlier, may illustrate this phenomenon.

Becker acknowledges that drug consumption may increase the rate of time discounting. "A habit may be raised into an addiction by exposure to the habit itself. Certain habits, like drug

⁸ George Loewenstein, *Out of Control: Visceral Influences on Behavior*, 65 *Organiz Behav & Hum Dec Proc* 272, 272 (1996).

use and heavy drinking, may reduce the attention to future consequences—there is no reason to assume discount rates on the future are just given and fixed” (p 120). For Becker, this is not itself an irrational phenomenon, any more than a lowering of discount rates because of exposure to religion would be irrational. Note, however, that Becker tacitly assumes that the addict’s *awareness* of the future consequences is not impaired—it is simply that they are given less weight in the utility function. *But how can he tell the difference?* How can Becker tell that the effect is motivational rather than cognitive? To be sure, by stipulating that the drug works on the discounting factor and not on the beliefs, he can still claim that the addiction is rational, given the rational-choice premise that, unlike beliefs, desires and preferences cannot be assessed as more or less rational. This cannot, however, be a sufficient reason for making the stipulation. What we observe is simply that the addict is less swayed by future consequences than he was before he took up the drug.

Turning now to the second question—whether the initial choice of an addictive career is rational—Becker might argue that drug-induced impairments of the capacity to make rational decisions do not affect his thesis as long as they are foreseen. This is the “stream C vs stream B” argument made above. Alternatively, he might argue that even if stream A is actually superior to stream C, choosing addiction might still be rational if the addict, at the outset, had no way of anticipating what addiction would do to him. An ignorant and rational addict might simply lack the information needed to know that he should seek information about the potentially dangerous effects of addictive substances, including their effect on the capacity to make rational decisions.

I do not think either reply would be effective. The first reply is hard to square with the fact that among those who experiment with intravenous cocaine, one-third don’t like it the first time, one-third try it again without developing any problems, and one-third try it again and go on to ruin their lives, through lost jobs, lost families, legal troubles, lost savings, and so on.⁹ If a person were aware of this risk at the outset, could it really be rational to experiment? The second reply runs up against a different objection. In Western societies today, it is widely known among potential consumers that drugs are harmful and that detailed information about the harms is easily available. If they nevertheless decide to experiment with drugs, the cause is often some kind of ir-

⁹ Eliot Gardner, personal communication with the author.

rationality. "It won't happen to me" is one mechanism. "I'll show my parents that I am old enough to make my own decisions" is another. "If I don't, my friends will think I'm a wimp" is a third. (Becker might argue that in the last case we should simply include the costs of shame in the utility function. For reasons that I cannot go into here, I do not think this is how shame affects behavior.)

For those unused to the reasoning of economists, this whole discussion might seem entirely superfluous, and my conclusion so obviously true that no arguments are needed. How can an activity be both rational and self-destructive? This objection misses the point that *the concept of rationality is subjective through and through*. To be rational does not mean that one is invariably successful in realizing one's aims: it means only that one has no reason to think that one should have acted differently, given what one knew (and could have known) at the time.¹⁰ Nor does a rational belief have to be true: it must only be well-grounded in the available information. Nor, finally, should the rationality of a life plan be assessed after the fact or by an external observer: it must be assessed by the agent before the fact. If some individuals have the bad luck to be born with genes or exposed to external influences that make them discount the future heavily, behavior with long-term self-destructive consequences may, *from their perspective*, be their best option. To be sure, addicts have no *reason* to discount the future heavily. The date at which a good becomes available does not in itself constitute a reason for wanting or preferring it, although it may be associated with such reasons. If we disregard the fact that we know *that* but not *when* we shall die, or the fact that we will enjoy things less as we grow old, any year is as good as any other. Yet the lack of reasons for discounting the future does not detract from the explanatory power of discounting. To this extent I agree with Becker.

I would question, however, his specific assumption that people discount the future at a constant rate, giving rise to a form of exponential decay. There are alternative assumptions that fit some of the facts better. George Ainslie has argued for many years that organisms, including humans, tend to discount the future at an hyperbolic rate.¹¹ Their behavior is characterized by a preference for the present over the near future that is much stronger than their preference for the near future over the dis-

¹⁰ I simplify. For a fuller exposition, see Jon Elster, *Solomonic Judgments: Studies in the Limitations of Rationality* ch 1 (Cambridge 1989).

¹¹ See notably George Ainslie, *Picoeconomics: The Strategic Interaction of Successive Motivational States within the Person* (Cambridge 1992).

tant future. Because the distant future eventually turns into the near future and the near future into the present, this structure of discounting makes for inconsistent behavior. There is by now considerable evidence that not only pigeons and rats but people as well exhibit this kind of behavior.

When people notice this inconsistency, they can and do use a number of *precommitment devices* to force themselves to stick to the behavior they believe is in their long-term interest. They can avoid exposure to cues that would trigger the craving. They can put photographs of cancerous lungs on the walls of their office and home. They can raise the cost of smoking by telling their friends that they are going to quit. They can raise the cost of drinking by taking Antabuse, and even, as in Poland, getting it implanted in their body. (This raises the cost of drinking sharply: if they drink, they die.) They can vote for shorter opening hours for liquor retail stores. They can entrust their money to others to prevent themselves from spending it on addictive substances or behaviors, adding, "And don't give it to me even if I ask." They can write self-incriminating letters to be opened in case their urine tests positive. None of these behaviors is explicable on Becker's model.

As he notes (pp 21-22), addicts might wish they were not addicted, but because the costs of transition to the addiction-free state are so high they will not do anything about it. Some of the techniques for quitting may be compatible with his model, e.g. nicotine patches to reduce cigarette craving or pills to reduce hunger pangs. By attenuating withdrawal symptoms, these techniques reduce the marginal utility of consuming the addictive substance. The techniques I mentioned above are, however, uniformly inconsistent with his model. Moreover, they are so widely used that Becker's lack of attention to them amounts to *disregarding a major empirical objection* to his model. He might reply that many who use these techniques fail in their attempts to quit. Yet many relapses are due to cue-elicited cravings or withdrawal symptoms, phenomena which also have no place in his model. Also, although most attempts by cigarette smokers to quit end in failure, about half of those who ever smoked become ex-smokers eventually.

I do not deny that there are cases in which addiction is a form of rational self-medication. An example may be taken from a letter by D.J. Jaffe to the *New York Times* of August 26, 1996:

[I]ndividuals with schizophrenia who smoke do not do so because they have 'poor judgment' or because they have been encouraged by institutional rules. They smoke because nico-

tine stimulates the subcortical brain reward mechanisms and the prefrontal cortex, which may be hypoactive in schizophrenia. In addition, for individuals with schizophrenia, nicotine may also improve concentration and reduce anxiety, positive and negative symptoms and symptoms of movement disorder. Individuals with schizophrenia who smoke are, from where they sit, making what could be considered a very rational decision.¹²

Yet this example is obviously too extreme to support Becker's view. Although bad medical luck (and bad social luck) have a role in explaining why some people end up as addicts, a large part of the explanation lies in their poor choices.

V. BEYOND RATIONAL CHOICE?

The standard models of economic theory assume that economic agents have rational, self-interested motivations. In many cases, Gary Becker has challenged the self-interest assumption, while consistently retaining the rationality assumption. Sometimes this strategy is illuminating, notably in the economics of discrimination and the economic analysis of the family. At other times, however, this *incomplete liberation* from the standard model produces incongruous results. Although Becker now allows a role for addiction, emotions, and social norms in economic analysis, they remain very closely tied to the rationality assumption, in two distinct ways. On the one hand, he assumes that addiction and emotions matter only as sources of utility and disutility: they do not affect behavior or cognition directly. I believe casual as well as systematic observation shows that addiction and emotions are capable of short-circuiting rational choice and rational belief-formation, so as to make people behave against their rational interest. On the other hand, he assumes that emotions and social norms are the result of rational choice, not by the agent—although given what I have said it would not be surprising if Becker were to explore that possibility—but by parents and social superiors. Again, I believe the empirical evidence flatly contradicts the assumption. I wish, therefore, that Becker would entertain the idea that to understand the causes and the consequences of addiction, emotions, and social norms, we need to go beyond rational choice analysis. If and when

¹² D.J. Jaffe, Letter to the Editor, *A Rational Choice*, NY Times A14 (Aug 26, 1996) (paragraph breaks omitted).

Becker takes that step, I am confident that we can expect further illumination as well as exasperation.