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Gary Becker's Impact on Economics and Policy[†]

By EDWARD P. LAZEAR*

It is impossible in a few pages to even touch on the impact Gary Becker had on economics and public policy. Becker was a pioneer whose work spanned many fields, most of which he was responsible for creating. His imagination was limitless, and he applied economics to areas that few would have thought feasible, providing insight, innovation, and reason in every direction he went. Milton Friedman described him as the most important social scientist of the second half of the twentieth century, and the description is not an overstatement. Becker was more than an economist. He was a social thinker who could bring logic to any subject, no matter how unapproachable. It is for that reason that he had such an important impact on public policy.

Becker's seemingly heretical work often reversed stereotypic thoughts and provided approaches to public policy that were not only novel—they were correct. Based on economic theory and empirical analyses that backed it up, Becker provided prescriptions that were both practical and welfare enhancing. Above all, Becker was a scholar in the finest sense of the word, who believed in economics and its power to explain the world. The ultimate economic imperialist, Becker's real-world orientation gave us new ways to think about economics and its application to policy.[1]

*Graduate School of Business and Hoover Institution, Stanford University, 434 Galvez Mall, Stanford, CA 94305 (e-mail: lazear@stanford.edu). This research was supported by the Coulter Faculty Fellowship 2014–2015 from the Stanford Graduate School of Business.

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[1] In 2000, I was asked to write an essay on economic imperialism to appear in the millennium issue of the *Quarterly Journal of Economics*. My immediate thought was that Becker, not I, was the appropriate choice because Becker was the ultimate economic imperialist. But so much of the essay ended up being about Becker and based on his work that it was probably more appropriate for another to write it (see Lazear 2000).

I. The Method

Becker was a scientist and used the scientific method, which means that he proposed clear and unambiguous hypotheses that were testable and falsifiable in the sense of Popper (1934). He was the purest in following the approach that distinguishes economics from other social sciences. The three themes that are fundamental in economics are fundamental in Becker's work. First, he assumed that individuals engage in maximizing, rational behavior. Second, he incorporated a well-defined concept of equilibrium as part of his theory. Third, he placed a heavy emphasis on efficiency.

The emphasis on maximization is important and allowed Becker to make predictions in new situations, the subject of most of his work. When individuals are assumed to maximize something, a well-defined and predictable behavioral response to any stimulus can be derived.

Second, like physical scientists, Becker made equilibrium a core part of his theories. Often, this is in the context of a market, but in some of his work, like that on the family, the markets were non-standard.

Third, Becker emphasized efficiency in almost all of his work. Efficiency serves two purposes, one positive and one normative. When Becker modeled a situation, he would not be content to conclude that a resulting equilibrium was inefficient. Instead, he thought harder about his model, asking whether there were trades that could have occurred that were implicitly or explicitly ruled out of the model. As a result, this lead him to ask what market or other institutions could arise to remedy the situation. Becker's emphasis on efficiency also permitted him to make clear, unambiguous policy statements. The notion of welfare enhancing policies is well-defined when efficiency is the backdrop. At the same time, Becker was concerned with distribution, and this affected many of his views on particular policies, for example, no fault divorce.

A final important theme of Becker's work is that incentives are most important in predicting behavior. Rather than resorting to discussions of tastes or inherent difference between individuals, Becker looked for differences in prices that would affect economic agents' behavior. Sometimes the prices were subtle or implicit, but it was differences in incentives, not individuals, that was at the heart of his explanations.

In what follows, a few of Becker's most policy-relevant contributions are discussed.

II. The Economics of Discrimination

Becker's doctoral dissertation at the University of Chicago was on discrimination, controversial because it analyzed an important moral issue in hard-nosed cost-benefit and utility maximization terms. The theory not only proved to have empirical validity, but it was rich in policy implications. Becker's goal was to understand how discrimination would affect the well-being of its victims and to provide testable implications about when discrimination's effects would be most pernicious (Becker 1957). Becker reasoned that in labor markets, disfavored individuals worked first for those firms that had the least distaste for them. This implied that when there were large numbers of people in the disfavored group, the wages of that group would be much below that of the favored group because they would be forced to work even for those who had strong distastes for their kind. Thus, African Americans, who are a large group, suffer more from discrimination than Jews, who are a much smaller group, even when comparing individuals with the same education and skills, which, as well as other implications, holds empirically.

A direct implication of the theory is that firms that discriminate should have lower profits because discriminators, in accommodating their tastes, pass up opportunities to hire inexpensive qualified labor. The same is true in housing markets. It has been argued that housing markets suffer from redlining, where certain groups find it difficult to obtain mortgages. Becker's theory implies that redliners should receive lower returns on their loans because they pass up valuable opportunities to lend. If, on the other hand, lenders are issuing loans based on credit worthiness alone, then no such pattern should exist. The Becker approach provides a clear rule on which to base policy and court rulings. Other things equal, discriminating banks should have lower returns, at least on the transactions on which they discriminate.[2]

III. Fertility and Demography

In 1960, Becker published "An Economic Analysis of Fertility." A few years later, he published "A Theory of the Allocation of Time." The combination of the two papers yielded one of his most important policy implications.

Becker observed that in the nineteenth century, high income families were larger than low income families, but by the latter part of the twentieth century, the pattern had been reversed, with the poor having the largest families. Becker reasoned that raising a child combined both goods and time, primarily time of the mother. The time cost varied with the mother's wage rate. The "cost of a child" was lower to low wage women because the value of a low wage woman's time in the labor market was lower than that of a high wage woman. As a result, he postulated that families where the mother has low wages are likely to be larger than families with high wage mothers. This implication has been verified both cross-sectionally and over time. Today, immigrant families with low wage women are large whereas the families of professional women are small. Female professionals have fewer children because they cannot "afford" to take time off to raise a large number of children, not because they love children less than their poorer counterparts. The cost of taking time off work is higher for professional women than for low wage women and as a result, they work more and spend less time in the home raising children. In the nineteenth century, the pattern was the reverse because women with rich husbands did not work and the value of their time outside the home was low. Only income effects were operating. Again, Becker's emphasis was on prices and income. He avoided resorting to stories about taste and cultural differences between groups and instead focused on measurable economic variables.

The Becker theory of fertility gives the prescription that the most effective way to limit

[2]These implications and others were examined in alternative theoretical frameworks by Phelps (1972) and Arrow (1971), whose analyses take off from Becker's work.

population size is to educate girls so that they will have high wages in adulthood. The increased time price associated with their higher wages induces them to have fewer children. This policy has become a widely accepted part of economic development.[3]

IV. Crime and Deterrence

Becker's (1968) "Crime and Punishment," is among the best examples of his style, which emphasizes prices and incentives rather than tastes. Rather than assuming that there were honest people and dishonest ones, Becker thought of crime in rational terms, arguing that potential criminals would trade off the gains from crime against the expected costs. Gains might be higher in areas with high income inequality because the amount that could be taken would be related to differences in income between the perpetrators and their victims. Most important, though, was the theory of deterrence was enormously rich in policy implications.[4]

There are two components of cost that affect the willingness to undertake crime. The first is the standard resource and labor cost of engaging in the activity itself. The second is the costs associated with the expected penalty, which can be thought of as the product of the fine, or more generally, the pain associated with punishment, and the probability of detection. The potential criminal will engage in the crime if the expected benefit is less than the expected fine, or if:

$$\text{Expected benefit} < (\text{Probability of Detection})\,(\text{Penalty}). \tag{1}$$

This simple inequality is rich in implications. First, it implies as a positive matter, that higher fines should result in less crime. Second, and more normatively, because detection is costly, using higher fines and fewer resources to catch criminals may be efficient. Third, and as a corollary, the theory explains why it may be rational to make examples of criminals. This is true both at the civil level and also in the context of the firm. For example, a worker may be fired for surfing the web on the job, even though the damage associated with web surfing is minor, but difficult to detect. Fourth, the expected fine should be set equal to the social cost of the crime. If this is done, the "criminal," will engage in the activity only when socially efficient.

Becker was aware of the limitations of this logic. Cruel and unusual punishment is unconstitutional and may prevent using extreme punishment that is appropriate in a probabilistic sense. There are a number of reasons why constitutional restrictions of this sort make sense. An enormous literature on crime and deterrence followed that explored some refinements to the theory. The two most obvious qualifications are that mistakes may be made and that marginal extreme punishments might distort marginal incentives.

Society has serious misgivings about punishing the innocent, especially when the punishment is severe. Theory also implies that the poorer the correlation between punishment and criminal activity, the weaker the incentives. Random punishments, no matter how severe, deter nothing. Second, extreme punishments for lesser crimes distort marginal deterrence for greater crimes. Consider, for example, imposing the death penalty for burglary. When a burglar is caught, he may decide to shoot the policeman rather than allowing himself to be taken prisoner because the marginal punishment associated with the shooting is zero.

V. Human Capital

Becker's most important work was developing the theory of human capital (Becker 1975). His theory is the workhorse of labor economics, the economics of education, and health economics.[5] Becker's work has become so widely accepted that it is frequently incorporated without citation.

The early theory was applied primarily to two issues—formal schooling and on-the-job training.[6] Becker, more than any other economist,

[3] Early work on the trade-off between child quantity and quality by Becker himself and Becker and Lewis (1973) was advanced by the important work of Willis (1973).

[4] The work spawned other controversial research on the deterrent effects of punishment. One early one on the deterrent effect of capital punishment that received tremendous attention was Ehrlich (1975).

[5] See the early work by Grossman (1972).

[6] Mincer's work, especially Mincer (1962) and Mincer (1974), were most important in adding additional empirical insight and evidence to Becker's human capital theory.

made the economics community think of education as a tool for wage enhancement, and as a consequence, linked education directly to living standards. At first, Becker's theories were resisted by the educational establishment, which thought that treating education as a mere income-producer belittled education and those engaged in it. That view changed as the evidence mounted that the single most important factor in raising income was education. This not only illustrated the importance and relevance of the theory, but made education and teachers all the more important to society. Today, almost every discussion of income inequality gives a prominent, if not the major role, to education and its provision to various members of society.[7]

The formalization of human capital theory allowed Becker to ask whether there was over- or under-provision of education. In early work,[8] he examines rates of return to education and compared them to rates on other investments. This opened up an area of research that targeted directly whether the state should be engaged in subsidization of education, and if so, for which members of society and at what level of schooling.

Indeed, this discussion was linked later to his work on the family. Much of the need for state intervention in education[9] depends on how much of the child's well-being is internalized by the parent. If parents are sufficiently altruistic, then only limited subsidization and state intervention is needed. Selfish parents, however, may under-educate their children if they cannot contract (formally or implicitly) with the child to be repaid for their investments when the child matures. Child labor laws may prevent parents from selfishly forcing their children to work.

Becker's theory of human capital, particularly the firm-specific component, has implications for labor market turnover and earning loss.[10] The theory provides a way to think about whether job-to-job movement is helpful or harmful, and whether the state should compensate workers who suffer accidental job loss.

[7] Eric Hanushek, who has been a leader in research on the economics of education, had early work on the trade-off between quantity and quality of children, a major component of quality being education (see Hanushek 1992).

[8] Becker (1960b)

[9] This is a question of state payment for education, not whether schools should be run by the state. Vouchers are one alternative if families under-provide education to their children (see Lazear 1983).

[10] Important early contributions to the literature on worker turnover that was based on Becker's theory of specific human capital include Parsons (1972) and Jovanovic (1979).

VI. The Family

Becker's work on the family was revolutionary, innovative, and brimming with policy implications. He considered marriage and divorce and whether no-fault divorce laws would alter the number of divorces (Becker, Landes, and Michael 1977). He considered polygamy and polyandry and discussed who would favor laws prohibiting these institutions. He also analyzed, both in his academic work, and in his writing for the more general public, whether changes in marital property rights, both during marriage and on dissolution, would alter the allocation of resources between men and women.

Becker analyzed bequests and inter vivos transfers and the interaction between private payments and those arranged by the state, the most important of which is Social Security. Even in his most recent papers,[11] Becker was concerned about what families do to assist in efficient intergenerational transfers that occur in the shadow of state intervention. The provision of old-age support by the state may be offset by reductions in support from children, who feel altruism for their parents or even guilt when not supporting them. This may also affect investments by parents in their children when the children are young because one consequence of those investments may affect the amount that grown children will contribute to parental support.[12]

VII. Conclusion

Gary Becker was a giant who used his genius to make sense of issues that had formerly resisted analysis. He integrated economics into more general social science and demonstrated that analytic thinking and economic analysis were the social scientist's most powerful tools. Becker went beyond scholarship, using his ideas and knowledge to inform policy. As a result, his ideas will be influential for generations.

[11] Becker, Murphy, and Spenkuch (2015).

[12] Much of the work on charity and on public giving finds its roots in Becker's notions of altruism and how that force affects behavior (see, for example, Andreoni 1989).

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