Private Notes For:
The Impact of Gary Becker’s Work

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A Celebration of the Life and Work of Gary S. Becker
The University of Chicago
October 31, 2014
This draft, November 6, 2014 2:00pm

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Audience background: Approx. 500 registrants
The composition of the audience is comprised of 50% University of Chicago faculty and students (approximately n=180). About 10% of the 180 are students and another 10% are non-academics. The audience composition will be similar at both. The Mandel Hall audience will be slightly broader (likely more students)
The Impact of Gary Becker’s Work

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Becker’s Contributions

Impacts of his work

Today I have been given a formidable task — to summarize in a short period of time the multiple impacts of Gary Becker’s work.

Formidable task for many reasons:

(a) Gary Becker left a massive, tightly interconnected body of work.
   – Not an easy task to summarize all of his contributions and their development in an hour – even just the major contributions.

(b) Gary Becker had many interests and ranged widely and deeply across many fields within and beyond economics. Each of us here today has his/her favorite Gary Becker contributions and know them best. Inevitably, whatever I say can only be a partial and incomplete account of his work as a creative scholar who reshaped social science, and who has had and will continue to have an impact on economic policy. Covering the entire range of his work, I am inevitably going to omit some important contributions. I am bound to offend and I apologize in advance for doing so.
How do you measure the impact of such a creative scholar?

- One way to measure the impact of his work is to look around you and appreciate the high quality of the people assembled here today to honor him.

- A more traditional way to discuss the work of a distinguished scholar is to list his external recognitions and his honors. For Becker this is an easy but time-consuming task – you all know that he was a Nobel Prize winner, a Medal of Science recipient and a recipient of the Presidential Medal of Freedom. He was honored by many academies and organizations around the world.
And these are just a few of his many honors.
• A third measure is the Accolades of Teachers and Colleagues

“Becker is the best student I ever had.”
– reference letter on Becker’s application to Chicago, 1951

Jacob Viner

• Viner – A major figure in Chicago economics who later in life went to Princeton and taught Becker as an undergrad.

• This was high praise.

• Viner had taught many leading economists (Friedman, Stigler, Samuelson).
“Becker has a brilliant, analytical mind; great originality; knowledge of the history of economic thought and respect for its importance; a real feeling for the interrelationships between economic and political issues; and a profound understanding of both the operation of a price system and its importance as a protection of individual liberty.”

(1953)

- The characteristics described by Friedman were true of Gary Becker over his lifetime.
• Writing about the same time, the chair of his Ph.D. committee, and himself a distinguished and pioneering economist who wrote an important paper with Becker – of which there is more later–

“It is hard to write to you about Mr. Becker without sounding overenthusiastic. He is an exceedingly intelligent and imaginative young man and certainly, I think, will become really outstanding in the economics profession. He is honest in all matters, has the highest character, and I am confident, is exceedingly trustworthy. I recommend him to you without any reservations.” – H. Gregg Lewis

• Traits of character that lasted a lifetime
• It is useful to ask how his teachers viewed him 50 years later.

• 50 years later, Friedman only strengthened his praise

“Gary Becker was the most influential social scientist of the past half century.” – Milton Friedman, 2001
Citation Count?

• A citation count is another traditional measure. Becker was (and remains) one of the most highly cited economists of the last half century. Even in death, citations to his work are high. But this too misses the substance of the man.

• All such summaries are inevitably superficial. They focus on the exterior and miss the content and true contribution of his work and its true impact.

• Instead, today I will attempt to assess his work using Gary Becker’s own standards.

“It [economics] is judged ultimately by how well it helps us understand the world, and how well we can help improve it.” – Gary Becker
Consider His Contributions to:

A. Thought – the world of ideas – the corpus of the body of economics and social science more generally.

B. Contributions to Public Policy.

• For Becker, and for the Chicago of his era, the two worlds were not distinct. Economics was all about understanding the world and as he often said—quoting from Milton Friedman—it was not a game played only for the pleasure of clever people to show how smart they are.

• As Friedman noted, even as a graduate student, Gary Becker had deep knowledge of the interplay between economic and political issues.

• Becker was on record deploring an economics detached from real world problems, and his work addressed real world problems.

Will Also Discuss

C. His impact on the vitality and continuity of both economics at Chicago and the “Chicago School” – two different but highly related entities.

D. How he maintained and extended this tradition and created a new body of ideas that enriched this tradition.

E. Gary Becker as an example of how to do creative economics that changes the world.
A Brief Biography of Becker

- Becker was a brilliant student and scholar. Born to middle-class parents, raised in Brooklyn, and educated in NYC public schools, Princeton, and Chicago, Becker developed rapidly.

- He graduated Princeton in 3 years where he worked with Jacob Viner and coauthored a paper with William Baumol that showed a deep understanding of the history of thought regarding classical monetary theory.

- This was a trait that characterized all his work. Throughout his lifetime, he grounded his papers in the history of economic thought. He placed his work in context and presented a statement of the continuity and originality of his work.
Becker at Princeton
Becker finished his Ph.D. thesis in 3 years, stayed on the faculty at Chicago for 3 years, and then went off to Columbia and the NBER, then headquartered in New York.

![Becker as a Grad Student at Chicago](image)

**Independence**

Even though Becker was offered a position at Chicago, he left to make his own mark – to be his own man – and showed early on the independence and pluck that carried through his lifetime.
At Columbia, he was rapidly promoted to tenure and a chaired professorship, and along with Jacob Mincer, created the legendary Columbia Labor Economics Workshop of which there is more later.

Many of his students are here today. I joined this workshop in the aftermath of Gary Becker and was impressed by the passion, enthusiasm, and creativity of the participants. Their sense of solidarity in defense of Becker against general hostility toward him at the time in the economics profession suggested to me that this was what early Christians were like – except that most of the participants in the workshop were Jewish!
• Moved Back to Chicago at age 40

• University Professor 1970-2014

• Counting all of his time as a graduate student, assistant professor, and university professor, he spent 50 years at Chicago.

• Although he was not Chicago-born, he was Chicago-bred.

Becker on Leave at Chicago (1969)
Heir apparent to leadership of economics at Chicago School – Iconic photo

The Long and Short of the Chicago School: Early 1970s
Friedman & Stigler

• Waiting in the wings at Chicago
Chicago 1972 Poster (After “The School of Athens” by Raphael)

- By Roger Vaughn, a graduate student at that time
- Explain who is in the picture (Agnew and Nixon)
- Picture shows 5 members of faculty who would eventually win Nobel Prizes
- His wait in the wings was not long
- Quoting from Shakespeare’s *Julius Caesar*: “Yon Cassius has a lean and hungry look. He thinks too much. Such men are dangerous.”
Place him in context

- Gary Becker came of age in the ‘50s and ‘60s, at a time when Keynesian models were in the forefront of professional thinking in economics.

- Incentives and prices were largely ignored outside of Chicago and its circle.

- Chicago tradition (back to Simons, Knight, Viner, and later Friedman, Schultz, Stigler) emphasized the strong role of incentives and the need to respect them in devising policies and understanding behavior.

- The Keynesian multiplier promised a free lunch for black box reasons.

- Kennedy tax cut (1962) viewed as a triumph.

- A great example of Keynesian thinking is the Brookings model of the economy (1965). It was a complex monster of a model with many sectors. It barely considered the labor market or the household and generally lacked any role for prices.

- Labor supply not studied.

- Demography as a field lacked a coherent discussion of incentives.
Gary Becker’s Work

Becker in Context: Ran Against the Grain

Developments in Economics 1950–2014

- The field of economics was very limited in scope.
- And even in the fields studied, role of incentives neglected.
- In the economics he entered in the 1950s, representative agent models were standard in economics in the limited part of economics that considered incentives.
- Heterogeneity and diversity were ignored.
Becker as an Innovative Force in the World of Ideas

• Any adequate account of Becker’s many contributions to knowledge has to chart his remarkable evolution of thought.

• We all evolve in our thinking.

• But what is notable about Gary Becker was how as he evolved in his thinking, he took the field of economics and later many other social sciences with him and created a body of work that now shapes thinking about many social issues.

• Becker had a Midas touch.

• When Becker touched a subject, it became a suitable topic for economists to study.

• He would walk on forbidden grounds and turn them into pathways of knowledge for those who followed.
Examples

Many possible examples: today I will focus on 4 and try to establish interconnection

(a) Economics of discrimination

(b) Human capital – Becker gave us tools and evidence on structure that was a coherent theory of the growth of earnings, human capital (personal and firm), economics of slavery, inequality, job turnover, growth accounting.

(c) The economics of the family: fertility, marriage, household division of labor, and intergenerational mobility

(d) The study of preferences fascinated him throughout his lifetime. It is interesting to see how his views on preferences changed.

(e) Three of these topics were a cornerstone of his life’s work.

(f) On all of these topics he contributed to economic science by developing frameworks for data collection and analysis that had an enormous impact on empirical social science.
- Becker Agoraeus refers to Becker and his influence on the market (Agora).

- At the **foundation** of all of his work and the Chicago economics that preceded him was a belief in the power of incentives – broadly defined and not just monetary incentives backed up by empirical evidence supporting this belief.
Becker’s Approach to Economics and Social Science

(a) **Used a core set of organizing principles and applied them everywhere**

- Got to the essence of problems
- Gave insightful prototypical examples that illuminated subjects studied – examples:
  (i) Rotten Kid Theorem
  (ii) Marital Sorting (best with best)
  (iii) Market discrimination set by marginal transaction

**His organizing principles**

- People pursue self-interest (broadly defined and increasingly broadly defined over his lifetime)
- Stable preferences
- Equilibrium in market

- He followed the Chicago tradition by doing Marshallian partial equilibrium analyses within markets where actors on agents and their interactions were readily identified.
(b) Applied Friedman’s methodology of positive economics: success of theory judged not in predicting outcomes on one data set but in its power to explain other data and predict additional phenomena.

- Looked at **multiple implications** of his theories (human capital) on different data sets and new problems
- Judged a theory by the range of its implications
- Not one fact or one study

(c) Like most scientists he hated tautological “explanations” like “taste change” or preference shocks as explanations (technical change, preference shocks)

- Always sought to understand phenomena from deeper organizing principles

(d) Always stayed rooted in economics.

- Carefully delineated his intellectual roots and how he departed from them.
- Went into other fields but was never absorbed by them and he showed how economics would inform the questions studied there.
- In doing so he emboldened many others to venture on to new grounds.

(e) Had a perspective rooted deeply in the history of economic thought.

- In many of his papers, he was talking not just to his peers, but to generations past. He was speaking to past great economists and updating and expanding their work.
• His first paper – on Classical Monetary Theory with Baumol – published at age 22 – was doctrinal in nature.
• He never lost that perspective throughout his lifetime.
Becker’s Characteristics

• Highly original, constantly extended the frontier. (Did not write book reviews or polemics). He created new tools and applied them.

• His career showed continuities but always growth.

• Constantly sought new challenges.

• Each step led to new ideas and further steps.

• He listened and learned from criticisms and from failures.

• Showed openness to the ideas of others – even his harshest critics – persistence and resilience.

• He did so in a firm but polite way. Set a standard of gentility and respect. Stood out in a harsh place (Chicago Economics) that could often be blunt and cutting.

• He developed essential ideas in each of the topics he addressed and gave prototypical, insightful examples that motivated the literature.

• Created a deeply interconnected system of ideas that he continued to perfect to the very end of his life.

• His life’s work unfolds like a symphony – new themes introduced and blended with the old themes—but the symphony grew in richness and strength.
Staying the Course

- Becker was not a dilettante.
- Even though he was a quick study, focused on problems for months and years and kept refining his thinking and challenging it.
- Like other great scientists, these topics never left his mind even after he provisionally solved them and was acclaimed for doing so because he knew that all answers to all questions are only provisional hypotheses.

Ventured into Uncharted Territory

- Often the topics he chose were highly controversial.
- They were off limits to economists when he initially ventured into them.
- He was viewed as a crackpot for studying them. Initially paid the price (e.g., babies as consumer durables).
- Marriage, fertility, education, formation of preferences, drug addiction, sales of body organs.
- He persevered against tremendous hostility –
  (a) Story of his job market interview at MIT where Samuelson and Solow openly derided him for his work on discrimination.
  (b) Samuelson’s description of his work.
Praising Easterlin’s relative income hypothesis, Samuelson goes on to criticize Becker and T.W. Schultz...

“The Easterlin theory is all the more valuable for its scarcity among economic theories, standing out in welcome relief from the rather sterile verbalizations by which economists have tended to describe fertility decisions in terms of the jargon of indifference curves, thereby tending to intimidate non-economists who have not mis-spent their youth in mastering the intricacies of modern utility theory.”’ – Paul Samuelson (1978)

- He cites Schultz and Becker in a footnote.

(From Robert Pollak, Gary Becker’s Contributions to Family and Household Economics, 2002)

- He reacted with dignity to these and other attempts at ridicule (e.g., Alan Blinder’s Economics of Brushing Teeth.)

- Sincerity was a trait he exuded and valued in others.

- Becker had contempt for scholars more interested in publishing papers than understanding problems.

- He had contempt for careerists who sought headlines and not substance (“Top 5” journals) and looked to make a splash with journalists.

- This in fact was a characteristic of Chicago Economics.

- Ted Schultz, another Nobel Prize winner and Becker’s colleague for many years, described Becker and Zvi Griliches as people who “stayed with a problem.”
One Measure: Before and After Becker
– A series of event studies.

Economics of Discrimination: Ph.D. Thesis

- Why did he choose this topic? Had he personally experienced discrimination? Perhaps.

- He was among the first cohort of Jewish-Americans granted admission and acceptance in Ivy League.

- Chicago benefited from anti-semitism in welcoming top students and faculty of Jewish origin at a time when this was rare.

- Whatever the motivation, his thesis was a remarkable feat.
Recast Discussion of the Problem, Which Up to That Point Was the Sole Province of Psychologists and Sociologists:
(Gordon Allport: Nature of Discrimination)

- The claim made by many was that capitalists benefited from discrimination.
- By exploiting minorities, majorities benefited.
- Becker examined this notion in depth.

**Key Ideas in Becker’s work on Discrimination**

(a) Showed the interplay of preferences and markets.

(b) Key idea – distribution of tastes for discrimination among firms

- **Two radical notions:**
  - Utility maximizing firms and heterogeneity among firms in preferences.
  - Both features were radical innovations at the time.

(c) Minorities sorted to firms that had less discriminatory tastes.

(d) Defined Market and Individual Discrimination in an *Empirically Operational Way* — Price people pay for their tastes. Market discrimination was the price paid for being a minority. The discount arose from the marginal transaction in the market.

(e) Contrasted Market Discrimination with Individual Discrimination

Highly relevant for audit pair studies today that sample the average transaction, not the transaction at the margin.
(f) In applications to racial discrimination in the U.S., explained how greater numbers in some regions led Blacks to deal with more discriminatory individuals (at margin they get lower wages)

(g) Showed which groups benefited and which lost from discrimination. The great benefits of trade and the likely costs of withdrawal of groups from society, e.g., as proposed by the Marcus Garvey movement. White capitalists lose; white workers win; black capitalists lose; black workers win.

(h) Fellow employee discrimination and consumer discrimination. Distinguished segregation from discrimination (If fellow employees do not like each other, often sort by race).

(i) Interpreted a wide range of facts with the model. Did original empirical work on the time series of the status of blacks. (A feature of his work that was in the spirit of Friedman’s work on the methodology of positive economics which was being written while he was a graduate student.)
Contributions of the Book:

(1) Pioneered utility maximizing model of firm (prior to Williamson and the Carnegie Behavioral School and Baumol and later work).

(2) Introduced heterogeneous preferences and market sorting and their implications.

(3) Created a framework for thinking about discrimination—implemented and tested (Landes; Ashenfelter; Charles and Guryan)

(4) Did not then look at the origins of preferences.

(5) Showed how discrimination could persist with sufficiently inelastic supply of entrepreneurs while highly original was not one of the pillars of his later work.

(6) While enough to make the reputation of anyone, it’s a minor achievement compared to his later work.

(7) His framework for taste-based discrimination remains the standard today.

After Becker: Phelps–Arrow Statistical Models of Discrimination
Human Capital
• By the middle of the 20th century – U.S. had greatly expanded its educational system.

• Skilled work forces emerging.

• Yet economics was slow to recognize this trend.

• **Human capital – skills embodied in people.**

• Notion goes back in economics to William Petty in 17th century.

• Adam Smith mentions importance of acquired skills in *Wealth of Nations* (even had the view that people were fundamentally equal except for the skills they acquired).
• Alfred Marshall had a brief discussion of the importance of human capital (and he stressed that the greatest part was due to the influence of the mother).

• Lotka; Kuznets (Lotka estimated the value of a life).

• Previous work by Friedman and Kuznets developed rudiments of the idea; computed rates of return to different levels of education (occupations). Introduced notion of general and specific. (Portability of capital across different firms and environments.)

**Classical View of Distribution of Income**

• Three factors – **functional distribution** of income
  Land, labor (unskilled) and capital

• In this limited view, only capital was an acquired factor, although land might be improved.

• Ignored the evidence that skilled labor is the greatest part of a modern nation’s wealth and source of productivity

• Left unanswered – Why did the economy grow?
  Exogenous technical progress (manna from heaven)
  T. W. Schultz view – technical progress was mainly due to increases in stock of human skills (due to education training, health)
Becker

But Becker created the modern field and showed the full range of applications of the theory as ever acknowledging the previous work but then unifying it in a unique way.

- A unified theory of human capital (skills)
  (education, on the job training, broadened to health and other capitals)

- Unified phenomena across multiple domains (labor market, wage differentials, choice of and returns to education, job turnover and theory of quits and layoffs, framework for growth accounting, inequality, wages, Leontief Paradox in trade.) [Capital abundant country like U.S. exported labor intensive goods – no paradox at all – human capital was “labor” ; U.S. was human capital intensive.]

- Developed the economics of investment
  (Rates of return)

- Explained rising wage profiles – costs incurred early and payoffs later. Role of life cycle wage growth.

- Examined both micro and macro determinants of rates of “return”
Frameworks for Measuring Rates of Return

“Mincer Equation”

- Initially used IRR.
- Expanded and extensively applied in Mincer (1974).

\[
\ln y_i = \alpha_i + \rho_i s_i + \phi_i(x_i) \tag{1}
\]

\(\rho_i\): “rate of return to schooling for person i.”

- Ability bias
- Asked a bold policy question – “Is there underinvestment or overinvestment in human capital?” “Should society subsidize schooling and if so, by how much?”
- Question still unanswered today.
- Addressed many relevant policy issues.
Implications for Firms

- Worker-job turnover (Jovanovic) / Theory of quits and layoffs
- Explain turnover patterns and wage growth
- “Hold up” problems arising from firm-specific / worker-specific investments

Inequality

- Personal distribution of earnings.
- Skills and skill premium – a driving force in inequality – a point still not well understood (e.g., Piketty 2014)
- Piketty largely focuses on capital
- Examined sources of differences in rates of return across people
- How to address inequality?
  (Supply of skills)
Good Vs. Bad Inequality

- Basis for understanding rising wage inequality and understanding that some forms of inequality can be beneficial.
- Why? Because they promote acquisition of skills.
- Example of wages in communist China in the 1970s.
- Streetsweepers and nuclear physicists earned the same.
- Skill shortages rampant.
- True of many societies.

Choice of Education

(a) Choice of education and provision of training

(b) Later merged his interest in schooling with family – role of family in producing schooling

Becker was Just Beginning

- This work would have been enough to make the reputation of anyone.
- He published first edition at age 34.
- But there was lots more on his plate.
Fertility, Marriage, & Household Production

a treatise on the family

GARY S. BECKER
Evolution of Becker:
Initially Studied Fertility and Branched Out to Study
the Full Life Cycle

Before Becker:
Malthusian theory: Income ↑ Population ↑ until overpopulation sets in and drives down wages.

- After Becker a much richer understanding of economics of fertility.
- Great example of his evolution and determination to create a satisfactory, internally consistent theory. He persisted in being curious about the topic to the end of his life.
- Up to the end, he was very enthusiastic about the Asian Family Initiative of BFI which will examine causes and consequences of declining fertility all around Asia.
- 1960 paper – stressed income effects (+). (Children a normal good.)
- But the evidence generally showed a negative correlation between Fertility and Family income.
- Explained how negative estimated income effect which was observed could arise. (But only as an omitted variable – people with higher income had greater contraceptive knowledge.)
- Was harshly criticized by many who rejected the notion that babies were like consumer durables.
• A more valuable criticism from James Duesenberry who criticized Becker for not recognizing how the consumption of children to each other and to parents’ consumption are linked in part because of social norms and because of altruism.

• Becker absorbed the criticism and eventually responded to it, and incorporated it into his work.

Mincer

• Mincer (1962, 1963) – value of time (opportunity cost of time of women). (Why as price of time ↑, women might have fewer children and work more).
By 1965, organized these ideas in **Theory of Allocation of Time**

(a) Theory of Inputs  
(Child a derived demand)  
Inputs – mother’s time

(b) Organized thinking about the household and home production

   (i) Stimulated work on collecting new data on household production

   (ii) A variety of nonmarket activities – health, fertility, brushing teeth, etc. (Surveys of time use)
(c) **Quantity-Quality Tradeoff** (Becker & Lewis) – (Again, tools were there, e.g., Theil, 1955, Restudies)

(i) A delayed but thoughtful response to Duesenberry consumption

(ii) Duesenberry linked child quality to parental consumption standard

(iii) Becker - Lewis created link of quality to children and parents standards and later literature is linked

(iv) The consumption standard of children and parents were linked

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**On the Interaction between the Quantity and Quality of Children**

Gary S. Becker and H. Gregg Lewis

*University of Chicago*

*JPE, 1973*
• This work explains how, under reasonable conditions, as income ↑, parents substitute quality for quantity.

• As parents consumption rose the cost of children rose!

• This together with the rise of price of female time explains decline in fertility with development.

• Highly relevant – used to explain declining fertility all over Asia.

• Why, even if China relaxes the one child policy, its fertility will not rise by much.

**Household Formation and Dissolution**

• Natural extension of his work on fertility

• Outgrowth of work with Mincer
  JPE – Breathed life into Koopmans & Beckmann (1957) on assignment problems

  (a) Marriage Market (1973) – (Again, simple prototypical example that was easily understood and had a powerful effect on the field)

  (i) Sorting and matching (back to a theme established in the Economics of “Discrimination”)

  (ii) Best with best – Active area of research – Linked up with allocation mechanism models

  (iii) Implications for child development and rising inequality

  (iv) How incentives for being single and in other activities would affect choices of marriage – to marry at all; tastes

  (v) Analysis of no fault divorce.

  (vi) Used analysis of specific capital.
(b) Social interactions (simple example); this also takes into account his work on preferences.
   (i) How households internalize interactions among members “Rotten Kid Theorem” and Introduction of Altruism
   (ii) Rotten Kid Theorem: under special cases a rotten kid who could only express rottenness in a single good, or more generally transferrable utility, would have no effects on the distributions and family internalizes the full effects.
(c) Simple example: led to a huge literature about its limitations
(d) He graciously accepted valid criticism.
• Incentives affect families.

  (i) Barro papers: expand child quality – altruism and effects of fertility on the interest rate
  How the interest rate affects fertility

  (ii) Becker, Murphy and Tamura showed how endogenous fertility and altruism changed the nature of the OLG model

  (iii) Created a new model of fertility and growth challenging the Malthusian scheme
  – Choice of fertility changes rate of time preference with development; the wage of women rises with development and with human capital accumulations. (Substitute quality for quantity).
  – Discount rate declines
  – This fuels for the quality and lowers discount rate

  As economic growth proceeds and child quality ↑, family size ↓, and human capital per person ↑ and the economy responds with lower fertility and higher levels of human capital.

  (iv) Discount rate used by altruistic families depends on fertility choices

  (v) Multiple steady states

  (vi) Importance of initial conditions

  **Continuing Influence to This Day**

  Active area of research to this day – *Browning, Chiappori, and Weiss (2014)*

  • Continues to be a big influence on macro (his presidential address shaped this)

  • We have moved well beyond the Brookings model
Tastes, Preferences, and Habits
• Gary Becker had a lifetime interest in the role of preferences and tastes in motivating economic life and explaining phenomenon.

• Consistently over his lifetime he rejected “taste-based” explanations of phenomena when a different taste or change in tastes is invoked to explain them.

• But his thinking changed over time and again on this topic he brought the economics profession and a lot of other social sciences along with him.

• In his work on discrimination, he introduced the notion of the utility maximizing model of the firm.

• In his work on fertility, he used standard preferences (e.g., his early work on fertility)

• Early on, made a deep insight—did not need preferences to get some basic laws of economics

• Openly rejected invocation of changes in preferences as explanations of changes in economic variables in his work with Stigler (1977)

• Developed a systematic analysis of habituation, addiction, and preference change by introducing stocks of capital (has a growing neuroscientific basis)

• Evolution of Preferences: survival argument (a species argument; not for an individual)
Irrational Behavior: (1962)

This paper is highly relevant today.
• This work is very timely as we speak

• Neoclassical economics has come under attack

• Journalists—even some trustees of this university—paint a straw man of economics as based on hyper rationality, perfect foresight, and frictionless economics as the requirement of economics, and reject neoclassical

• To this popular mindset, certain versions of behavioral economics with their quirks in preferences are the perfect antidote

• Often tautological explanations

    **Role of Constraints and Preferences**

• Look at the implications of the budget set
• As noted by Becker, however irrational people are, they operate under constraints. (Government excluded, at least in the short run!)

• Many of the implications of traditional economic theory are consequences of constraints.

• Consider the law of demand.
A Lot of Basic Propositions in Economics Do Not Need Rationality: Constraints are Basic

- Constraints play a key role
- Even totally irrational consumers have to live without their means.
- This insight avoids the “money pump” explanations present in many behavioral anomalies
- Many preference anomalies create opportunity for arbitrage
- People who acted with those preferences would be wiped out
- An example of a survivorship argument which he also pursued
- Great example of how he penetrated to the essence of the problem
Household Production

- His work on *household production* – unburdened preferences
  – used technology and preferences in part to explain “tastes”
Habit Formation

- In many of his papers – fascinated by habituation as a way preferences evolved (Aristotle, Thomas Jefferson, Adam Smith)
- Many discussions of how, as people practice actions, they become more automatic and built into preferences
- Aristotle talked about perfecting an effortless virtue and even claimed that true virtue was effortless

A Theory of Rational Addiction

Gary S. Becker and Kevin M. Murphy

University of Chicago

(1988)
Stable Preference Solution

- Created a framework for discussing addiction without invoking prevailing view that drug addicts were “totally irrational”
- The irrational view leads only to strategies of police deterrence and psychiatric treatment
- No rule for incentives or fines or other social policies
- Addressed the problem of changing preferences using stocks of capital (a device initially used in his paper with Stigler but hinted at even earlier)
- Preferences over stocks stable
- But could get unstable-looking behaviors out of a model that was based on stable preferences
- Some versions are even time consistent
- Work with Mulligan (Parents shape time preference)
- Work on shaping the structure of preferences of children to perfect missing markets
- Evolutionary fitness (survival)
Contributions to Welfare Economics

- But also interested in how to deal with preference change in welfare economics
- It poses a major challenge to libertarian ideas if the “person” is shaped totally by experiences – can reshape modern man
- Extreme example – notion of a modern Soviet man
- Implications for welfare dependence and agent autonomy and independence
- To the end, Becker wrestled with the twin problems of taste changes and their implications for free will – for autonomy of agents

Peer Influence

- Social interactions a source of preference formation that also influences choices
Crime and Punishment

Crime and Punishment: An Economic Approach

Gary S. Becker*
Columbia University

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1. Crime and punishment— incentives
   - Beyond morality as a discussion of crime
   - Beyond crude psychology and notion of irrational criminals
   - Look at efficiency and incentives as an alternative and perhaps complementary discussion
   - Criminals respond to incentives
   - They face consequences
   - Changed criminology
   - Remains a standard to this day
   - **Fines vs jail sentences**
   - Value of deterrence
   - His work guided the U.S. Sentencing Commission in the 1980s
Law and Economics

(a) Opened up a number of areas in law and economics

(i) Richard Epstein’s work on employment at will
   (Gen and Spec. Human Capital)

(ii) Private enforcement through backloading of payments—
    (Explained “exploitative” contracts; why for incentive reasons wages may not be equated with productivity)

(iii) Household models — family law; no fault divorce, and sex discrimination — role of nonmarket sector

(iv) Models of time allocation of judges

(b) Stimulated and fostered work of Bill Landes and William Landes and Posner — 30 articles and books that laid the foundations in shaping and an efficiency-based version of law and economics.

(c) Like Bentham and beyond Coase, showed how economics characterizes all behavior and not just market behavior. A generalized cost benefit analysis.
Incentives

(a) Pioneered structure of incentive pay for government officials (back loading)

(b) Huge applications in explaining mandatory retirement and other incentive schemes

- More generally, examined incentives
  
  (a) Compensation of enforcers (back loading)
  (b) Impacts in agency theory
  (c) Human capital theory
- Compliance with regulations
- He was a pioneer in theory of incentive contracts

COMPETITION AND DEMOCRACY (1958)

GARY S. BECKER
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- Compared performance of governments with those of markets
- Positive theory of government
- Competition among interest groups
- When government is ineffective: role of interest groups
Becker’s Impact on Sociology

• From an early age interested in social problems
• Becker had once thought of going into sociology as an undergraduate but thought it was too hard
• Rational choice workshop
• Provided guiding principles
• Touchstone which many loved to attack
• Rational choice workshops (with Coleman)
• Coleman’s Principles of Sociology
Becker Contributed to and Extended the Chicago Tradition in Economics

Aspects of Chicago Economics

(a) Generally high quality of the faculty and high level of integrity. Intelligence valued but not just as an end in itself.

(b) Belief that economics was solving real world problems and was not intellectual escapism

(c) Price Theory as Lingua Franca

(d) Integrated theory with data and hypothesis testing
What, besides the intelligence of most of its members, made Chicago so distinctive, and why did it work? What made the place tick? How were people assimilated into its culture?

- A hallmark of Chicago economics, at least as it has been practiced when it is the most successful, is that it does not accept the division between theory and evidence that characterizes many other economics departments, even many leading ones.

- That unhealthy division of labor allows theorists to speculate without empirical discipline and empiricists to produce “tantalizing” or “cute” sound-bite empirical findings that make headlines but that are not guided by theory and that do not contribute to a larger understanding of society and the economy.

- Participants were asked to think big, and they were surrounded by scholars who thought big.

- Chicago economists as a group, and especially in that era, avoid the schizophrenic separation of theory from evidence common elsewhere because of the ground rules of Chicago economics.

- **Becker fostered and elevated this tradition.**

- His classes inspired generations of economists to do creative, rigorous economics.

- One of his most important contributions was as a teacher, colleague, and mentor to generations of scholars.

- His class with Kevin Murphy, co-chair with Lars Hansen of BFI, was a training ground for price theory and an economics that addressed problems.
Becker and Murphy at Blackboard
• Distinguish Chicago Economics from Chicago School

Chicago Economics:
Disagreement at a High Level of Originality and Rigor

• Consider the Early Cohorts Through 1950

James Laughlin  Thorstein Veblen  Henry Simons
• Unifying theme – diverse points of view at a high level.
• People agree to disagree.

Paul Douglas  Oscar Lange  H.G. Lewis

• Lange wrote on economic theory of socialism.
• Douglas a liberal lion in U.S. Senate.

T.W. Schultz  Marschak
• Unifying theme—intellectual excellence not politics.
• Becker contributed to both Chicago economics and the Chicago school. His greatest contributions, however, are to Chicago economics.
• Strong empirical traditions

### Three Ground Rules for Chicago Economics

1. The first ground rule is that its faculty know and understand the corpus of economic theory — not just their specialty within the field. That we insist that students and faculty speak a common language — the language of basic price theory and the economics of incentives — and that participants communicate these ideas clearly.
2. The second ground rule is that it views economics as a serious subject, tackling serious problems.

Milton Friedman once described the seriousness of Chicago economics. He did not stay there, he wrote, “for the weather, but because his colleagues were engaged in the serious enterprise of understanding the world and not in getting their names quoted in newspapers.”

3. The third ground rule is that Chicago economists move beyond selective and self-serving appeals to “stylized facts” to “illustrate” their theories and instead engage and promote the serious scientific task of creative collection and analysis of hard data, analyzing it with care, and linking the theory and evidence. Chicago does not devalue the hard empirical work that produces hard evidence and rigorous economic theorizing.

- Becker embodied and promoted all of these values.
• He also contributed to

The Chicago School of Economics

The Chicago School of Economics: Distinguish from Chicago Department of Economics — Easily Confused

Question:

1. Is There a Chicago School of Economics? (A Midwestern version of the Manchester School?)

2. When Did It Emerge? (1946—By all accounts became a recognized group of scholars with the arrival of Milton Friedman; There were earlier precedents. Douglas commented on how the atmosphere had changed.)

3. Becker’s role in the Chicago school above and beyond his role in the department.

Chicago School

• In common with Chicago Economics, used Price Theory;

• Associated with neoliberalism;

• Focus on free markets;

• A belief that free markets are promoted through discipline and habituation by democracy (playing by the rules).

• Politically conservative (Stigler wrote that economics was intrinsically a conservative field if only because economists respected budget constraints and tradeoffs — at least most economists.)
• Closely associated with Chicago economics and especially after *Capitalism and Freedom* (1962) was written.

• But this group of scholars prided themselves first of all on their scholarship.

• (Story of Milton and Rose Friedman in an interview.)
  Question asked of Milton Friedman: *What is your greatest contribution?*
  
  – Rose (interjecting) “*Your contribution to liberty.*”
  – Friedman (objecting) “*No, Rose, it’s my contributions to scholarly knowledge.*”

Milton Friedman, George Stigler, and Aaron Director at First Mt. Pelerin Society Meeting (1947)

• Director was Samuelson’s first instructor in economics at Chicago in 1932
• Becker, like his fellow members was, however, interested in positive economics.

• His beliefs about the role of markets and the limitations of government were fundamentally rooted in data.

• His presidential address to the Mont Pelerin Society meeting (1992) was an empirically based discussion of the relationship between the size of government and the rate of growth.

• What made him so attractive and compelling was that he listened to and learned from the data and from dissenting analyses.

• He contributed enormously to the Chicago Empirical Tradition.
Becker’s Contributions to Empirical Economics

(a) Becker’s work was strongly motivated by empirical problems – big issues and changes in the economy that economic theory is often slow in picking up on

(b) A good example is his long quest to understand the economic and social forces explaining fertility and his acknowledgement that his first attempts at a theory were not satisfactory

(c) Deeper notion of the role of evidence than the blind empiricism of “Absolute Truth”
   • Took from his early days as an RA at the Cowles Commission – a group of economists who developed the modern foundations of econometrics – the value of Theory with Measurement
   • All Measurement Requires Theory: (The idea of “getting the facts first” or letting the data speak for themselves is an illusion.)
   • **Theory Refines Measurement and Measurement Refines Theory** (Fermi at Hayek Seminar)
   • His approach was neither purely inductive or deductive
   • It was **abductive** (Pierce, 1875)
   • He sought the most plausible range of explanations consistent with the models

(d) Thus, while he does not do a lot of original empirical work, his knowledge, syntheses, and insights of the data were comprehensive.
(e) He followed closely a huge array of empirical work in depth and encouraged it.

(f) His research came along at a time when masses of micro data on earnings, fertility, labor supply, just were being collected—sharpened and guided the collection of data on all aspects of earnings of the family.

(g) Created frameworks that shaped and guided collection of data.

(h) His influence on empirical work enormous:

1. Time Use: Whole Inventory of Studies Launched by His Work
2. Education and Ability
3. Structure of Educational Choices
4. Marriage
5. Divorce (Rich Theories of Bargaining and Household allocations by Browning, Chiappori, and Weiss)
6. Household
7. Fertility
Contributions to Public Policy & Economic Literacy

Lyndon Johnson

• Without necessarily supporting it, shaped the analytical framework on the War on Poverty (shaping skills)

• Shaping policies to alleviate discrimination and how firms respond to incentives (Henry Aaron in “Politics and the Professors” wrote on Becker’s intellectual influence)

• One of the lasting benefits of the war on poverty was its emphasis on evaluation of social programs based on data

• Becker gave tools for evaluating rates of return (applied his work on education to job training)

• Stimulated data collection
Poverty and Inequality

Intergenerational Mobility and Inequality:
The “Gatsby Curve”

\[ IGE: \ln Y_1 = \alpha + \beta \ln Y_0 + \varepsilon \]

Income in current generation \hspace{1cm} Income of parents

\[ \alpha \] \hspace{1cm} \[ \beta \ln Y_0 + \varepsilon \]

Source: Bradley J. Setzler (2014)

Note:

- Inequality is measured after taxes and transfers.
- Gini index defined on household income.
- IGE measured by pre-tax and transfer income of individual fathers and sons.

- Causality?
  
  (a) Inequality to immobility? (The Gatsby curve crowd)
  (b) Or immobility to inequality? (Becker-Tomes)

- Linked household with educational attainment

- \( \beta \uparrow \) (more credit constrained; greater the parental altruism; less access to schools and quality child investments)
• Understood and helped to explicate the role of the family in creating skills through genes

• Marital sorting

• Effects of impaired child environments on shaping child outcomes

• Understood that inequality in skills is a major determinant of overall inequality

Popular writings
• Becker Posner blog

**Discussed a Range of Issues**

• Drug policy
• Abortion
• Immigration
• Industrial policy
Clear and effective

• One drawback to his popular appeal – his analyses were always measured
• Journalists and politicians like sound bites
• He was far too serious to write a bestseller
Impact of Gary Becker – Summary

“It [economics] is judged ultimately by how well it helps us understand the world, and how well we can help improve it.” – Gary Becker

- How well did he do?
- Today presented only a small sampling of his work
- Impacts are wide-ranging
- Expanded scope of economics and expanded the frameworks used by other social sciences.
- His approach to rational choice has guided thinking both in the policy world and in academics.
- Even agent-based modeling respects budgets and basic constraints
- Challenged conventional wisdom in a number of ways
• Stimulated the production of data – gave frameworks for organizing thinking, data collection, etc.

• Produced a cadre of well-trained, highly motivated students.

• And he encouraged the work of others even when it was critical.

• His gracious and often understated approach encouraged others and by example promoted a fruitful style of discourse of economics.

• His curiosity pushed out the boundaries of economics and enriched our understanding of society.