MURRAY N. ROTHBARD
The Making of an Austrian Economist

The Mises Institute dedicates this volume to all of its generous Supporters and wishes to thank these, in particular:

Anonymous
Jeffrey A. Barnes
Steven R. Berger
Mr. and Mrs. J. Robert Bost
Mr. and Mrs. Roger H. Box
John D. Breen
Bryan Lee Briggs
Mr. Mitch Cantor and Ms. Patricia Coronado
David Capshaw
Jim and Cherie Cox
Carl S. Creager
Will and Jenavee Currie
D. Allen Dalton
George J. Demetras, In Memory of Bettina Bien Greaves
Jerry T. Dowell
Tate and Lea Fegley
Mr. and Mrs. Fujimaru (Japan Institute for Libertarianism)
In Memory of Kurt Fuller
In Honor of Lew Rockwell
In Memory of Murray N. Rothbard
Mr. and Mrs. David Fusato
Miguel Gracia M. and Rosa Arias G., Loving founders of a big family
Patrick Gruhn
Janna Harmon
Mr. and Mrs. Daniel W. Haubeil
Dr. and Mrs. Jeffrey Herbener, In Honor of Lew Rockwell
Jule R. Herbert, Jr.
Dr. Frederic H. Herman
Frank Heurich
Jeffery Hodgson
R. Anderson Hord III
Drs. Peter and Sandy Klein
Mr. and Mrs. Bernard Koether
Jeff Leskovar
Hunter Lewis and Elizabeth Sidamon-Eristoff
Zhuoyang Li, In Memory of Murray N. Rothbard
Dr. Antonio A. Lloréns-Rivera
Dr. Charles W. Martin and Ms. Happy Bailey
Ralph Martins
Akihiko Murai, In Honor of Roger Ver
Ernest H. Muth
Darryle L. Owens
Alex Pappas
Robert Parauda
Don W. Printz, MD
David and Cynthia Richards
Carlos Rossi
Eric Russell
Dr. and Mrs. Murray Sabrin
Steven P. Schneider
Ryan Searfoorce
Gary and Genie Short, In Memory of Roger Garrison
Roy H. Simmen, Jr.
Carlton M. Smith
Jay Lawrence Smith
Dennis A. Sperduto
Michael and Laura Sporer, In Memory of Ronald Hamowy, Ralph Raico, and Murray N. Rothbard
Marko Srebre
Aaron and Lindsey Tuttle
Thomas E. Verkuilen
Dr. John F. Wakerly
William E. Waldschmidt
Mr. and Mrs. Donald F. Warmbier
Mark G. Warner
Brendan A. Weishaar
Dominique Yarnell

MURRAY N. ROTHBARD

The Making of an Austrian Economist

Joseph T. Salerno
Patrick Newman

Mises Institute
AUBURN, ALABAMA

The Mises Institute is a nonprofit organization that exists to promote teaching and research in the Austrian School of economics, individual freedom, honest history, and international peace, in the tradition of Ludwig von Mises and Murray N. Rothbard.

Nonpolitical, nonpartisan, and non-PC, we advocate a radical shift in the intellectual climate, away from statism and toward a private property order. We believe that our foundational ideas are of permanent value and oppose all efforts at compromise, sellout, and amalgamation of these ideas with fashionable political, cultural, and social doctrines inimical to their spirit.

The Mises Institute is funded entirely by voluntary donations from individuals, businesses, and foundations. We do not accept any government money.

For more information, see mises.org, write us at contact@mises.org, or phone us at 1.800.OF.MISES.

Mises Institute
518 West Magnolia Ave.
Auburn, AL 35832
mises.org
contact@mises.org

ISBN: 978-1-61016-795-6 (hardback)
ISBN: 978-1-61016-794-9 (paperback)
ISBN: 978-1-61016-809-0 (ebook)
DOI: https://doi.org/10.35297/RJXQ9862

To Llewellyn H. Rockwell Jr.,
without whose intellectual entrepreneurship
this book would never have been written.

ACKNOWLEDGMENTS

This book has been several years in the making. Originally we envisioned it as a collection of letters and unpublished monographs from the Rothbard Papers at the Mises Institute. It was only in 2020 that we realized that a coherent narrative was needed to organize and bring to life the mass of correspondence and other writings. Over the next several years we wrote the manuscript and revised it as suggestions were made and new archival material was discovered.

We would like to thank several people affiliated with the Mises Institute who have helped us along the way. Without their assistance this book would not be what it is today. Archivist and librarian Suzy Westenkirchner was indispensable in discovering or obtaining archival materials from the collections at Duke University, Grove City College, the Hoover Institution, and the Mises Institute. The following reviewers provided very helpful feedback: David Gordon, Jeffrey Herbener, Peter Klein, Matthew McCaffrey, Jonathan Newman, Shawn Ritenour, and the participants at the 2025 Rothbard Graduate Seminar. Executive director Judy Thommesen, managing editor Daniella Bassi, copyeditor Sean Tommasi, and proofreader Ronda Rawlins cleaned up the book as it moved through the publication process. We would also like to thank Lew Rockwell, the founder of the Mises Institute and chairman of the board, for his enthusiasm and support of the project.

Above all, we thank Murray N. Rothbard for writing *Man, Economy, and State*. His vast intellectual output continues to be an incredible inspiration to both of us in our scholarly careers, and we strongly believe that if Rothbard had not met Mises in 1949, Austrian economics would not be the vibrant and flourishing intellectual movement it is today.

Joseph Salerno and Patrick Newman
Mises Institute
Auburn, AL
January 2026

CONTENTS

INTRODUCTION

In a letter he wrote to the philosopher Louis Rougier in December 1962, Ludwig von Mises referred to "the systematic exposition of the whole doctrine of praxeology in my book *Human Action* and nowadays in the brilliant book of a younger man, Murray N. Rothbard, *Man, State and Economy* [*sic*]." Mises concluded his letter by entreating Rougier: "But, please, first of all read the book of Rothbard."[1] Earlier in the year, Mises had written a review of Rothbard's work, describing it "as an epochal contribution to the general science of human action, praxeology, and its practically most important and up-to-now best elaborated part, economics." "Henceforth," Mises continued, "all essential studies in these branches of knowledge will have to take full account of the theories and criticisms expounded by Dr. Rothbard."[2]

These highly laudatory appraisals were uncharacteristic of a man who was very sparing in his praise of other economists' work, writing in *Human Action* that "there never lived at the same time more than a score of men

---

[1] Ludwig von Mises to Louis Rougier, December 6, 1962, p. 3, Ludwig von Mises Collection, Grove City College. Ludwig von Mises, *Human Action: A Treatise on Economics* (Yale University Press, 1949); Murray N. Rothbard, *Man, Economy, and State: A Treatise on Economic Principles*, 2 vols. (D. Van Nostrand, 1962).

Unless otherwise noted, all spelling, punctuation, and italics in quotations are taken from the cited source.

[2] Ludwig von Mises, "A New Treatise on Economics," *New Individualist Review* 2, no. 3 (1962): 41.

whose work contributed anything essential to economics."[3] But Mises was not exaggerating: Rothbard's *Man, Economy, and State: A Treatise on Economic Principles* is one of the most important and influential books written in the Austrian tradition. It is an outstanding treatise in economic science that spells out, builds upon, and refines Mises's praxeological system. Starting from the action axiom and other self-evident assumptions, Rothbard systematically deduces the workings of the free-market economy and the consequences of government intervention. *Man, Economy, and State*, therefore, is inseparably linked with *Human Action*, and to understand the praxeological system one must heed Mises and "read the book of Rothbard."

Many readers of Rothbard's treatise believe that he wrote it in the early 1960s while working for the William Volker Fund. However, Rothbard actually finished the bulk of *Man, Economy, and State* by 1956. The manuscript included *Power and Market*, which he wrote as the original chapters on interventionism.[4] Rothbard spent most of the latter part of his tenure at the Volker Fund using his theoretical system to evaluate contemporary economics publications, incorporating references to those he found of value into his treatise. There are other crucially important facts about the writing of *Man, Economy, and State*, of which even many Austrian scholars may not be aware. Rothbard was a Columbia PhD student with a thorough grounding in neoclassical economic theory and the positivist method when the Volker Fund originally commissioned him to write a textbook version of *Human Action*. Rothbard subsequently decided to transform the textbook project into a full-blown treatise after realizing that his original chapter on production theory was deeply flawed and gaps existed in Mises's own production theory. Thus, Rothbard relied heavily on Eugen von Böhm-Bawerk and his own innovations to complete a systematic analysis of capital and production that he could then integrate into the structure of economic theory.

The only significant archival research thus far on the writing of *Man, Economy, and State* was Joseph Stromberg's helpful introduction to the first scholar's edition, which provides a summary overview of Rothbard's

[3] Mises, *Human Action*, p. 869.

[4] Murray N. Rothbard, *Power and Market: Government and the Economy* (Institute for Humane Studies, 1970).

progress in writing his treatise.[5] The general absence of research on Rothbard's development as an economist in the 1950s accounts for what we view as an underappreciation of his contributions to economic theory by many serious readers of *Man, Economy, and State*. To these economists, Rothbard either made insignificant contributions relative to other Austrian economists, created his own line of economic thought distinct from other Austrian economists, or failed to distinguish his version of Austrian economics from neoclassical economics.

For example, Lawrence H. White, in his introduction to F. A. Hayek's *The Pure Theory of Capital*, describes contributions by Ludwig M. Lachmann, Israel M. Kirzner, Peter Lewin, and Roger W. Garrison that brought together "Hayek's analysis of the structure of production with Mises's 'pure time-preference' analysis of interest."[6] In contrast to his descriptions of these thinkers, White only lists Rothbard in passing, omitting his contributions and how he substantively combined Mises's and Hayek's approaches.[7] Peter J. Boettke recognizes Rothbard's influence on his own thinking and has written about some of Rothbard's theoretical innovations.[8] However, in his review of *Rothbard vs. the Philosophers*, he states that "Rothbard represented something different from either Mises or Hayek as an economist and as a political economist" and "Rothbard, and Rothbardianism, must be understood as its own distinct branch of the Austrian School of Economics."[9] Karen I. Vaughn, in her *Austrian Economics in America: The Migration of a Tradition*, concludes that "Rothbard's version of Austrian economics was in principle not very different from neoclassical economics. . . . What was clearly and unquestionably distinctive about his writing

[5] Joseph Stromberg, introduction to *Man, Economy, and State with Power and Market*, scholar's ed., by Murray N. Rothbard (Mises Institute, 2004).

[6] Lawrence H. White, introduction to *The Pure Theory of Capital*, by F. A. Hayek, ed. Lawrence H. White (University of Chicago Press, 2007), p. xxxiv.

[7] White, introduction to *Pure Theory of Capital*, pp. xxxiv–xxxvi.

[8] Peter J. Boettke and Christopher J. Coyne, "The Forgotten Contribution: Murray Rothbard on Socialism in Theory and in Practice," *Quarterly Journal of Austrian Economics* 7, no. 2 (2004): 71–89.

[9] Peter J. Boettke, "Rothbard vs. the Philosophers," *Coordination Problem* (blog), February 1, 2010, https://www.coordinationproblem.org/2010/02/rothbard-vs-the-philosophers.html. Roberta A. Modugno, ed., *Rothbard vs. the Philosophers: Unpublished Writings on Hayek, Mises, Strauss, and Polanyi* (Mises Institute, 2009).

was the pervasive and unequivocal free market message he delivered."[10] We believe that these remarks inadequately convey the scope and originality of Rothbard's contributions because they are not informed by a thorough knowledge of how Rothbard arrived at his theories and the process of his transformation as an economist.

The goal of this book, then, is to fill the gap in Rothbardian scholarship and present an intellectual biography that shows Rothbard's evolution from a neoclassical graduate student to a pioneer in Austrian economics. Our thesis is twofold. First, Mises was correct: *Man, Economy, and State* represents "an epochal contribution" to praxeology. The mainline of Austrian economics runs from the seminal writings of Carl Menger through Böhm-Bawerk to Mises and Hayek and then to Rothbard. Second, the culmination of Rothbard's efforts was the creation of a postwar theoretical edifice that rivaled both the neoclassical synthesis and the Chicago School and was distinctly different from neoclassical economics. Given these contributions, Rothbard is Mises's most important successor, or heir.

In writing this book, we extensively quote Rothbard's letters, memos, and other documents as well as extant draft chapters and unpublished sections of *Man, Economy, and State*. Unfortunately, the Volker Fund papers are scattered across multiple institutions, and many of these files are hard to obtain. Other archives of affiliated organizations, such as the Earhart Foundation, are closed off for the foreseeable future. This has limited our primary sources largely, though not entirely, to the Murray N. Rothbard Papers at the Mises Institute.[11] When the draft pages of *Man, Economy, and State* are unavailable, we use the final version and other writings Rothbard was working on during this time. When unpublished primary sources are not available, we quote from the secondary source it was referenced in. We hope that this book encourages scholars to utilize the archives of other Austrian writers and prominent Austrian-affiliated institutions when writing about the history of Austrian economic thought.

[10] Karen I. Vaughn, *Austrian Economics in America: The Migration of a Tradition* (Cambridge University Press, 1994), p. 98.

[11] Shortened to Rothbard Papers in the footnotes.

The outline of this book is as follows. "Part I: Neoclassical Training, 1945–1949" describes Rothbard's educational background at Columbia University before he met Mises. Although Columbia rivaled Harvard University and the University of Chicago as a leading center of economic thought in the country, Rothbard perceived that something was amiss in the Marshallian economic theory and institutionalist and positivist methods he learned during his graduate studies. In his search for answers, he discovered the Foundation for Economic Education, where he heard about the Volker Fund and met Mises. "Part II: A Misesian Textbook, 1949–1953" marks the beginning of Rothbard's immersion in Misesian thought and Austrian economics. After Rothbard corresponded with Mises while reading *Human Action* in late 1949, Mises asked Rothbard to write a textbook version of *Human Action* that explained praxeology to college students. Embarking upon the project, Rothbard quickly demonstrated his mastery of Misesian theory. He elaborated several deductions that were missing in *Human Action*, explaining how a strictly ordinalist conception of marginal utility leads to downward-sloping demand curves and how equilibration of market prices occurs in a world of uncertainty.

Rothbard achieved an intellectual milestone in late 1953, as explained in "Part III: A Böhm-Bawerkian Treatise, 1953–1955." When Rothbard moved from consumption to production theory, he realized Mises had written relatively little on the subject. Consequently, he relied upon the standard Marshallian partial-equilibrium analysis he had learned at Columbia. By early 1954, Rothbard recognized the multiple errors in this isolated-firm approach and that he would need to move beyond Mises's work and make his own original contributions. The result, an Austrian or dynamic general equilibrium theory that focuses on the capitalist-entrepreneur's central position in the structure of production, constitutes one of the key contributions of *Man, Economy, and State*. Rothbard concluded his treatise by analyzing government intervention into the economic system. "Part IV: The Rothbardian Theory of Interventionism, 1955–1956" shows Rothbard's construction of an integrative and systematic theory of government policy, a notable advance beyond Mises's disparate chapters on the subject. The capstone of this analysis was his improvements upon Mises and Hayek's theory of the trade cycle, which consisted in demonstrating the "exogeneity" of the causes of the business cycle to the market economy and the hitherto neglected beneficial aspects of credit contraction.

With the essentials of the treatise finished by mid-1956, "Part V: Applying the Treatise, 1956–1962" explains the next stage of Rothbard's intellectual development. It documents how Rothbard spent the next several years evaluating new economic literature for the Volker Fund. Rothbard sharply criticized writings by economists of the Chicago School, notably Milton Friedman and George J. Stigler. In particular, he found serious deficiencies in their positivist method, Marshallian production theory, and monetary adjustment process. Significantly, he criticized the contemporary textbook of Mises's doctoral student Israel Kirzner for falling into the same errors he had when formulating a neoclassical production theory in 1953. But Rothbard did not criticize every contemporary publication. He eagerly incorporated and referenced writings that applied the praxeological method to theory, such as *Capital and Its Structure*, by Lachmann, an Austrian economist whom he extensively corresponded with.[12] The book ends with the setbacks to Rothbard's prospective research program, which resulted from the collapse of his main institutional backer, the Volker Fund. Although *Man, Economy, and State* received scant attention from the economics profession, Mises, as we noted, lauded Rothbard's pathbreaking achievements in praxeology and economic science.

Murray N. Rothbard: The Making of an Austrian Economist is written for everyone interested in Rothbard's economic theory and Austrian economics in general. We hope it will serve as a useful complementary volume to *Man, Economy, and State* by elucidating Rothbard's many contributions and the process by which he developed an integrated structure of economic theory using the praxeological method.

[12] Ludwig M. Lachmann, *Capital and Its Structure* (London School of Economics, 1956).

Part I
Neoclassical Training, 1945–1949

Murray Rothbard started his career with a foundational training in neoclassical economics. At Columbia University, he learned from highly regarded professors and demonstrated a thorough understanding of the positivist method, Keynesian and Marshallian economic theory, and institutional empirical analysis. Crucially, Rothbard perceived the fact that critical errors existed in these disparate strands of knowledge, although he could not yet articulate them. But the recognition itself motivated him to take the highly important step of contacting the free-market Foundation for Economic Education and the William Volker Fund, thereby discovering Austrian economics.

Columbia University

At a young age, Rothbard proved to be extremely gifted. Born in 1926 to Raya Babushkin and David Rothbard, a petroleum chemist with conservative political leanings, Rothbard skipped grades "with disconcerting rapidity."[1] His elementary school teachers recognized their pupil's "inquiring mind" and "desire really to *know* reasons, origins, [and] exceptions" of various phenomena.[2] He started at Birch-Wathen high school in the seventh grade and enrolled at Columbia University in 1942 at the age of sixteen. He was

[1] Murray N. Rothbard, "My Autobiography," n.d., p. 9, quoted in Justin Raimondo, *An Enemy of the State: The Life of Murray N. Rothbard* (Prometheus Books, 2000), p. 29.

[2] Margaret Elizabeth Nells and Leah Sibley, "Report of Murray Rothbard," December 21, 1934, quoted in Raimondo, *An Enemy of the State*, p. 35.

just nineteen when he received his AB degree with honors in economics and mathematics in 1945. He was soon accepted into Columbia's PhD program.[3]

At Columbia, Rothbard learned economics through the lens of the emerging "neoclassical synthesis" that was rapidly transforming economic science in the mid-1940s.[4] It combined the aggregative macroeconomics of the Keynesian revolution with neoclassical Marshallian partial equilibrium theory and Walrasian general equilibrium. This synthesis considered economic science as the analysis of the determination of unrealistic equilibrium prices in a world without a temporal structure of production against the backdrop of total spending managed by an activist government. Economic theories needed to be expressed in mathematics and tested through empirical research. Influential neoclassical works included John R. Hicks's *Value and Capital*, George J. Stigler's *The Theory of Price*, and Paul A. Samuelson's *Foundations of Economic Analysis*. Samuelson first used the term in 1955, in the third edition of his famous textbook *Economics*.[5]

In the mid-1940s, Columbia University was a leading academic institution in the US and housed one of the top three economics departments in the nation. Located in New York City, the hub of American intellectual life, Columbia rivaled the University of Chicago and Harvard University, producing more doctoral students than either institution. Prominent examples include Arthur F. Burns (1934), a future Columbia professor and chairman of the Federal Reserve, and Milton Friedman (1946), the influential University of Chicago professor and Nobel Prize laureate. When future University of Chicago professor and Nobel laureate George Stigler started to work for Columbia after World War II, he "felt that [he] was joining one of the truly great universities" which had a "consistently high quality economics

[3] Office of the Registrar, "1944–1945 Courses for Murray N. Rothbard," June 5, 1945, Rothbard Papers; Raimondo, *An Enemy of the State*, pp. 23–36, 42; Joseph Stromberg, introduction to *Man, Economy, and State with Power and Market*, scholar's ed., by Murray N. Rothbard (Mises Institute, 2004), p. xxii.

[4] Joseph T. Salerno, introduction to *Man, Economy, and State with Power and Market*, 2nd scholar's ed., by Murray N. Rothbard (Mises Institute, 2009), p. xxi.

[5] Salerno, introduction to *Man, Economy, and State*, pp. xxi–xxiii, xli–xlii. John R. Hicks, *Value and Capital: An Inquiry into Some Fundamental Principles of Economic Theory*, 2nd ed. (Oxford University Press, 1946); Paul A. Samuelson, *Foundations of Economic Analysis* (Harvard University Press, 1947); Paul A. Samuelson, *Economics: An Introductory Analysis*, 3rd ed. (McGraw-Hill, 1955); George J. Stigler, *The Theory of Price* (Macmillan, 1946).

department."[6] Stigler did not exaggerate; notable professors included John Maurice Clark, a Marshallian and pioneer in Keynesian economics; Harold Hotelling, the eminent mathematical statistician; Ragnar Nurkse, a prominent international trade and development economist; and Joseph Dorfman, an influential historian of American economic thought. The latter noted that the "pervasive ideal of the University as a research center" dominated the economics department: seven faculty members and five doctoral students had become president of the American Economic Association.[7]

Though Rothbard's conservative background alienated him from Columbia's liberal students and professors, he flourished in the intensely intellectual environment. One notable influence was Benjamin H. Beckhart, the professor for his graduate course in banking theory. Beckhart was a disciple of H. Parker Willis, a former professor at Columbia. Although Willis was one of the major architects of the Federal Reserve System, he sharply criticized the expansionary policies it pursued in the 1920s, which were championed by the leading neoclassical monetary and business cycle theorist Irving Fisher. Rothbard reminisced that during his graduate career, he "was a Willis-Beckhart anti-Fisher" economist.[8]

Rothbard was also influenced by Burns and Dorfman and impressed both professors despite the fact that back in "those days there was not much give and take" during lectures and students "didn't really know the professors very well."[9] Burns, who had befriended Rothbard's father, "enjoyed having

[6] George J. Stigler, *Memoirs of an Unregulated Economist* (Basic Books, 1988), pp. 16, 42–43.

[7] Joseph Dorfman, "The Department of Economics," in *A History of the Faculty of Political Science, Columbia University*, ed. R. Gordon Hoxie et al. (Columbia University Press, 1955), p. 205. Dorfman, "Department of Economics," pp. 201–5; Milton Friedman and Rose Friedman, *Two Lucky People: Memoirs* (University of Chicago Press, 1998), pp. 43–44, 441–43; Lewis A. Froman, "Graduate Students in Economics, 1904–1940," *American Economic Review* 32, no. 4 (1942): 818; Murray N. Rothbard, "Statistics: Destroyed from Within?," in *Making Economic Sense*, 2nd ed. (Mises Institute, 2006), p. 28; Malcolm Rutherford, *The Institutionalist Movement in American Economics, 1918–1947: Science and Social Control* (Cambridge University Press, 2011), pp. 223–26, 247; Stigler, *Memoirs of an Unregulated Economist*, pp. 45, 87.

[8] Murray N. Rothbard to Alex Tabarrok, August 28, 1993, p. 3, Rothbard Papers. Dorfman, "Department of Economics," p. 196; Raimondo, *An Enemy of the State*, pp. 36–42; Murray N. Rothbard, *America's Great Depression*, 5th ed. (Mises Institute, 2008), pp. 76, 164, 173–81; Rothbard to Tabarrok, August 28, 1993, p. 3.

[9] Walter Block and Walter Grinder, "Rothbard Tells All: Interview with Murray Rothbard," December 1972, p. 12, Rothbard Papers.

[Rothbard] in [his] classes" and expected Rothbard to make "a prominent place for himself" in the world.[10] Rothbard reciprocated the appreciation, reminiscing that he thought Burns "was a brilliant theorist" and his "critique of orthodox theory and so forth, was excellent" despite not "publish[ing] in that area."[11] Burns's criticisms included Keynesian macroeconomics incorrectly building on the Marshallian theory of the firm, the illusory nature of the concept of excess capacity in monopolistic competition, and issues with the causes of business cycles in Walrasian general equilibrium.[12] Dorfman also recognized Rothbard's talent and ended up serving as his dissertation advisor, and once it was finished Rothbard reported Dorfman as being "very anxious to have the book published" with Columbia University Press.[13] Rothbard held an extremely high opinion of Dorfman as a historian of economic thought, noting that "his knowledge of the sources is unparalleled."[14] In his last major work, Rothbard acknowledged Dorfman as one of his most important "mentors."[15]

Lastly, there was the newly hired George Stigler, who taught Rothbard in a class on price theory in the fall of 1946. Stigler and Friedman constituted the core of the modern Chicago School, which used Marshallian price theory and Fisherian monetary macroeconomics to criticize select Walrasian and Keynesian aspects of the emerging neoclassical synthesis. Stigler's free-market orientation contrasted with other faculty members and impressed Rothbard. In his first two lectures, Stigler attacked rent control and the minimum wage, shocking students back into "the Neanderthal

---

[10] Arthur F. Burns to David Rothbard, May 27, 1948, p. 1, Rothbard Papers.

[11] Block and Grinder, "Rothbard Tells All," p. 12.

[12] David Gordon, introduction to *Strictly Confidential: The Private Volker Fund Memos of Murray N. Rothbard*, ed. David Gordon (Mises Institute, 2010), p. 4; Murray N. Rothbard, *Man, Economy, and State with Power and Market*, 2nd scholar's ed. (Mises Institute, 2009), p. 732; Murray N. Rothbard, "Breaking Out of the Walrasian Box: Schumpeter and Hansen," in *Economic Controversies* (Mises Institute, 2011), p. 261.

[13] Murray N. Rothbard to Ivan R. Bierly, November 14, 1959, p. 1, Rothbard Papers.

[14] Murray N. Rothbard to Kenneth S. Templeton, May 5, 1955, p. 1, Rothbard Papers.

[15] Murray N. Rothbard, *An Austrian Perspective on the History of Economic Thought*, vol. 1, *Economic Thought Before Adam Smith* (Mises Institute, 2006), p. ii. Raimondo, *An Enemy of the State*, pp. 43–44; Rothbard to Bierly, November 14, 1959, pp. 1–2.

Age" before the New Deal. Rothbard, ostracized because of his conservative views, relished this "free-market viewpoint" at Columbia.[16]

The Positivist Method

During Rothbard's studies, the economics department entered a transition period between clashing methods. Historically, most economists utilized the deductive method to understand economic phenomena and developed theories by tracing out the logical implications of their starting assumptions. Lionel Robbins's *An Essay on the Nature and Significance of Economic Science* remained the outstanding exposition of this approach.[17] In the early 1900s through the 1930s this method was eschewed by many economists at Columbia, which turned into a stronghold of "Wesley [Clair] Mitchell and A.F. Burns' Baconian institutionalism."[18]

Taking a page from the work of Sir Francis Bacon in the seventeenth century, institutionalism eschews theoretical analyses that are grounded in general assumptions about human behavior. Instead, it advocates using narrow hypotheses that are discovered from the copious collection and organization of facts. Mitchell was heavily influenced by the founding institutionalist Thorstein Veblen; one of the creators of the National Bureau of Economic Research (1920), an organization that pioneered in institutional research; and a professor at Columbia from 1913 to 1944. Burns, Mitchell's PhD student, shared his wariness of simple theories and supported detailed empirical investigation. They coauthored *Measuring Business Cycles*, a leading institutionalist work that practitioners of the neoclassical synthesis attacked as "Measurement without Theory."[19]

---

[16] Murray N. Rothbard, *The Betrayal of the American Right* (Mises Institute, 2007), p. 66. J. Daniel Hammond and Claire H. Hammond, eds., *Making Chicago Price Theory: Friedman–Stigler Correspondence 1945–1957* (Routledge, 2006); Rothbard, *Betrayal of the American Right*, pp. 65–66; Joseph T. Salerno, "The Place of Mises's *Human Action* in the Development of Modern Economic Thought," *Quarterly Journal of Austrian Economics* 2, no. 1 (1999): 59, 61.

[17] Frank H. Knight, "'What Is Truth' in Economics?," *Journal of Political Economy* 48, no. 1 (1940): 1–32; Lionel Robbins, *An Essay on the Nature and Significance of Economic Science*, 2nd ed. (Macmillan, 1935).

[18] Murray N. Rothbard to William F. Campbell, April 2, 1961, p. 1, Rothbard Papers.

[19] Rutherford, *Institutionalist Movement*, pp. 251–52. Arthur F. Burns and Wesley Clair Mitchell, *Measuring Business Cycles* (National Bureau of Economic Research, 1946); Wesley Clair Mitchell, "Quantitative Analysis in Economic Theory," *American Economic Review*

Their critics were not practitioners of the old deductive method, but defenders of the new method rapidly taking hold at Columbia—the "positivist line."[20] Positivism argues that the economist must form tentative hypotheses from basic assumptions about human nature and then test these hypotheses based on their ability to explain empirical phenomena. Both the positivist and institutionalist approaches champion empirical analysis, but only positivism allows for a body of economic theorems that precede investigations of historical episodes.

Positivism rapidly gained strength in the economics profession, displacing the deductive approach and institutionalism, and Rothbard remembered his time at Columbia as one "surrounded by positivists." Notably, he took a "term course on the Philosophy of Economics" with Ernest Nagel, an important expositor of positivism.[21] In his lecture notes, Rothbard showed that he recognized the positivist criticisms of institutionalism, despite not yet realizing the profound defects in the positivists' own approach. "Institutionalists," Rothbard records Nagel as lecturing, argue that "universal economic theoretical laws are illegitimate" because theory is "only relative to *particular historical situations*" and "certain stages of historical society." Although "they deny this," institutionalists' "methodology is purely Baconian, simple fact-gathering" because economists must continually "gather extensive and sufficient factual data out of which the theory will eventually grow." In contrast, positivists argue that the economist must first construct a hypothesis and then test its consequences. "A theory must: 1) *explain* 2) *afford means for prediction* . . . [and] the essential task of empirical data [is] to verify a theory."[22]

A common institutionalist criticism of economic positivists is that the assumptions of "neo-classical economic theory are unsound," particularly the

---

15, no. 1 (1925): 1–12; Murray N. Rothbard, "The National Bureau and Business Cycles," in *Making Economic Sense*, pp. 243–46; Rutherford, *Institutionalist Movement*, pp. 127–29, 228–29, 231, 233–56.

[20] Rothbard to Campbell, April 2, 1961, p. 1.

[21] Rothbard to Campbell, April 2, 1961, p. 1. David Gordon, *The Essential Rothbard* (Mises Institute, 2007), p. 9; Ernest Nagel, *The Structure of Science: Problems in the Logic of Scientific Explanation* (Harcourt, Brace & World, 1961).

[22] Murray N. Rothbard, "Professor Nagel's Reply to Institutionalist Criticism of Economic Theory," Summer 1948, pp. 1–3, Rothbard Papers.

"assumption of carefully-calculating rationality—the economic man" who always prefers more wealth to less. According to the institutionalist critics, this premise is false because "we know that people are driven by irrational whims, inconsistencies, etc." and "there is no deliberate, rational ordering of conduct." If the positivists admitted this, then they would have to discard the structure of hypotheses built on the assumption of self-interested individuals maximizing monetary profits. However, as Rothbard continues to write in his recording of Nagel, "this criticism is valid" but "*not fatal* to the theory [because of] the final and complete answer . . . in a superb article by John Stuart Mill," a classical economist who was also a protopositivist.[23]

"Mill," Rothbard records Nagel as saying, argued that "economic science considers mankind as occupied solely in wealth-activities." This admittedly "is only an approximation [that] must be corrected for other impulses," such as leisure and the desire for present consumption. But approximations are appropriate because to "develop an adequate theory . . . you must simplify, idealize, and even make assumptions *that are clearly contrary to known existing fact*!! . . . The empirical justification of this is the ability to introduce supplementary assumptions later that will bring [the theory] close to the facts." As long as the revised theory can be empirically verified and used for prediction, the continued use of unrealistic assumptions is warranted. Far from criticizing the unrealism of assumptions, then, positivists like Nagel champion their use.[24]

Rothbard notes the conclusion of Nagel's reasoning. "Mill's methodology is perfectly sound. The correct approach is to assume economic man, develop the theory, and then hope you can make the supplementary assumptions" that are grafted onto the original unrealistic assumption of a carefully calculating money maximizer. This contrasts with the "rigid institutionalist methodology" that criticizes economic hypotheses for being founded on assumptions about the behavior of individuals that are not supported by detailed empirical evidence.[25]

---

[23] Rothbard, "Professor Nagel's Reply," p. 5. Marian Bowley, *Nassau Senior and Classical Economics* (George Allen & Unwin, 1937), pp. 60–64; John Stuart Mill, *Essays on Some Unsettled Questions in Political Economy* (London, 1844).

[24] Rothbard, "Professor Nagel's Reply," p. 5.

[25] Rothbard, "Professor Nagel's Reply," p. 5.

Rothbard believed that Nagel made "the most convincing case for neo-classical economic theory" and sent his lecture notes to Burns, "the foremost representative" of the Institutionalist School. "One of the reasons why Professor Nagel was more convincing than other neo-classicists," Rothbard wrote to his professor, was that "Nagel is ever-sensitive to tautologies and quick to insist on the necessity for empirical verification."[26] Burns, impressed with Rothbard's lecture notes, sent them to Friedman, a former student and a current colleague at the National Bureau of Economic Research who was writing a paper on economic method. Friedman wrote on top of the notes, "Arthur: many thanks. I found it interesting, and, of course, agreed."[27]

At this stage of his intellectual evolution, Rothbard possessed only an "instinctive feeling or insight . . . that there was something wrong with" institutionalism and positivism. Positivists were right to criticize institutionalists for their attempt to discover theories from their intensive empirical work of sifting through reams of data. At the same time, the institutionalists were on the mark when they attacked the positivists' use of false assumptions because their supplementary assumptions only covered up, and did not substantively change, the theoretical edifice built upon false premises. Consequently, Rothbard realized that "when the institutionalists were criticizing the orthodox [positivists] they were right and, when the orthodox people were criticizing the institutionalists, they were right."[28]

However, Rothbard did not then fully grasp the alternative to institutionalism and positivism, the deductive method, which had been the traditional approach in economics. Furthermore, he did not know that there existed recent improvements in this method. The praxeological method constructed theorems using only assumptions that were self-evident, meaning that neither the assumptions nor the theorems required empirical verification.

[26] Murray N. Rothbard to Arthur F. Burns, August 23, 1948, p. 1, Rothbard Papers.

[27] Rothbard to Burns, August 23, 1948, p. 1. Friedman and Friedman, *Two Lucky People*, pp. 29, 164; Milton Friedman, "The Methodology of Positive Economics," in *Essays in Positive Economics* (University of Chicago Press, 1953), pp. 3–43; J. Daniel Hammond, "Early Drafts of Friedman's Methodology Essay," in *The Methodology of Positive Economics: Reflections on the Milton Friedman Legacy*, ed. Uskali Mäki (Cambridge University Press, 2009), pp. 69–70. The Friedman marginalia can also be found in Murray N. Rothbard to Arthur F. Burns, August 23, 1948, p. 1, Arthur F. Burns Papers, Duke University Archives.

[28] Block and Grinder, "Rothbard Tells All," p. 6.

In particular, the fundamental axiom of praxeology is that humans act in ways that they think will maximize their psychic income, of which monetary income may be only one part. In the first edition of his book, Lionel Robbins had actually articulated the basics of the praxeological method before he watered it down in the second and more influential edition.[29] But, as Rothbard recalled, "Nagel of course had never heard of praxeology at the time, and unfortunately I hadn't either."[30]

A Marshallian Criticism of Keynesian Theory

Rothbard recalled that as an undergraduate he "cut his teeth" on Alfred Marshall's *Principles of Economics* by participating in an intense "college seminar, a senior seminar, [that] spent the entire year on Marshall, going through every chapter."[31] In the early twentieth century, Marshall's treatise served as the quintessential book on neoclassical price theory. Quite famously, Marshall fused the classical economics of Adam Smith and David Ricardo, who argued that cost determined the value of goods, with the marginalist revolution of William Stanley Jevons, Carl Menger, and Léon Walras, which argued that marginal utility determined price.[32] Marshall pioneered partial equilibrium analysis, focusing on an isolated industry and assuming firms in it cannot influence input and output prices. He used it to show that "the shorter the period which we are considering, the greater must be the share of our attention which is given to the influence of demand on value," while "the longer the period, the more important will be the influence of cost of production on value." This is because in the long run "fitful and irregular

[29] D. P. O'Brien, *Lionel Robbins* (St. Martin's Press, 1988), pp. 24–29; Lionel Robbins, *An Essay on the Nature and Significance of Economic Science*, 1st ed. (Macmillan, 1932); Salerno, "The Place of Mises's *Human Action*," p. 51.

[30] Rothbard to Campbell, April 2, 1961, p. 1.

[31] Murray N. Rothbard, "Menger and Böhm-Bawerk," in "The History of Economic Thought Lectures," transcribed by Thomas Topp, p. 143, https://www.stephankinsella.com/wp-content/uploads/publications/others/rothbard-history-economics-thought-iii-transcript.pdf. Alfred Marshall, *Principles of Economics*, 8th ed. (Macmillan, 1920).

[32] William Stanley Jevons, *The Theory of Political Economy* (London, 1871); Alfred Marshall, *Principles of Economics*, 1st ed. (London, 1890); Carl Menger, *Grundsätze der Volkswirtschaftslehre* [Principles of economics] (Vienna, 1871); David Ricardo, *On the Principles of Political Economy and Taxation* (London, 1817); Adam Smith, *An Inquiry Into the Nature and Causes of the Wealth of Nations* (London, 1776); Léon Walras, *Éléments d'économie politique pure* [Elements of pure economics] (Lausanne, 1874).

causes in large measure efface one another's influence" and production will adjust and push output prices back to where they correspond with given input prices. Ultimately, for Marshall, the important conclusion is "that the value of a thing tends in the long run to correspond to its cost of production."[33] But Marshall's major failure went unnoticed: by assuming an industry could not influence its cost of production, the economist fails to explain how the input prices are formed in the first place.

Marshall's partial equilibrium framework and stress on the long run enormously influenced the profession and caused it to downplay the marginalist revolution's insights about utility. Neoclassical economics became forever associated with Marshall, and the impact was so severe that Rothbard did not directly read any of the marginalist revolutionaries while at Columbia. He recalled that in preparation for the history of thought section of his PhD oral examination, he asked his examiner, John Maurice Clark, if he should read Jevons. To Rothbard's astonishment, Clark replied, "What's the point? The good in Jevons is all in Marshall."[34]

Marshall's dominance inspired Edward H. Chamberlin and Joan Robinson's monopolistic competition revolution in the 1930s.[35] This crucial component of the neoclassical synthesis discarded the concept of industry in favor of just focusing on an isolated firm that is so small it cannot influence input or output prices. This was a state of "perfect competition," an ideal situation which economists used to judge the actions of real-world firms.[36] The theories were mathematically elegant but, according to Rothbard, even more unrealistic and erroneous than theories based on the Marshallian industry.[37]

Marshall's legacy even extended to new macroeconomic theorists in the 1930s. John Maynard Keynes, whose *General Theory of Employment, Interest*

---

[33] Marshall, *Principles of Economics*, 8th ed., pp. 348–50. Robert B. Ekelund Jr. and Robert F. Hébert, *A History of Economic Theory and Method*, 6th ed. (Waveland Press, 2014), p. 359.

[34] Rothbard, *Austrian Perspective*, 1:xiv.

[35] Edward H. Chamberlin, *The Theory of Monopolistic Competition: A Re-Orientation of the Theory of Value* (Harvard University Press, 1933); Joan Robinson, *The Economics of Imperfect Competition* (Macmillan, 1933).

[36] Murray N. Rothbard, "The Theory of Monopolistic or Imperfect Competition," November 28, 1954, p. 6, Rothbard Papers.

[37] Rothbard, "Theory of Monopolistic or Imperfect Competition," pp. 1–7.

and Money had revolutionized the discipline, was a student of Marshall's and had taken his lectures at Cambridge University.[38] Marshallian partial equilibrium analysis greatly influenced Keynesian macroeconomics. However, Rothbard had learned in one of his classes with Arthur Burns that Keynes made a crucial mistake when he tried to construct his macroeconomics on the Marshallian microeconomic edifice.[39]

Rothbard explained this insight in an article he wrote for *analysis*, a small periodical edited by the libertarian writer Frank Chodorov. Rothbard learned of Chodorov "at the Columbia University bookstore one day in 1947" by stumbling upon a pamphlet titled *Taxation Is Robbery*.[40] Its caustic perspective on taxation enormously influenced Rothbard and accelerated his shift from free-market conservatism to radical libertarianism. Rothbard and Chodorov started to correspond that summer, and Chodorov asked Rothbard to "do a little writing for my broadsheet, on a . . . debunking of Keynesianism," the bête noire of many conservatives and libertarians.[41] Rothbard, well-versed in Marshallian economics and criticisms of the Keynesian system, quickly agreed and wrote a lengthy piece titled "Spotlight on Keynesian Economics."[42]

Rothbard started by defending "'neoclassical economics,' which is grounded on careful analysis of economic realities," and then attacked "the Keynesian theory . . . that drastically oversimplifies reality." He proceeded to construct the basic Keynesian model. "*Aggregate national income* . . . [is] equal to the aggregate of income received" and "the fundamental equation of the Keynesian system is *aggregate income = aggregate expenditures*." Aggregate expenditures are equal to consumption expenditures, determined by "a stable, passive function of income (the famous *consumption*

[38] John Maynard Keynes, *The General Theory of Employment, Interest, and Money* (Cambridge University Press, 1936); Tiziano Raffaelli, "Keynes's Apprenticeship with Marshall in 1905," *History of Economic Ideas* 8, no. 2 (2000): 121–52.

[39] Gordon, introduction to *Strictly Confidential*, p. 4.

[40] Rothbard, *Betrayal of the American Right*, p. 69. Frank Chodorov, *Taxation Is Robbery* (Human Events Associates, 1947).

[41] Frank Chodorov to Murray N. Rothbard, June 11, 1947, p. 1, Rothbard Papers.

[42] Murray N. Rothbard, "Spotlight on Keynesian Economics," October 20, 1947, in *Strictly Confidential*, pp. 223–40. Rothbard, *Betrayal of the American Right*, p. 69.

function)," and investment expenditures that are "effected independently of the national income."[43]

He then explained how, according to Keynes, an increase in spending can increase employment. If "expenditures increase . . . because of an increase in private investment," consumption is no longer equal to the fraction of income determined by the consumption function. Consequently, "income payments to consumers" will increase, and they increase consumption spending. Businesses respond by "expand[ing] their output of consumer goods" and once again pay out higher incomes that consumers spend. This process continues until "consumption is again equal to" the given "percent of income" determined by the consumption function. With the important assumption of constant "money wage rates," "for every level of national money income, there corresponds a unique, definite volume of employment."[44]

Therefore, increasing national income can increase overall employment. The "grand Keynesian climax" is that the "level of income determined in the free market" may produce substantial amounts of unemployment because money wage rates are above their market clearing levels—the famous "underemployment equilibrium."[45]

After explaining the model, Rothbard applied Burns's argument. He devotes the bulk of his criticism to the consumption and investment functions. "Keynesianism," Rothbard explains to Chodorov in a letter, "originates in standard Marshallian neo-classical equilibrium theory." Keynes was a Marshallian because he applied to the entire economy the partial equilibrium assumption that an isolated firm "can expand or contract its output . . . without changing . . . the cost curve and the price line." From the microeconomic perspective, this assumption is "generally true, because the firm is so small in comparison to the rest of the economic system." But the problem with Keynes is that he extended this Marshallian assumption to the macroeconomy, particularly the "large aggregates—consumption and investment." He stressed that the economist "cannot postulate that the determining functions will remain constant while the adjustment process

[43] Rothbard, "Spotlight on Keynesian Economics," pp. 227–28.
[44] Rothbard, "Spotlight on Keynesian Economics," pp. 229–30.
[45] Rothbard, "Spotlight on Keynesian Economics," pp. 230–31.

is going on, since you are now dealing with the whole economy instead of a small unit."[46]

Rothbard elaborated on this point in his article. Investment will change unevenly because "each firm will have to make its own adjustments to its own particular experience. . . . Profits will be distributed unevenly . . . [and] new firms will enter the economic system." The consumption function will change because of changes "in the distribution of income" and variables besides present income such as "past income, expected future income, . . . prices of commodities, [and] cash balances." The false assumption that the consumption and investment functions are constant constitutes "the basic fallacy of the Keynesian system."[47]

Rothbard's article, which Chodorov thought "excellent" but unpublishable because of space constraints, shows Rothbard's current state of development as an economic theorist.[48] He thoroughly understood the Keynesian model and its reliance on "misleading aggregative concepts."[49] But he focused his criticism far too narrowly on the determinants of aggregate expenditures and how Keynes misapplied Marshall's partial equilibrium analysis. He failed to realize the faults in Marshallian partial equilibrium analysis and that Keynes simply compounded its errors by applying faulty microeconomic reasoning to the macroeconomy.

An Institutionalist Dissertation

By the spring of 1948, Rothbard had passed his orals and was busy writing his doctoral dissertation. He had decided to write it along institutionalist lines, building upon his master's thesis, "Contemporary Opinion of the Depression of 1819–1821."[50] The institutionalist Joseph Dorfman, his dissertation advisor and a Columbia PhD (1935), was an expert in amassing a large number of facts to analyze the development of economic ideas. He dedicated his five-volume magnum opus, *The Economic Mind in American*

[46] Murray N. Rothbard to Frank Chodorov, September 20, 1947, pp. 1–2, Rothbard Papers.
[47] Rothbard, "Spotlight on Keynesian Economics," pp. 232–33.
[48] Frank Chodorov to Murray N. Rothbard, September 17, 1947, p. 1, Rothbard Papers.
[49] Rothbard, "Spotlight on Keynesian Economics," p. 233.
[50] Murray N. Rothard, "Contemporary Opinion of the Depression of 1819–1821" (master's thesis, Columbia University, 1946), Rothbard Papers.

Civilization, to "the first-born" of Veblen's intellectual heirs, his dissertation advisor Wesley Clair Mitchell, who "read numerous drafts and [offered] words of encouragement."[51] *The Economic Mind* was a massive compilation of the views of various economists, businessmen, and politicians on economics, cataloguing what they wrote and whom they influenced. Subsequent historians of thought recognized Dorfman's institutionalism and systematization of facts. "We are all indebted to Dorfman," Paul K. Conkin wrote, because his work was "encyclopedic. He missed no one."[52]

In his dissertation Rothbard set out to elaborate on Dorfman's insights concerning economic thought during America's first business cycle, the Panic of 1819. He focused on proposals to encourage economic recovery "and the speculations, controversies, and policies arising from them."[53] These included debtors' relief, monetary reform, public works, and protectionism. In each chapter, Rothbard used primary and secondary sources to provide a thorough recounting of contemporaries' views about the panic, what proposals they advocated, and how they influenced policies at the federal and state levels. He especially concentrated on early nineteenth-century monetary thought, with the bulk of the dissertation focused on debates over monetary expansion and bank credit restriction.

The dissertation, which Rothbard had mostly finished by mid-1951, provided a plethora of information on individuals' perspectives that historians could reference, but it had major weaknesses. Rothbard later admitted he "didn't analyze the causes" of the panic, nor did he provide an account that explained why proposals differed among individuals.[54] In other words,

[51] Joseph Dorfman, *The Economic Mind in American Civilization*, vol. 1, *1606–1865* (Viking Press, 1946), pp. v, xii. Joseph Dorfman, *The Economic Mind in American Civilization*, vol. 2, *1606–1865* (Viking Press, 1946); Joseph Dorfman, *The Economic Mind in American Civilization*, vol. 3, *1865–1918* (Viking Press, 1949); Joseph Dorfman, *The Economic Mind in American Civilization*, vol. 4, *1918–1933* (Viking Press, 1959); Joseph Dorfman, *The Economic Mind in American Civilization*, vol. 5, *1918–1933* (Viking Press, 1959).

[52] Paul K. Conkin, *Prophets of Prosperity: America's First Political Economists* (Indiana University Press, 1980), p. xii. Raimondo, *An Enemy of the State*, pp. 42–43; Rutherford, *Institutionalist Movement*, pp. 226, 239.

[53] Murray N. Rothbard, *The Panic of 1819: Reactions and Policies* (Columbia University Press, 1962), p. viii.

[54] Murray N. Rothbard, "A Conversation with Murray N. Rothbard," in *The Rothbard Reader*, ed. Joseph T. Salerno and Matthew McCaffrey (Mises Institute, 2016), p. 30.

Rothbard's dissertation lacked a theory of the business cycle or a theory of why various individuals proposed certain remedial actions. He did not attempt to test a theory that preceded the collection of facts—the positivist approach—nor did he try to emulate the institutionalists by developing a theory from the amassing of facts.

This shortcoming would not have been a major issue if the dissertation had served its primary purpose of allowing Rothbard to receive his PhD and graduate from Columbia. This guild card would have enabled him to advance in the academic profession and possibly obtain a position at a prestigious university. But this he could not do because, he lamented, a "monkey-wrench ha[d] been thrown into [his] timetable on finishing the thesis." Despite Dorfman having "approved it in glowing terms," Arthur Burns, "a member of the final committee examining the work," surprisingly shot it down. The two professors had different visions for the dissertation: "Dorfman is a historian of economic thought [and] has little use for the facts [of the business cycle] and wants major emphasis on" contemporaries' proposals about how to recover from the panic, while Burns "is only interested in the facts of business cycles" rather than contemporary opinions about policy. Dorfman, who was "scared stiff of Burns," sided with Burns. Unless the "professorial prima donnas" could "iron out their differences" or Burns left the committee, he could not graduate.[55]

Rothbard's training at Columbia powerfully shaped his intellectual development. His education provided him with foundational knowledge of the rising neoclassical synthesis, which prepared him well for a career as an orthodox economist. He had learned methodological, theoretical, and empirical techniques from some of the best professors in the nation. However, he did not yet grasp that much of what he learned was false. Positivism could expose the flaws in institutionalism, but the errors in the positivist method remained hidden. Marshallian price theory enabled Rothbard to attack the weaknesses in the Keynesian model, even though use of this price theory severely weakened his own argument. Rothbard's dissertation exemplified the institutionalist approach to economic history, yet it did not illuminate

[55] Murray N. Rothbard to Herbert C. Cornuelle, October 16, 1951, p. 1, Rothbard Papers. Raimondo, *An Enemy of the State*, pp. 43–44.

the causal forces behind the mountain of facts. Furthermore, Rothbard avoided discussion of earlier thinkers because he was taught that subsequent economists always improved upon their ideas. Rothbard concluded that his neoclassical education made him "very unhappy with all the economic theory" because it lacked "a good theoretical base."[56] Perceiving that there was more to economics, he started to search for answers outside of his university.

The William Volker Fund

Rothbard soon found the appropriate organizations that could further develop his understanding of economic theory. It started with discovering scholars that shared his conservative and libertarian perspective. While taking Stigler's class on price theory in the fall of 1946, Stigler referred the students to a publication he had coauthored with Friedman, *Roofs or Ceilings?*, a pamphlet on how rent control created housing shortages.[57] Stigler explained that an obscure organization called the Foundation for Economic Education (FEE) in New York recently published their pamphlet because "nobody else would." By November, Rothbard wrote to FEE for the work. By contacting the organization, he "unwittingly 'entered' the libertarian movement" and soon discovered Austrian economics.[58]

Leonard Read had founded FEE in that year, intending it to serve as the nucleus for free-market teaching and scholarship, a field in serious disrepute since the New Deal and the Keynesian revolution. The "creation of FEE," Rothbard reminisced, "marked the beginning of the modern libertarian movement in America."[59] Read established the institution thanks to a grant from the William Volker Fund, an organization that was rapidly transforming its mission away from charitable activities and into promoting conservative and libertarian scholarship, including works written by Chicago School economists. Harold Luhnow, the new president of the fund,

[56] Block and Grinder, "Rothbard Tells All," p. 6.

[57] Milton Friedman and George J. Stigler, *Roofs or Ceilings? The Current Housing Problem* (Foundation for Economic Education, 1946).

[58] Rothbard, *Betrayal of the American Right*, p. 66. Rothbard, *Betrayal of the American Right*, pp. 65–66; Murray N. Rothbard to Foundation for Economic Education, November 23, 1946, p. 1, Rothbard Papers.

[59] Murray N. Rothbard, "Toward a Strategy for Libertarian Social Change," April 1977, p. 132, Rothbard Papers.

also provided indispensable funding for the first meeting of the Mont Pelerin Society and indirectly worked with the free-market Earhart Foundation and Henry Regnery Company. Most importantly, Luhnow used his resources to help an obscure economist, Ludwig von Mises, then languishing at New York University (NYU).[60]

Mises was the doyen of what remained of the Austrian School of economics. In sharp contrast with the neoclassical synthesis, Mises used the praxeological method of economic reasoning to develop a body of qualitative theorems that explained real-world price formation, the entrepreneurial function in allocating resources in an uncertain world, the temporal structure of heterogeneous capital goods, and permanent alterations in the economy caused by changes in the money supply. Mainstream economists dismissed Austrian economics because praxeological reasoning stood diametrically opposed to modern mathematical reasoning and empirical testing. Despite reaching similar free-market conclusions, Chicago positivists also found Austrian economic theories outdated. Even Mises's former disciple, Lionel Robbins, who had fallen under the personal influence of Keynes during World War II, had repudiated Austrian economics.[61]

Despite its greatly diminished numbers and influence during the 1940s, the Austrian School had, on two earlier occasions, boasted some of the most famous economists in the world. In the first instance, Eugen von Böhm-Bawerk of the University of Vienna clashed with Alfred Marshall about capital theory in the early 1900s. The second instance occurred during the 1930s when Hayek, then at the London School of Economics, having advanced Böhm-Bawerk's capital theory, used it in his debate with John Maynard Keynes on monetary and business cycle theory. These prominent debates

[60] Brian Doherty, *Radicals for Capitalism: A Freewheeling History of the Modern American Libertarian Movement* (PublicAffairs, 2007), pp. 181–87; Jörg Guido Hülsmann, *Mises: The Last Knight of Liberalism* (Mises Institute, 2007), pp. 865, 867; Michael J. McVicar, "Aggressive Philanthropy: Progressivism, Conservatism, and the William Volker Charities Fund," *Missouri Historical Review* 105, no. 4 (2011): 197–200; Murray N. Rothbard, *The Essential von Mises* (Mises Institute, 2009), pp. 39–40; Rothbard, "Toward a Strategy for Libertarian Social Change," pp. 131–33.

[61] F. A. Hayek, *Hayek on Hayek: An Autobiographical Dialogue*, ed. Stephen Kresge and Leif Wenar (University of Chicago Press, 1994), p. 94; Samuelson, *Foundations of Economic Analysis*, pp. 117–18; George J. Stigler, *Production and Distribution Theories* (Macmillan, 1941), pp. 179–227.

reflected well on Mises because he was a student of Böhm-Bawerk's and his writings heavily influenced Hayek. But with the rise of the neoclassical synthesis in the late 1930s and early 1940s, the Austrian School's influence rapidly dissipated.[62]

This collapse adversely affected Mises. It was an unfortunate turn of events for a man who might have received a Nobel Prize in the 1920s had the award been established at that time. Instead, *Nationalökonomie*, his monumental treatise in the tradition of Böhm-Bawerk's *Capital and Interest* that expounded the entire corpus of Austrian economic theory, sank without a trace in World War II.[63] Even worse, the Nazis forced Mises to flee to the United States. Mises was relegated to a part-time position at FEE and a visiting professorship at New York University's Graduate School of Business. The latter was a temporary position, but the Volker Fund's financing soon made it permanent. Hayek didn't fare much better than Mises: after the war, the economics department at the University of Chicago contemplated hiring him, but its members rejected his capital theory and methodological views. Instead, Hayek landed a Volker Fund–financed position at the Committee on Social Thought at the university, spending the 1950s writing on subjects outside of economics in semiobscurity.[64]

Unlike Columbia University, New York University was then a poorly ranked school that did not begin to ascend in the rankings until the 1970s and 1980s. Even at this academic backwater, the faculty and administration dismissed Mises as a free-market crank who had nothing to contribute to the profession. Israel Kirzner, Mises's graduate assistant and doctoral student in

---

[62] Jeffrey M. Herbener et al., introduction to *Human Action: A Treatise on Economics*, scholar's ed., by Ludwig von Mises (Mises Institute, 2008), pp. v–x; Hülsmann, *Mises*, pp. 141–50; Salerno, "The Place of Mises's *Human Action*," pp. 38–57; Mark Skousen, *The Structure of Production*, new rev. ed. (New York University Press, 2007), pp. 28–33, 43–83; Nicholas Wapshott, *Keynes–Hayek: The Clash That Defined Modern Economics* (W. W. Norton, 2011).

[63] Eugen von Böhm-Bawerk, *Kapital und Kapitalzins* [Capital and interest], 4th ed. (Gustav Fischer, 1921); Ludwig von Mises, *Nationalökonomie: Theorie des Handelns und Wirtschaftens* [Economics: Theory of action and exchange] (Editions Union, 1940).

[64] Simon Bilo, "Mises and His Money," *Review of Austrian Economics* 33, no. 1 (2020): 131–34; Lanny Ebenstein, "Hayek's Divorce and Move to Chicago," *Econ Journal Watch* 15, no. 3 (2018): 309–18; Hayek, *Hayek on Hayek*, pp. 126–28; Hülsmann, *Mises*, pp. 746–98, 845–53; Salerno, "Place of Mises's *Human Action*," pp. 57–59; Paul A. Samuelson, "Bertil Ohlin (1899–1979)," *Scandinavian Journal of Economics* 83, no. 1 (1981): 358.

the 1950s, remarked that "Mises was marginalized by the rest of the faculty" and "there may have been cases where students were advised against taking his classes." Most of Mises's students were business majors without any real interest in economics who signed up for his classes because they heard he "gave everyone a B."[65] Needless to say, New York University was not an academic institution for someone of Mises's eminence.[66]

In 1949, while busily at work on his dissertation, Rothbard discovered Mises and Austrian economics through his connections at FEE. The yawning gap in his Columbia education suddenly became apparent to Rothbard: previously he had only heard of Mises as someone who argued "that socialism can't calculate." In fact, he "didn't even know that Mises was still alive."[67] He now learned that Mises was starting a graduate seminar on September 29th at New York University, sponsored by the Volker Fund. He also found out that Mises's English-language version of *Nationalökonomie*, substantially revised and retitled *Human Action*, was scheduled to come out in mid-September by Yale University Press.[68] Several scholars protested the decision, but Yale's conservative- and libertarian-minded editor Eugene Davidson pushed it through. Corresponding with Herbert C. Cornuelle, an associate of Leonard Read turned Volker Fund administrator, Rothbard got in touch with Mises. Cornuelle told Mises that Rothbard was "one of the most outstanding [classical] liberal economic students [who was] interested in the possibility of attending your seminar."[69] Mises agreed to let Rothbard participate in the seminar. When Rothbard started to attend Mises's seminar and read *Human Action*, he embarked on the next phase of his intellectual development.[70]

---

[65] Israel Kirzner, interview by Brian Doherty, February 9, 1997, quoted in Doherty, *Radicals for Capitalism*, pp. 206, 212.

[66] New York University, "A Brief History of New York University," in Faculty Handbook (New York University, 2024), pp. 7–8; Doherty, *Radicals for Capitalism*, pp. 205–12; McVicar, "Aggressive Philanthropy," pp. 198–200; Rothbard, *Betrayal of the American Right*, p. 66; Rothbard, *Essential von Mises*, pp. 103–4, 106.

[67] Block and Grinder, "Rothbard Tells All," p. 6.

[68] Ludwig von Mises, *Human Action: A Treatise on Economics* (Yale University Press, 1949).

[69] Herbert C. Cornuelle to Ludwig von Mises, June 17, 1949, p. 1, Rothbard Papers.

[70] Doherty, *Radicals for Capitalism*, pp. 182–83; Herbener et al., introduction to *Human Action*, scholar's ed., pp. xiii–xiv; Hülsmann, *Mises*, pp. 883–86; Rothbard, *Essential von Mises*, pp. 103, 110.

Part II

A Misesian Textbook, 1949–1953

Murray Rothbard's economic perspective changed significantly in 1949 when he met Ludwig von Mises and read his magnum opus, *Human Action*.[1] With the financial support of the Volker Fund, Rothbard accepted Mises's offer to write a textbook rendition of his treatise. Early on, Rothbard evinced a thorough understanding of Mises's monetary transmission mechanism and praxeological method. This allowed him to further develop the theories of value and price formation the emerging neoclassical synthesis had neglected. In particular, Rothbard used the means-ends relationship to deduce the law of ordinal marginal utility rankings and contrasted it with modern theories of utility. He then showed how this law logically resulted in demand schedules that always sloped downward, which in turn led to a theory of pricing that explained the process of equilibration to the market clearing price. Finally, he extended his analysis to price formation in a monetary economy. In addition to exhibiting his own intellectual progress, Rothbard's developments significantly advanced economic science because Mises assumed these logical deductions but never actually derived them.

The Textbook Project

When Rothbard started to read *Human Action*, the twenty-three-year-old experienced what he later described as "an enormous revelation . . . on the

[1] Ludwig von Mises, *Human Action: A Treatise on Economics*, scholar's ed. (Mises Institute, 2008).

economic theory front."[2] Where before Rothbard felt an inchoate dissatisfaction with the contemporary state of economic theory, now he clearly recognized and articulated the serious problems in the traditions dominant at Columbia University and other leading research centers. Rothbard revealed his radical change of perspective in letters he wrote to Mises in September 1949 and May 1950 while he was still a graduate student at Columbia.

Writing to Mises before he had finished reading half of the treatise, Rothbard already perceived the importance of the praxeological method that Mises deployed to develop his theoretical structure. Rothbard considered praxeology strikingly different from the institutionalism and positivism he learned at Columbia, deeming Mises's "development of the relationship between praxeology and economics . . . a tremendous contribution." Mises's "masterful analysis" had moved beyond Lionel Robbins's *Nature and Significance of Economic Science* and "for the first time established a firm methodological base for economics in praxeology."[3]

Rothbard's discovery of praxeology caused him to reject the strictures he heard at Columbia about the relative unimportance of doctrinal history for the progression of economic theory. He boldly proposed that Mises "now undertake the task of providing us with a *Dogmengeschichte* [i.e., doctrinal history]" because "no good history of economic thought exists" and Mises could clarify the differences between the Austrian and neoclassical approaches. Rothbard's proposal was partially motivated by his understanding "that Professor [Joseph] Schumpeter," a leading Walrasian with some Austrian leanings, "is at work on a history of economic thought."[4] Rothbard feared that if Schumpeter's "interpretations and evaluations are allowed to go unchallenged, it is sure to have an injurious effect on present and future generations of economists" by diluting the Austrian tradition

[2] Walter Block and Walter Grinder, "Rothbard Tells All: Interview with Murray Rothbard," December 1972, p. 6, Rothbard Papers.

[3] Murray N. Rothbard to Ludwig von Mises, September 22, 1949, pp. 1–2, Rothbard Papers. Lionel Robbins, *An Essay on the Nature and Significance of Economic Science*, 1st ed. (Macmillan, 1932); Lionel Robbins, *An Essay on the Nature and Significance of Economic Science*, 2nd ed. (Macmillan, 1935).

[4] Joseph A. Schumpeter, *History of Economic Analysis* (Oxford University Press, 1954).

with the Walrasian neglect of time and uncertainty. (Schumpeter died shortly after the letter was written, in January 1950.)[5]

In mid-1950, after finishing the book and attending the seminar, Rothbard reflected on how *Human Action* had totally revolutionized his understanding of economic theory. He now characterized the eclectic approaches that he had been taught at Columbia as "a vast inchoate labyrinth of disintegrated compartments." The neoclassical synthesis treated core elements of economics, particularly "monetary theory" and "price theory," no differently than peripheral topics like "agricultural economics" and "transportation economics," each existing "in its own void" and unconnected with all the other parts. This sharply contrasted with *Human Action*, which contained "the revelation of economics as one magnificent, complex, but integrated structure of thought." "The concept of praxeology," Rothbard stated, "is a brilliant new conception."[6]

Rothbard went as far as to suggest to Mises for the following year's seminar at New York University "two topics of great importance." The first was a comparison of "sound economics as exemplified by *Human Action*" and the prevailing "neoclassicism as exemplified by such works as Marshall's *Principles* [*of Economics*], Hicks' *Value and Capital*, and Stigler's *Theory of Price*."[7] The second topic suggested by Rothbard was the epistemology of economics, "another course grievously neglected in all graduate schools." This lacuna in the curriculum has dire consequences for students, who "flounder among conflicting methodologies" and "usually give up theory altogether, and take refuge in what they conceive to be 'solid fact'—such as compiling index numbers."[8]

It is clear that Rothbard had completely moved beyond his Columbia foundations to embrace Austrian economics and the Misesian paradigm. He now grasped the significance of the axiomatic-deductive, praxeological

[5] Rothbard to Mises, September 22, 1949, p. 2, Rothbard Papers; Elizabeth Schumpeter, introduction to Schumpeter, *History of Economic Analysis*, p. xxxv.

[6] Murray N. Rothbard to Ludwig von Mises, May 18, 1950, p. 1, Rothbard Papers.

[7] John R. Hicks, *Value and Capital: An Inquiry into Some Fundamental Principles of Economic Theory*, 2nd ed. (Oxford University Press, 1946); Alfred Marshall, *Principles of Economics*, 8th ed. (Macmillan, 1920); George J. Stigler, *The Theory of Price* (Macmillan, 1946).

[8] Rothbard to Mises, May 18, 1950, pp. 1–2.

method for formulating a unified structure of economic theory. This impressed the fastidious Mises, who responded in early 1950 with delight "to learn that your ideas agree with mine." "What separates the various 'schools' of economics from one another," Mises wrote to his budding protégé, "is their epistemological approach." Mises hoped Rothbard would soon earn his doctorate so he could "write a great book on the problems [Rothbard] refer[red] to in [his] letter."[9] These powerful words motivated the young Misesian.

Mises did not know it, but the seeds of Rothbard's "great book" had already sprouted. The previous November, Rothbard had written to Herbert C. Cornuelle that Mises "discussed with [him] the project for an economics textbook and guide for the intelligent layman" along the lines of *Human Action*. This project would be financed by the Volker Fund and allow Rothbard to continue to learn Austrian economics, thereby preparing him to write the larger book Mises had envisioned. When Rothbard agreed, Mises "asked [him] to prepare an outline." Mises "like[d] the outline" and "suggeste[d] that [he] write a representative chapter."[10] In 1950, Rothbard wrote such a chapter on the crucial topic of monetary economics, which Mises told Cornuelle was "very satisfactory. It certainly proves his ability to write a textbook much better than all those [he] had the opportunity to see."[11]

Rothbard then brainstormed how he would write the book and described his outline in detail to Cornuelle in early 1951. He began by criticizing contemporary neoclassical economics as represented by a widely used textbook, Mary Jean Bowman and George Leland Bach's *Economic Analysis and Public Policy*.[12] He characterized this 931-page work as "a fantastic jungle, a hodgepodge of almost every conceivable fashionable doctrine and set of facts (most of them fallacious) and presented in an amazingly chaotic fashion." Surveying textbooks of the pre-1920 era did not yield much better results and, in Rothbard's opinion, Frank A. Fetter's *Economic Principles* was still

---

[9] Ludwig von Mises to Murray N. Rothbard, May 29, 1950, p. 1, Rothbard Papers.

[10] Murray N. Rothbard to Herbert C. Cornuelle, November 28, 1949, p. 1, Rothbard Papers.

[11] Ludwig von Mises to Herbert C. Cornuelle, January 25, 1951, p. 1, Rothbard Papers. Herbert C. Cornuelle to Murray N. Rothbard, February 10, 1951, p. 1, Rothbard Papers.

[12] Mary Jean Bowman and George Leland Bach, *Economic Analysis and Public Policy*, 2nd ed. (Prentice-Hall, 1949).

"about the best text available," although it contained several expositional gaps and theoretical flaws relating to utility, price, and capital theory.[13]

The "sound textbook" that Rothbard envisioned would thus be "a pioneering project" and require a significant amount of time and Volker Fund resources. But the results would be well worth it. Using the praxeological method, Rothbard would "create an edifice . . . namely, a logical step by step development of the Misesian theoretical structure." "I am convinced," Rothbard wrote, that the student, following this step-by-step logic that started with "simple praxeological axioms," would "realiz[e] the absurdity of his socialist and interventionist beliefs. He would become a libertarian in spite of himself." Rothbard would thereby "do for Mises what [J. R.] McCulloch did for [David] Ricardo, i.e., presenting the content and spirit of the master in a purified, remorselessly logical manner, to serve as [an] economic guide for the serious student and intelligent layman."[14]

Eager to start the project, Rothbard decided that he did not want to "waste time waiting" for Joseph Dorfman and Arthur Burns to settle their disagreements over his dissertation. He would not spend his time revising his PhD. Instead, he would write his textbook on Austrian economics while remaining a graduate student. This momentous decision delayed his academic career, but it did provide ample time to immerse himself in his new undertaking.[15]

The Money Chapter

As noted, in preparation for his projected textbook, Rothbard wrote a sample chapter on money that Mises approved, which he titled "Money and Banking on the Unhampered Market."[16] Rothbard "had the aid of Mises's *Theory of Money and Credit*, which served as an admirable elaboration of the

---

[13] Murray N. Rothbard to Herbert C. Cornuelle, March 14, 1951, p. 1, Rothbard Papers. Frank A. Fetter, *Economic Principles* (Century, 1915).

[14] Rothbard to Cornuelle, March 14, 1951, pp. 2–3. J. R. McCulloch, *The Principles of Political Economy* (Edinburgh, 1825); David Ricardo, *On the Principles of Political Economy and Taxation* (London, 1817).

[15] Murray N. Rothbard to Herbert C. Cornuelle, October 16, 1951, p. 1, Rothbard Papers.

[16] Murray N. Rothbard, "Money and Banking on the Unhampered Market," 1950, Rothbard Papers.

money section of *Human Action*."[17] The chapter demonstrated Rothbard's facility in mastering Mises's praxeological method and monetary theory and provided him with ample training on using the praxeological method for a principles textbook.

Rothbard's chapter spelled out Mises's theory of money and criticized the monetary economics of Mises's old rival, Irving Fisher. Fisher's influential *Purchasing Power of Money* advanced a holistic quantity theory of money—an increase in the money supply causes a proportional increase in the prices of goods, or inversely, a fall in the purchasing power of money (PPM). According to Fisher, the PPM is "the reciprocal of the level of prices" and changes in it could be measured with an aggregative price level index.[18] Though changes in the money supply caused short-term transitional effects, in the long-run end state it only changed overall prices and hence was neutral to relative prices and real activity. Rothbard, already anti-Fisher from his class with Benjamin H. Beckhart, set out to dismantle Fisher's theory.[19]

In sharp contrast to Fisher's neoclassical monetary theory, the centerpiece of Mises's monetary doctrine is the monetary transmission mechanism's uneven adjustment of the PPM to a change in the supply of or demand for money. This equilibration ripples out from the source of the disturbance and unevenly affects different individuals and markets, altering the entire structure of relative money prices, the allocation of resources, and the distribution of real income. Contra Fisher, money is nonneutral both during the transitional short run and in the long run.

There are two important implications of this long-run nonneutrality. First, because a change in the money supply does not cause a proportional change in the PPM, Fisher erred when he spoke of movements in "price levels."[20] Second, changes in the money supply do not affect social welfare. The monetary adjustment process only changes the real income and wealth of some individuals at the expense of others.

---

[17] Rothbard to Cornuelle, March 14, 1951, p. 3. Ludwig von Mises, *The Theory of Money and Credit*, US ed. (Harcourt, Brace, 1935).

[18] Irving Fisher, *The Purchasing Power of Money: Its Determination and Relation to Credit Interest and Crises* (Macmillan, 1911), p. 14.

[19] Fisher, *Purchasing Power*, pp. 8–32, 55–60.

[20] Fisher, *Purchasing Power*, p. 14.

The core of Rothbard's money chapter is the explication of the nature and operation of the monetary adjustment process and its effect on social welfare in sections 5, "Determination of the Purchasing Power of Money," and 6, "Utility of the Supply of Money." Rothbard closely adhered to Mises's exposition in *The Theory of Money and Credit* and *Human Action* and fleshed it out considerably.

Rothbard began by explaining how an increase in the supply of money disrupts the PPM equilibrium, thereby demonstrating the short- and long-run nonneutrality of money. The first receiver, a "Mr. Jones," finding himself with "excess cash balance," increases his demand for various goods and services, particularly apples and adding machines (calculators). The sellers of these goods then spend their excess cash balances on the goods they desire—clothes and automobiles. As a result, the prices of apples, adding machines, clothes, and automobiles increase and production of these goods expands as businesses "shift . . . resources, capital and labor, from" the production of other goods. As this sequential process continues, "the new supply of money becomes diffused throughout the economy" until it reaches the late receivers, the prices and production of all goods finally change, and there is no longer a surplus of cash balances at prevailing prices. Upon the completion of this equilibrating process, the "new equilibrium of purchasing-power will have an entirely different price-structure than the old equilibrium. Some prices will have risen further than others." In other words, the monetary adjustment process completely changes relative prices and production.

This nonneutrality of money still holds even if increases and decreases in the supply of money cancel each other out in the aggregate. Suppose Jones's "money supply increases . . . at the very moment that Smith" lost his money in a shipwreck, which leaves Jones with an excess supply of cash balances and Smith with an excess demand. Jones will thus reduce his cash balances by expanding his demand for apples and adding machines, while Smith does the opposite and replenishes his diminished cash holdings by selling wheat and furniture at a lower price: "the money supplied by Jones sets up eddies of increased prices for apples, adding machines, and other goods. . . . The money withdrawn from the market by Smith sets up eddies of lower prices for wheat, furniture, etc." Rothbard shows conclusively that, although the overall money supply remains constant and "the general purchasing power may remain about the same, the structure of prices may change considerably."[21]

Having established the nonneutrality of money with respect to prices, Rothbard proceeded to criticize attempts to precisely measure the PPM and changes in it. This is because the PPM is the list of the reciprocals of individual money prices—that is, the array of alternative quantities of goods and services that can be purchased with a unit of money. For example, the "Purchasing Power of [the] Money Unit" could be "1 pair shoes, 1/100 plow, [or] 10 dozen eggs." Therefore, since the PPM "must encompass every commodity that can be purchased with the money, [it] cannot be subject to precise quantitative expression."

It is even harder to measure changes in the PPM because the monetary transmission mechanism demonstrates that "prices do not all move together as do the waters of the ocean in a 'price level.'" Rothbard provided an example: if the money supply increases by 20 percent, the uneven adjustment process causes some prices to increase more than 20 percent and some less. This means that "there is no warrant for concluding that there will be a 20% drop in the purchasing power of money." Overall, "there is no method of measuring changes in the purchasing power of money over time."[22]

Rothbard continued his discussion of the PPM's immeasurability in a paper he presented at Mises's NYU seminar in October 1952 titled "Fisher's Equation of Exchange—A Critique." Rothbard argued that the equation of exchange (money supply times the velocity of money equals the price level times total goods bought) is "a pernicious one" because "there is no price level . . . there are only individual prices of specific goods." Prices cannot be averaged without engaging in the impossible activity of "adding or multiplying of the quantities of completely different units of goods." This means that "the holistic equation is false, and the price level remains

[21] Rothbard, "Money and Banking," pp. 46–49, 60. Mises, *Human Action*, pp. 408–11, 413–16; Ludwig von Mises, *The Theory of Money and Credit*, 2009 ed. (Mises Institute, 2009), pp. 131–45.

[22] Rothbard, "Money and Banking," pp. 13, 44, 47. Mises, *Human Action*, pp. 220–29; Mises, *Theory of Money and Credit*, pp. 187–94.

pure myth, an undefinable concept."[23] Rothbard mentioned in a letter that he was "flattered by Mises' reaction." Mises encouraged him to "elaborate on [his paper] and try to publish it," although Mises was "of course pessimistic about the chances of this or any other good economics article being published in the journals." Rothbard thought it "worth a try" because of Fisher's prominence in economics textbooks and other publications, but no record exists of his attempting to publish the paper.[24]

After discussing in his chapter the nonneutrality of money and the immeasurability of the price level, Rothbard explained the social welfare effects from a change in the money supply. Following Mises, Rothbard recognized that consumer goods provide "utility for each individual on the basis of [their] direct use" in consumption and "capital goods are evaluated indirectly by businessmen on the basis of the consumer goods that they can assist in producing." Consumer goods are scarce "in relation to the vastness of individual wants . . . [and] the resources needed to produce these goods—the supply of labor and capital goods—[are] severely limited." An increase in the "supply of shoes," for instance, can occur through "increased saving and capital investment in shoe production." Scarcity means "that any increase in the supply of goods, consumer or capital, constitutes a net increase in general public welfare." In making this welfare judgment, Rothbard is not "imply[ing] that there exists any measurable 'total welfare.'" Instead, he is tying the Pareto unanimity principle "that some or all individuals benefit by the change, while none loses as a result of the change," to the supply of produced consumer goods and services.

In contrast, money "has no direct uses; its sole utility is its superior marketability and use as a medium of exchange." Changes in the money supply do not increase the supply of resources or savings. Instead, during the nonneutral reconfiguration of prices and production, there are "transition gains by some at the expense of transition losses by others, as well as some permanent gains at the expense of permanent losses." Therefore, since changes in the money supply do not alter the supply of consumer goods,

[23] Murray N. Rothbard, "Fisher's Equation of Exchange—A Critique," October 1952, pp. 5–6, Rothbard Papers. Murray N. Rothbard, *Man, Economy, and State with Power and Market*, 2nd scholar's ed. (Mises Institute, 2009), pp. 831–42.

[24] Murray N. Rothbard to Herbert C. Cornuelle, October 20, 1952, p. 1, Rothbard Papers.

an expansion or contraction of the money supply can neither increase nor decrease general welfare and "an increased supply of money constitutes no net social benefit [and] a decreased supply of money is not a net social loss."[25]

Following Mises, Rothbard notes two exceptions and explains how changes in the money supply could affect savings and hence the supply of consumer goods. First, an increase in the money supply may bring about a situation in which "the gainers of wealth . . . will increase their savings by more than the losers decrease theirs." In this case, total savings and capital goods formation increases, leading to additional consumer goods and improved general welfare. But this is not due to the increase in the money stock per se. In fact, it is no less reasonable to assume that "the gainers['] added savings . . . will be less than the lowered savings of the losers." In other words, "whether the supply of money increases or decreases, total savings . . . may either increase or decrease," and economic theory cannot say with certainty which will occur.

Second, "large increases in the money supply and the consequent large fall in purchasing power tend to falsify economic accounting" through traditional bookkeeping methods that evaluate assets at their original cost. Increases in the money supply and prices tend to lead to "illusory 'profits'" because inflated current revenues exceed historical costs. This leads the owners of the firms to spend their false profits on consumption, resulting in an inadvertent consumption of capital (savings). Conversely, decreases in the money supply and prices "exaggerate business losses" as revenues plunge below historical costs. Consequently, business owners retrench on consumption and "the supply of capital is unwittingly increased."

Rothbard did not discuss the third exception Mises made in his monetary welfare analysis, that an increase in the supply of commodity money, such as gold, is a resource that could be used to produce goods. Although earlier in the chapter Rothbard discussed how money demand is partially determined by the "demand for direct consumption," because he now assumed money "has no direct uses" he did not show how changes

[25] Rothbard, "Money and Banking," pp. 53–56, 60–61. Mises, *Human Action*, pp. 416–19, 428; Mises, *Theory of Money and Credit*, 2009 ed., pp. 79–86, 142, 208.

in the purchasing power of money induce actors to use more or less of the monetary commodity for producing consumer goods.[26]

After he read and approved Rothbard's sample money chapter, Mises continued to be impressed by the graduate student's writing on monetary economics. When he presented on free banking in April 1953, Rothbard reported that he thought "Mises liked the report; he said it was 'very interesting.'"[27] In it, Rothbard discussed how free-market competition among banks limits credit expansion, a topic he mentioned in his sample money chapter. Rothbard believed that "the economic analysis is pure Mises, but the political conclusions differ," particularly regarding whether fractional-reserve banking was fraudulent.[28] But Rothbard noted that in his comments that Mises "gave special mention to the distinction, which I found in [William Stanley] Jevons, between a 'special deposit warrant' and a 'general deposit warrant,' which he said derives from old Roman law."[29] A couple of years later, Mises commented on a pamphlet Rothbard wrote for the Foundation for Economic Education titled "Money, Free and Unfree."[30] Mises declared that Rothbard had "succeeded rather well in giving to the general reader a correct interpretation of the intricate problems involved. . . . There is little doubt that Dr. Rothbard's draft can provide the discriminating layman with knowledge that no other available publication could furnish." However, Mises considered Rothbard's "plan for a reform of the American currency and banking system . . . unworkable."[31] Although Rothbard disagreed with his mentor over the legal aspects of banking and his plan for returning to the gold standard in the 1953 edition of *The Theory of Money and Credit*,

[26] Rothbard, "Money and Banking," pp. 22, 55, 62–65. Mises, *Human Action*, pp. 416–17, 421–22, 545–47; Mises, *Theory of Money and Credit*, pp. 203–6, 346–48.

[27] Murray N. Rothbard to Herbert C. Cornuelle, May 26, 1953, p. 1, Rothbard Papers. Murray N. Rothbard, "The Question of Free Banking," April 1953, pp. 1–10, Rothbard Papers.

[28] Murray N. Rothbard to Herbert C. Cornuelle, May 4, 1953, p. 1, Rothbard Papers.

[29] Rothbard to Cornuelle, May 26, 1953, p. 1. William Stanley Jevons, *Money and the Mechanism of Exchange*, 16th ed. (Kegan Paul, Trench, Trübner, 1907), pp. 201–11.

[30] Murray N. Rothbard, "Money, Free and Unfree," June 1957, pp. 1–85, Rothbard Papers.

[31] Ludwig von Mises to Miss Brown, October 21, 1957, p. 1, Rothbard Papers.

there is no question that very early in his career he demonstrated strong command of Mises's monetary economics.[32]

Rothbard's immersion in Mises's monetary economics set the stage for explaining in his textbook how prices on individual markets adjust to changes in the data. In his chapters on money and prices in *Human Action*, Mises failed to expound the causal process by which individual prices actually adjust.[33] It was left to Rothbard to fully develop this realistic theory of price formation that undergirds Mises's monetary adjustment process.

The Praxeological Method

When writing his monetary chapter, Rothbard made skillful use of the praxeological method. Moving beyond Columbia's methodological hodgepodge of positivism and institutionalism was essential to writing a textbook that presented Mises's theoretical system, especially price theory, as a step-by-step deduction of the implications of human action and several broadly empirical postulates.

Rothbard explained to the Volker Fund how he could use the praxeological method in his textbook to derive the general laws of human behavior. He "realized that it is possible to begin with one simple, self-evident assumption: *human existence*, and deduce all propositions in economics from it. The essence of human existence is *human action*, and once action is defined, all further economic truths can be deduced by logical implication." Because the purpose of his textbook was to develop economic theory and not discourse on finer points of method, Rothbard restricted his discussion of methodology to journal articles and presentations for the Mises seminar. This allowed him to engage with the economics profession on current techniques regarding the testing of theories and measurement of economic phenomena.[34]

[32] Ludwig von Mises, *The Theory of Money and Credit*, new ed. (Yale University Press, 1953), pp. 448–56; Rothbard to Cornuelle, May 4, 1953, p. 1; Rothbard to Cornuelle, May 26, 1953, p. 2; Murray N. Rothbard to Edward C. Facey, October 18, 1956, pp. 1–2, Rothbard Papers.

[33] Mises, *Human Action*, pp. 324–475.

[34] Murray N. Rothbard, "Progress Report, January 1 to October 1, 1952," n.d., p. 3, Rothbard Papers.

One of his first discussions of the relationship between the praxeological method and empirical testing concerned a negative review of *Human Action* in the 1950 volume of the *American Economic Review*, one of the profession's leading journals. The critic was George Schuller, who criticized Mises's praxeological method and a priori epistemology.[35] Fresh from writing a laudatory review of *Human Action* for Frank Chodorov's *analysis*, Rothbard defended Mises's approach and stated its tenets in a comment and then in a reply after Schuller responded.[36] That the journal published Rothbard's remarks shows that one of the discipline's leading outlets valued what he had to say on the matter. In his comment, Rothbard emphasized the simple "test of observation" required for the action axiom, the disutility of labor, the variety of resources, and other axioms.[37] "The important consideration," Rothbard continued in his reply, is that obtaining knowledge of the axioms requires "certainly a different type of 'empiricism' from the study of historical events and is definitely 'a priori' to those events, and that such a situation has no parallel in the physical sciences."[38]

These remarks reveal an important point: Rothbard, who adhered to an Aristotelian perspective stressing that knowledge can only be learned from the apparent facts of experience, could still readily defend Mises's neo-Kantian perspective, which argued that humans can know certain phenomena without reference to the external world. Indeed, Rothbard had sent Mises a copy of his comment before it was published, expressing doubt that the *American Economic Review* "will print it," while proudly proclaiming that he "tried as best [he] could to answer Schuller's fallacious statements."[39]

No record exists of Mises's response, but Rothbard apparently impressed his mentor enough to earn the opportunity to present on methodology at

---

[35] George J. Schuller, review of *Human Action: A Treatise on Economics*, by Ludwig von Mises, *American Economic Review* 40, no. 3 (1950): 418–22.

[36] Murray N. Rothbard, "Mises' *Human Action*: Comment," *American Economic Review* 41, no. 1 (1951): 181–85; Murray N. Rothbard, "Praxeology: Reply to Mr. Schuller," *American Economic Review* 41, no. 5 (1951): 943–46; Murray N. Rothbard, review of *Human Action: A Treatise on Economics*, by Ludwig von Mises, *analysis* (May 1950): 4; George J. Schuller, "Mises' *Human Action*: Rejoinder," *American Economic Review* 41, no. 1 (1951): 185–90.

[37] Rothbard, "Mises' *Human Action*," p. 181.

[38] Rothbard, "Praxeology: Reply to Mr. Schuller," p. 944.

[39] Murray N. Rothbard to Ludwig von Mises, July 18, 1950, p. 1, Rothbard Papers.

the NYU seminar. In November 1953, Rothbard presented "The Methodology in Gunnar Myrdal's *Monetary Equilibrium*," showing he had come a long way from Ernest Nagel's positivist strictures against institutionalism.[40] In his 1939 book, Myrdal criticized institutionalism and praxeology, which he described, respectively, as "naïve empiricism" and "classical scholasticism."[41] Rothbard approved Myrdal's "cogent criticisms" of institutionalism, which were similar to Nagel's remarks, but also attacked Myrdal's positivism along Misesian lines. Rothbard summed up Myrdal's methodological stance as follows: "abstract theory is first formed, then is organized and systematized, asks questions of the data, and then if the observed answers contradict or are not consistent with the theoretical questions, these questions must be altered so as to contain elements of the answers and be consistent with them." Rothbard trenchantly described Myrdal's position as "a bald, stark assertion of the position of most present-day economists. On the one hand theory is upheld, against the fact-grubbers. On the other hand, empirical fact still reigns sovereign." Rothbard criticized Myrdal, and hence his former teacher Nagel, for failing to realize that "the complex structure of economic theory" can be deduced from "the existence of human action" and "a very small number of very broad 'observations' . . . such as variety of skills, and resources." No empirical testing is needed.[42]

In his notes on this session of Mises's seminar, Rothbard indicated a favorable reception of his presentation by Mises, who thought Myrdal "typical of methodological confusion of eco. textbooks (theory plus verification by fact, etc.)." Rothbard also revealed that "Mises conceded my point that the axioms of the science of human action are *observed*, but disagrees with [John] Locke that it must be *sense-observation*. OK to use term observation so long as not strictly sensate."[43] This comment once again indicates the absence of conflict between Rothbard's Aristotelian and Mises's Kantian understanding of the nature of economic axioms.

[40] Murray N. Rothbard, "The Methodology in Gunnar Myrdal's *Monetary Equilibrium*," November 1953, pp. 1–5, Rothbard Papers.

[41] Gunnar Myrdal, *Monetary Equilibrium* (William Hodge, 1939), pp. 209–10.

[42] Rothbard, "Methodology in Gunnar Myrdal's *Monetary Equilibrium*," pp. 2–5.

[43] Murray N. Rothbard, "Mises on Methodology," November 1953, pp. 3, 5, Rothbard Papers. John Locke, *An Essay Concerning Humane Understanding*, bk. 2, *Of Ideas* (London, 1690).

Shortly thereafter, Rothbard wrote a memo for the Volker Fund in which he evaluated a proposal for a seminar at the University of Southern California based on Stigler's textbook *The Theory of Price*.[44] It was the first of Rothbard's many attacks against the Chicago School for failing to appreciate Austrian economics. He noted that his former professor attempts to inject into economic theory "greater 'realism' by empirical research and testing." This approach especially weakens the book "in the really crucial areas of theory."[45] Rothbard gave the example of Stigler's analysis of the law of returns—there exists an optimal amount of the variable factor of production that maximizes average product—as emblematic of Stigler's faulty method. Stigler dismisses the "a priori" proof that deduces "the law from self-evident propositions" as "essentially tautological." Instead, he refers to the empirical proof and how "no one has discovered any important exceptions to the doctrine."[46] Rothbard described this as "extremely weak" because "instead of generalizing the old classical view of labor and capital applied to land, Stigler abandons reasoning altogether and resorts to an irrelevant 'empirical proof.'"[47]

Rothbard's most telling defense of deducing economic theory from self-evident axioms was his critique of a 1955 essay by the positivist Fritz Machlup and the subsequent discussion between Machlup and Terence Hutchison.[48] Machlup, an associate and admirer of Mises, subtly tried to homogenize him with the mainstream position by arguing that "all the proponents of pure, exact, or aprioristic theory," particularly Mises, adhered to John Stuart Mill's method and do not "propose to put the *assumptions* of economic theory to empirical tests, but only the *predicted results that*

[44] Lawrence C. Lockley to Richard C. Cornuelle, December 13, 1953, pp. 1–2, Rothbard Papers.

[45] Murray N. Rothbard to Richard C. Cornuelle, December 25, 1953, p. 2, Rothbard Papers.

[46] Stigler, *Theory of Price*, pp. 118, 120.

[47] Rothbard to Cornuelle, December 25, 1953, p. 2.

[48] T. W. Hutchison, "Professor Machlup on Verification in Economics," *Southern Economic Journal* 22, no. 4 (1956): 476–83; Fritz Machlup, "The Problem of Verification in Economics," *Southern Economic Journal* 22, no. 1 (1955): 1–21; Fritz Machlup, "Rejoinder to a Reluctant Ultra-Empiricist," *Southern Economic Journal* 22, no. 4 (1956): 483–93; Murray N. Rothbard, "In Defense of 'Extreme Apriorism,'" *Southern Economic Journal* 23, no. 3 (1957): 314–20.

are deduced from them."[49] Rothbard recognized that Machlup's position, which he described as "the *assumptions* need not be verified so long as their deduced consequents may be proven true," contradicted Mises's actual views. Defending the praxeological method, Rothbard stated that economic theories can be deduced "as absolutely true" from a "tiny handful of premises . . . [which are] so generally true as to be *self-evident*, as to be seen by all to be obviously true once they are stated, and hence they are not in practice empirically falsifiable." This means that "the theorems and conclusions deduced by the laws of logic from these postulates are therefore absolutely true [and] there is consequently no *need* for empirical 'testing.'" Once again, Rothbard emphasized that the praxeological method does not rely on empirical data in the same manner as the positivist method.[50]

Significantly, Rothbard saw the article not only as a defense and clarification of Mises's position but as an attempt to advance his mentor's methodology "by an expansion and elucidation of the axioms and postulates of praxeology."[51] In July 1956, Rothbard sent the "Machlup–Hutchison interchange" and his comment to Mises, expressing "hopes that it might be published."[52] The following month, Rothbard mentioned its forthcoming publication and reported that "Mises was very complimentary about the article."[53] After the publication of the article, the Austrian Ludwig Lachmann wrote to Rothbard and stated that although "as to your positive doctrine I have some misgivings," he was "delighted" with his paper because he "thought your exposition of the differences between Hutchison and Machlup was brilliant."[54] The economics professor John V. Van Sickle, a friend and admirer of Mises, praised Rothbard's article as "the best short statement of the Misesian position I have ever read."[55]

[49] Machlup, "Problem of Verification," p. 7. John Stuart Mill, *Essays on Some Unsettled Questions in Political Economy* (London, 1844).

[50] Rothbard, "In Defense of 'Extreme Apriorism,'" pp. 314–16.

[51] Murray N. Rothbard to Richard C. Cornuelle, August 8, 1956, p. 2, Rothbard Papers.

[52] Murray N. Rothbard to Ludwig von Mises, July 16, 1956, p. 1, Rothbard Papers.

[53] Rothbard to Cornuelle, August 8, 1956, p. 2.

[54] Ludwig M. Lachmann to Murray N. Rothbard, May 31, 1957, p. 1, Rothbard Papers.

[55] John V. Van Sickle to Murray N. Rothbard, March 23, 1957, p. 1, Rothbard Papers.

While defending the praxeological method against empirical methods, Rothbard delivered reports at Mises's seminar that criticized new attempts to mathematically model and measure the economy. Such procedures were a striking contradiction to the qualitative nature of praxeological theorems. A month after the Myrdal critique, Rothbard presented on "Gerhard Tintner's 'Econometrics'" and criticized Tintner's attempt to construct supply and demand curves using "mathematical economic models."[56] Following Henry Schultz, another pioneer of econometrics, Tintner sought to discover the constant "numerical estimates" in history, such as price elasticity, that could be used to construct modern-day supply and demand functions. For example, based on data from 1919 to 1941, Tintner estimated that the constant price elasticity of demand for meat was −0.47, meaning that every 1 percent increase in the price of meat induced about a 0.5 percent reduction in quantity demanded. This matters for the present day because "if conditions are assumed to be the same, the price elasticity can be considered the same today" and the econometrician could then construct a demand curve that could "predict the *numerical results* of different policies . . . and . . . estimate the effect of a tax or subsidy for meat."[57]

Rothbard pointed out multiple problems in Tintner's econometric modeling. First, the supposedly constant elasticities were subject to a large degree of error. Tintner's meat elasticity is only statistically significant at "95% confidence limits" between price elasticities of −0.71 and −0.24. This means that a 1 percent increase in the price of meat may cause anywhere between roughly a 0.24 and 0.71 percent decrease in the amount purchased, a result not very useful for government policymaking.[58] Second, even if the elasticities were accurate, they could not be used to construct a demand curve. Tintner derived the price elasticity of meat from statistics that only showed "the intersecting point of the market supply and demand curve." This temporal series of exchanges will yield a demand curve "only if the demand curve is considered to be constant over" the twenty-year period. But "there is no warrant for assuming that the curve is constant" because

[56] Murray N. Rothbard, "Gerhard Tintner's 'Econometrics,'" December 1953, pp. 1–6, Rothbard Papers. Gerhard Tintner, "Econometrics," *Scientia* 47, no. 88 (1953): 250–57.

[57] Rothbard, "Gerhard Tintner's 'Econometrics,'" pp. 1–3.

[58] Rothbard, "Gerhard Tintner's 'Econometrics,'" p. 3.

preferences, incomes, expectations, and other factors mean that it is "changing continually." Third, whatever demand curve that could be constructed was highly unrealistic because it had only one elasticity regardless of the price. In reality, demand curves are jagged and "elasticity changes for each price," with alternating stretches of elasticity and inelasticity. Tintner's demand curve was thus irrelevant and would not be useful for measuring what he wanted it to.[59]

Rothbard criticized other modeling literature in his 1956 presentation on the National Bureau of Economic Research's *Input-Output Analysis*, a study spearheaded by the work of Wassily Leontief.[60] Rothbard recognized input-output analysis as "staunchly econometric" and "an attempt to arrive at a statistical estimation of the mathematical equations of [Léon] Walras' general equilibrium." To attain his goal, Leontief, the creator of this analysis, had to make "some drastic simplifications" in the Walrasian system of simultaneously determined prices. These included reducing the number of equations for each commodity into a few industrial sectors, dropping supply equations for land and labor and demand equations for consumer goods, and assuming that each "sector's purchases from every other sector are technologically related, in fixed proportions, to the buying sector's level of physical output." With these "fallacious assumptions," the "given level of consumer demand uniquely determines all physical outputs in all industrial sectors."[61]

Rothbard immediately pinpointed the major problem with this approach. By invoking the fixed proportions assumption, Leontief and his followers in effect homogenize the multitude of producers' goods into one primary resource. This enormously simplifies the economic problem to one of minimizing the amount of the homogeneous resource used per unit of any output. Thus the "estimated equations, if they were accurate, would determine the physical level of output in each and every sector." There would hence be no need for prices, "especially prices of producers' goods," nor other market

[59] Rothbard, "Gerhard Tintner's 'Econometrics,'" pp. 4, 6.

[60] National Bureau of Economic Research, *Input-Output Analysis: An Appraisal* (Princeton University Press, 1955); Murray N. Rothbard, "A Review of *Input-Output Analysis: An Appraisal*," December 1956, pp. 1–8, Rothbard Papers.

[61] Rothbard, "Review of *Input-Output Analysis*," pp. 1–2.

phenomena such as "entrepreneurship, etc." But the price system is absolutely indispensable in allocating scarce and differentiated resources to their most highly valued uses. Input-output analysis was a striking example of how attempts to model the Walrasian system are irrelevant for understanding real-world economic phenomenon.[62]

Rothbard's remarks demonstrate his knowledge of the praxeological method and how it can be distinguished from competing methods. The correct procedure for economic science is to deduce absolutely true and qualitative laws from the action axiom and subsidiary self-evident assumptions. False assumptions cannot form the basis of economic theory, which does not need to be tested on the basis of its predictive power or some other measure. Quantitative models prioritize mathematical sophistication over understanding economic principles that explain the real world and are not useful for economic theory. The budding economist had demonstrated to Mises and others that he had taken his place as a leading proponent of Misesian praxeology and was a methodologist to be reckoned with.

Reconstructing Utility Theory

The proficiency in the praxeological method that Rothbard gained while writing his money chapter and critiquing alternative methodologies served him well in writing his textbook's chapter on value theory, the logical antecedent of price theory. Assuming a great deal of basic economic knowledge on the part of the reader, Mises only offered a skeletal outline of the theory in *Human Action*, discussing the law of marginal utility and the general pricing process in fewer than fifteen pages.[63] It was time for the protégé to fill in the mentor's missing chains of reasoning by deducing the Austrian theory of value and price from the action axiom and other realistic assumptions in a step-by-step manner.

Rothbard started to write his textbook in January 1952, tentatively titling it "The Principles of Economics."[64] In a May letter, Rothbard indicated that he was beginning to develop his "utility and value-scale analysis." He

[62] Rothbard, "Review of *Input-Output Analysis*," pp. 1–2.
[63] Mises, *Human Action*, pp. 119–27, 324–28.
[64] Rothbard, "Progress Report, January 1 to October 1, 1952," p. 1.

reiterated that he was using the praxeological method, explaining how "the divisions of economics are all tied in with each other—more than most economists realize—and are all deduced from the fundamental praxeological assumptions." There is little doubt that Rothbard consciously followed this rigorous axiomatic-deductive method when deriving his theoretical edifice. Indeed, Rothbard wanted to revise his sample money chapter because "any chapters that are worked out in isolation from this network [of logical deductions] are likely to be revised after the network is developed step-by-step."[65]

In his manuscript for his textbook's chapter 1, "Fundamentals of Human Action," Rothbard showed how the "concept of action" and the desire to satisfy ends implied a "scale of values, or scale of preferences," which in turn led to "further implications" regarding the valuation of means, or goods, that can satisfy various ranked ends. He used this means-ends framework, which was absent in mainstream indifference curve analysis, to establish the "*Law of Marginal Utility*"—an increase in the supply of a good by one unit leads to a lower utility ranking for the added or marginal unit because it satisfies a lower-ranked end. Rothbard recognized the supreme importance of this demonstration: "this fundamental law of economics has been derived from the fundamental axiom of human action."[66]

In a letter in September 1952, Rothbard compared his findings with the current state of "utility theory," which he had "become greatly interested in." Neoclassical theory split along "two main deviations" from Mises's important insight of marginal "utility as only ordinal, not measurable." The first and older group harkens back to Jevons and Marshall by assuming "measurable utility"—that is, cardinal utility.[67] The second deviation follows John R. Hicks and "toss[es] out [marginal] utility altogether in favor of 'indifference curves.'"[68] The latter group, dominant in the neoclassical

[65] Murray N. Rothbard to Herbert C. Cornuelle, May 23, 1952, p. 3, Rothbard Papers. Murray N. Rothbard to Herbert C. Cornuelle, June 28, 1952, p. 1, Rothbard Papers.

[66] Murray N. Rothbard, "Chapter I: Fundamentals of Human Action," n.d., pp. 1, 26, 37, Rothbard Papers.

[67] Murray N. Rothbard to Herbert C. Cornuelle, September 16, 1952, p. 1, Rothbard Papers. D. H. Robertson, *Utility and All That* (George Allen and Unwin, 1952).

[68] Rothbard to Cornuelle, September 16, 1952, p. 1. John R. Hicks and R. G. D. Allen, "A Reconsideration of the Theory of Value, Part 1," *Economica* 1, no. 1 (1934): 52–76; John R.

synthesis, properly purged utility analysis of cardinality. At the same time, however, it jettisoned the concept of utility preference rankings, which meant that it jettisoned the means-ends framework, which actually explained why actors value goods.

In his appraisal of utility theory, Rothbard did not dismiss the profession in toto. Ever the indefatigable researcher looking for new insights from doctrinal history, Rothbard discovered the "promising" work of Harro F. Bernardelli, admittedly a mathematical economist but one who made "pure Misesian [assumptions] in this basic utility area."[69] In a series of papers and exchanges spanning roughly fifteen years, Bernardelli defended the concept of ordinal marginal utility against Paul Samuelson, who argued marginal utility required cardinality and therefore the economics profession should adopt the indifference curve framework.[70] Rothbard's respect for Bernadelli was evident when he recounted "one of Bernardelli's great feats." When Samuelson criticized an article of Bernardelli's on marginal utility, "Bernardelli mopped the floor with him—in Samuelson's favorite field of mathematical economics."[71] In a later letter the following year, Rothbard praised a contemporary article by the former Misesian Lionel Robbins because he still "sets forth some Misesian methodology" and "implies that he learned all about ordinal utility from Mises."[72]

Rothbard's research for chapter 1 led him to read widely in contemporary histories of the ordinal utility approach of the Austrians, particularly the work of Emil Kauder.[73] According to Rothbard, Kauder "demonstrates

Hicks and R. G. D. Allen, "A Reconsideration of the Theory of Value, Part 2," *Economica* 1, no. 2 (1934): 196–219.

[69] Rothbard to Cornuelle, September 16, 1952, pp. 1–2.

[70] Harro F. Bernardelli, "A Rehabilitation of the Classical Theory of Marginal Utility," *Economica* 19, no. 75 (1952): 254–68; Harro F. Bernardelli, "A Reply to Mr. Samuelson's Note," *Economica* 6, no. 21 (1939): 88–89; Harro F. Bernardelli, "The End of the Marginal Utility Theory?," *Economica* 5, no. 18 (1938): 192–212; Paul A. Samuelson, "The End of Marginal Utility: A Note on Dr. Bernardelli's Article," *Economica* 6, no. 21 (1939): 86–87.

[71] Rothbard to Cornuelle, September 16, 1952, pp. 1–2.

[72] Murray N. Rothbard to Richard C. Cornuelle, August 2, 1953, p. 2, Rothbard Papers. Lionel Robbins, "Robertson on Utility and Scope," *Economica* 20, no. 78 (1953): 99–111.

[73] Emil Kauder, "Genesis of the Marginal Utility Theory: From Aristotle to the End of the Eighteenth Century," *Economic Journal* 63, no. 251 (1953): 638–50; Emil Kauder, "The Retarded Acceptance of the Marginal Utility Theory," *Quarterly Journal of Economics* 67, no. 4 (1953): 564–75.

very effectively" that Austrian utility theory derived from the ideas of seventeenth- and eighteenth-century Italian and French economists who preceded Adam Smith and David Ricardo, whose theories of value actually "*set economics back for 100 years*" in the "vital value-sphere" and influenced Alfred Marshall's fallacious approach to pricing.[74] Rothbard went so far as to state that "no more worthwhile project in the economics field" existed than Kauder's plan to write a full-fledged history of marginal utility theory.[75]

Rothbard's extensive reading in the utility literature inspired him to extend the ordinal law of marginal utility to its corollary "law of total utility"—an actor ranks a larger sized unit of a good higher on his value scale than a smaller sized unit. He decided to expound the logical relationship between the two laws in "A Note on Marginal and Total Utility," which he wrote in 1954.[76] The paper contributed to the ongoing dialogue between Bernardelli, Samuelson, and others by clarifying the relation between "the concepts of marginal and total utility" using the praxeological method—that is, "the classical method of verbal logic." Mises had previously demonstrated this relationship, but the economics profession ignored his insights.[77]

As Rothbard pointed out, "lured by the calculus, economists have treated 'total' utility as an integral of the marginal utility, and therefore they conclude that, e.g. the marginal utility of a unit with a supply of six units, is equal to the 'total utility' of six units minus the 'total utility' of five units," which logically implies that marginal utility is a quantifiable entity. Thus, once economists abandoned the cardinality concept, they discarded marginal utility altogether. But Rothbard explained that this was an incorrect step. Assuming that the economist is analyzing "an 'economic' good and therefore an object of desire by the individual . . . it follows that a man will always value two units higher than one unit." Therefore, "*the marginal utility of a single, larger unit, of a good is always higher than the marginal utility of a single unit of a smaller size*," and "there is no relationship whatever between the marginal utilities of one unit at different supplies, and the

[74] Murray N. Rothbard to Richard C. Cornuelle, April 1, 1954, p. 4, Rothbard Papers.

[75] Rothbard to Cornuelle, August 8, 1956, p. 1. Emil Kauder, *A History of Marginal Utility Theory* (Princeton University Press, 1965).

[76] Murray N. Rothbard, "A Note on Marginal and Total Utility," 1954, pp. 1–10, Rothbard Papers.

[77] Rothbard, "Note on Marginal and Total Utility," p. 2.

marginal utilities of single units of varying size . . . except an obvious ordinal one." The ordinal law of total utility is simply an application of the ordinal law of marginal utility to units of different sizes of a homogeneous good.[78]

One of the most important aspects of Rothbard's analysis was his ordinalist reinterpretation of the meaning of *marginal*: "Instead of infinitely small unit, it means *relevant* unit. Any relevant unit, whether large or small, is marginal." Although this conceptual revision was put forward by both Mises and Bernardelli, it was "still virtually revolutionary," and to Rothbard goes the credit for trying to bring it into contemporary economics discourse.[79]

Significantly, because of the misperception that marginal utility is inherently cardinal, "economics has been largely deprived of what the present writer believes to be the correct theory of consumer demand, one based on ordinal marginal utility." In other words, fallacious reasoning in the field of value theory led to further errors in price theory. As a practitioner of the step-by-step, praxeological method, Rothbard clearly recognized that economics required the correct theory of marginal utility based on the means-ends relationship to properly deduce the theory of pricing.[80]

In September, Rothbard sent his paper to Mises and informed him that he submitted it to the journal *Economica* "in hopes that they will publish it."[81] While Mises did not send Rothbard back any comments, he highly esteemed the work that built upon his advances in utility theory. Many years later, Israel Kirzner recalled a "September 1954 evening" when Mises read Rothbard's paper and "found [it] to be excellent. He briefly but warmly complimented Murray on that piece of work, and expressed the hope and the prediction that Murray would continue to produce a great deal of future work of similar excellence."[82] Unfortunately, despite Mises's praise, the mentor's old prediction that the journals no longer would accept a "good economics

[78] Rothbard, "Note on Marginal and Total Utility," pp. 7–10.

[79] Rothbard, "Note on Marginal and Total Utility," p. 6.

[80] Rothbard, "Note on Marginal and Total Utility," p. 8.

[81] Murray N. Rothbard to Ludwig von Mises, September 22, 1954, p. 1, Rothbard Papers.

[82] Israel M. Kirzner, "Reflections on the Misesian Legacy in Economics," *Review of Austrian Economics* 9, no. 2 (1996): 143.

article" proved to be true.[83] In a November letter Rothbard stated that "*Economica* sent my article back 'with reluctance'" because they "decided not to print any more articles on the subject [of utility theory] for a while."[84]

He experienced a similar setback with "Welfare Economics, Ethics and Governmental Policy," a paper that built on his earlier understanding of Mises's general welfare analysis presented in his sample money chapter.[85] In May of that year, Rothbard submitted it to the high-ranking *Journal of Political Economy*, which was published by the University of Chicago. The editor of the *Journal of Political Economy*, Earl J. Hamilton, found the manuscript "interesting and well done in many respects" but rejected it "owing to the large mass of material on hand."[86] These rejections constituted Rothbard's first real setbacks in publishing articles and portended the growing difficulty he would face in communicating Misesian insights to the economics profession.[87]

Instead of editing his utility and welfare papers to resubmit to other journals, Rothbard combined them into an article for an upcoming Mises Festschrift. He titled it "Toward a Reconstruction of Utility and Welfare Economics."[88] In this paper, Rothbard elaborated on his criticisms of contemporary utility theories and explained why Mises's remained the most accurate depiction of how individuals value goods. In doing so, Rothbard presented his own advancements and improved upon the Misesian approach.[89]

One of his prime targets was Hicks, whom Rothbard believed changed utility theory for the worse. In his classic exposition in *Value and Capital*, Hicks declared that to reject "all concepts which are tainted by quantitative utility . . . the first victim must evidently be marginal utility itself."[90]

[83] Rothbard to Cornuelle, October 20, 1952, p. 1.
[84] Murray N. Rothbard to Richard C. Cornuelle, November 5, 1954, p. 2, Rothbard Papers.
[85] Not found in Rothbard Papers.
[86] Earl J. Hamilton to Murray N. Rothbard, June 10, 1954, p. 1, Rothbard Papers.
[87] Murray N. Rothbard to Earl J. Hamilton, May 24, 1954, p. 1, Rothbard Papers.
[88] Murray N. Rothbard, "Toward a Reconstruction of Utility and Welfare Economics," in *On Freedom and Free Enterprise: Essays in Honor of Ludwig von Mises*, ed. Mary Sennholz (D. Van Nostrand, 1956), pp. 224–62.
[89] Murray N. Rothbard, "Progress Report, October 1, 1954 to April 1, 1955," n.d., p. 9, Rothbard Papers.
[90] Hicks, *Value and Capital*, p. 19.

Rothbard showed that Hicks was in error because of Mises's ordinalist theory of marginal utility. Rothbard then discussed Hicks's replacement, "the concept of indifference classes." This approach to utility theory hypothesizes rankings of various bundles of two goods between which the individual is indifferent. Marginal utility rankings are absent and there is no reference to the individual's ranking of *ends* on his value scale and its causal relationship to the ranking of *goods*. With the Misesian insight that every choice demonstrates a preference, Rothbard exposed the fallacy of this approach: "indifference can never be demonstrated by action. . . . Every action necessarily signifies a *choice*, and every choice signifies a definite preference." Therefore, indifference can play no fundamental role in a utility theory grounded in the basic fact that individuals value the goods they receive more than the goods they give up because the former satisfy a higher-ranked end.[91]

Rothbard's article caused little splash in the economics profession, but the small Austrian community praised it. Rothbard learned of Trygve J. B. Hoff's "flattering remarks," and Ludwig Lachmann confided that he read the paper a second time and "liked it even better than the first time; all you say is exactly the kind of thing that needs saying."[92] Lachmann was also "glad to note" that Hicks's recent work, *A Revision of Demand Theory*, was "giving up indifference curves for the reasons you mentioned, and is merely postulating scales of preference."[93] Most importantly, Mises approved Rothbard's indifference curve analysis and included it in his revised second edition of *Human Action*. In the original edition, Mises wrote that one of the "fundamental principles of the theory of value" is that "action always means preferring and setting aside; it never means equivalence."[94] In the

[91] Rothbard, "Toward a Reconstruction," pp. 236–37. Rothbard, "Toward a Reconstruction," p. 233.

[92] Ludwig M. Lachmann to Murray N. Rothbard, January 24, 1957, p. 1, Rothbard Papers; Murray N. Rothbard to Trygve J. B. Hoff, November 29, 1956, p. 1, Rothbard Papers.

[93] Lachmann to Rothbard, January 24, 1957, p. 1. John R. Hicks, *A Revision of Demand Theory* (Clarendon Press, 1956).

[94] Mises, *Human Action*, p. 351.

revised edition, Mises now wrote that "it never means equivalence or indifference," a clear recognition of Rothbard's contribution.[95]

Rothbard thus rescued Misesian utility theory from oblivion and showed how starkly it contrasted with theories of consumer choice not deduced from the action axiom. In fully developing this ordinal theory of marginal utility in chapter 1, Rothbard emphasized a key point about the means-ends relationship in Mises's exposition. Means are never directly ranked and valued by the actor in vacuo, as is the case with the mapping of indifference curves; rather, the marginal utility and value of all means, including consumer goods, are completely dependent upon the ranking of the ends the actor intends them to serve. This recognition meant that Rothbard firmly rooted the law of marginal utility in the action axiom. His achievement set the stage for future deductions of even greater importance.

Pricing in a Barter Economy

Armed with a Misesian theory of marginal utility, Rothbard proceeded to deduce the theory of demand. This, in turn, enabled him to construct a realistic theory of pricing that did not require perfect information among market participants. In other words, he elucidated the equilibrating forces of the free market and how prices actually changed, an adjustment Mises only assumed in his monetary transmission mechanism.

After his utility analysis in *Human Action*, Mises referred only to his own mentor, Eugen von Böhm-Bawerk, as the source of the "modern theory of value and prices." He considered Böhm-Bawerk's "masterful expositions . . . essentially irrefutable. As far as they need to be amended, it must be done by a consistent elaboration of the fundamental thoughts of their authors rather than by a refutation of their reasoning."[96] But Mises never undertook this task of elaboration and failed to analyze price formation in his treatise, thereby leaving a gap in the praxeological edifice for his young protégé.

Rothbard set out to repair this lacuna in chapter 2, "Economics of the Unhampered Market: Direct Exchange," which he completed by April

[95] Ludwig von Mises, *Human Action: A Treatise on Economics*, 2nd ed. (Yale University Press, 1963), p. 354.

[96] Mises, *Human Action*, scholar's ed., p. 202. Eugen von Böhm-Bawerk, *The Positive Theory of Capital*, trans. William Smart (London, 1891), pp. 195–222.

1953.[97] He planned to use "logical derivation from the fundamental assumption of human action in order to explain the determination of all prices in interpersonal exchanges."[98] This undertaking consumed the vast majority of the chapter, as Rothbard built his price theory on the insights of Böhm-Bawerk and other economists in the Austrian tradition, particularly Carl Menger, Frank Fetter, and Philip H. Wicksteed.[99]

To explain the formation of prices, Rothbard needed to define the preconditions of exchange between two or more individuals. In contrast to chapter 1, which focused on "the actions of isolated individuals," chapter 2 considered "interactions between individual human beings." Rothbard explicitly stated that he was going to first analyze exchange and the "workings of a society based purely on voluntary action, entirely *unhampered* by violence." Then, after analyzing "the laws" that elucidated pricing and production on the free market, the textbook's later chapters would analyze actions "based on violence or threat of violence"—that is, the government. This approach was essential to spelling out the Misesian implications of human action because the economist first needs to understand how the market works before elucidating the ways in which government intervention alters the network of exchanges.[100]

Beginning his analysis of the free market, Rothbard derived the downward-sloping buyer's, or "exchange," demand curve for horses using the "Law of Marginal Utility . . . as a man's stock of goods increases the marginal utility of each unit declines." He showed that for an individual demanding horses by exchanging fish, because additional horses will be used to satisfy successively lower-ranked ends, "the marginal utility of the additional horse will be less than the utility of the first one . . . result[ing] in lower maximum-buying prices for each successive horse bought." This,

[97] Murray N. Rothbard, "Progress Report, October 1, 1952 to April 1, 1953," n.d., p. 1, Rothbard Papers.

[98] Murray N. Rothbard, "Chapter II: Economics of the Unhampered Market: Direct Exchange," n.d., p. 35, Rothbard Papers.

[99] Kenneth E. Boulding, *Economic Analysis* (Harper & Bros., 1941), pp. 51–80; Fetter, *Principles of Economics*, pp. 42–72; Carl Menger, *Principles of Economics* (Free Press, 1950), pp. 191–97; Rothbard, "Chapter II," pp. 35, 78; Philip H. Wicksteed, *The Common Sense of Political Economy* (Macmillan, 1910), pp. 213–38, 493–526.

[100] Rothbard, "Chapter II," pp. 1, 8.

in turn, implies that quantity "demand[ed] must either increase or remain unchanged" as the price in terms of fish decreases.[101]

Rothbard's derivation of the law of demand was a highly important accomplishment: he filled in a gap in *Human Action*'s theoretical system by showing how Mises's means-ends framework and marginal utility theory logically imply an apodictically downward-sloping exchange demand curve. This contrasted with the neoclassical indifference curve approach, which abstracts from the causal relationship between the rankings of ends and means when constructing a demand curve and admits the theoretical existence of upward-sloping demand curves.

Rothbard extended his demand analysis to the case of the seller's "*reservation demand*," or his "demand to hold stock," an analysis originated by Wicksteed.[102] From this perspective, the supply curve of horses can be represented as a demand to retain possession of the horse. A lower price of horses causes the individual to increase his quantity demanded to hold horses either for his own consumption or for sale at an anticipated higher price in the future. In either case, the horse has a higher marginal utility ranking than the fish that would be received. Thus, the ordinal marginal utility theory also leads to a downward-sloping reservation demand curve. With the exchange and reservation demand curves combined, the market for horses can be represented with a vertical line for the fixed stock of horses and the downward-sloping total market demand curve.

This Wicksteedian "total demand-stock analysis" abstracts from production and thereby "focuses more sharply on the fundamental truth that price is determined solely by *utility*. . . . The supply curve is not based on some sort of 'cost' that is independent of the utility on individual value-scales." This insight is crucial to the development of a realistic theory of price equilibration on the free market. For prices are always determined in the immediate run—that is, after goods have already been produced and exist in sellers' inventories awaiting exchange.[103]

[101] Rothbard, "Chapter II," pp. 51, 53–55.
[102] Rothbard, "Chapter II," p. 73. Wicksteed, *Common Sense*, pp. 213–28, 493–526.
[103] Rothbard, "Chapter II," p. 78.

Rothbard then showed how the horse market reached its equilibrium price when individuals are "liable to error" and trades occur at non-market-clearing prices. In such an uncertain world, entrepreneurship, or to "act speculatively," guides the market. By making the realistic assumption that market participants can recognize errors and adjust their behavior, Rothbard describes how, given the total demand and an already produced stock, "the approach to equilibrium takes place through *actual* purchases at the various prices." First, sellers "use [their] judgment in estimating the market price" and sell their stock at the price expected "to be the greatest that they can attain." They will often err in their initial estimations and set prices too high or too low. Then, speculative exchanges at "provisional resting point[s]" and sequential "revelation[s] of error" occur. "The shortages or the surpluses reveal the over-bidding or under-bidding" and sellers realize their mistakes and change their course of action. Furthermore, the "growth of specialized speculation"—that is, that some market participants adapt more quickly than others—"improve[s] forecasts." The revisions change the market price until quantity demanded is equal to quantity supplied. At this point, remaining exchanges are made and "*the market for this good has come to a close*. . . . There is no longer an active 'ruling market price' for the good." Imperfect estimates thereby set in motion a correction process that causes individuals to revise their forecasts and push the market to the equilibrium price and quantity of exchanges.[104]

Markets that close are often reactivated and "renewed." This occurs because of new demand or new stock is brought to the market, which results from "a change in the relative position of the two goods under consideration on the value scales." The new market conditions may "set a different quantity of exchanges at the old equilibrium price," a different quantity of exchanges "at a new price," or "the same quantity of exchanges and same price as on the old market." "In those cases where the market does not arrive at equilibrium before supply or demand schedules themselves change," the market becomes "*continuous*, moving toward a new equilibrium position before the old one has been reached." In these markets, the changing data means that the equilibration process does not end and buyers and sellers

[104] Rothbard, "Chapter II," pp. 64, 69, 79, 94, 96.

keep revising their forecasts and modifying their behavior. In markets where the schedules are given and do not change, however, "a market tends quickly to 'clear itself' by establishing its equilibrium price."[105]

Rothbard thus used the praxeological method to deduce the law of price formation in an economy without government intervention. After proving that demand curves always slope downward, Rothbard fleshed out the orderly pricing process of the free market, explaining how error and changing market conditions lead to price adjustments and a clearing of the market. This logical analysis was something that Mises only implied in his price theory. Rothbard, however, spelled out the analysis, thereby demonstrating his mastery of Misesian economics.

Pricing in a Monetary Economy

Rothbard was not content to rest there; a realistic theory of pricing required the inclusion of money. Up to this point, Rothbard assumed a barter economy where individuals only exchanged goods for direct use. He was now ready to take "demand and supply analysis of money" and integrate it "into the utility system" by rewriting his sample money chapter into three new chapters on money.[106] This elaboration would allow Rothbard to analyze a "large variety of topics" relating to money, particularly "prices, incomes, the value of money, interest, profits, costs, calculation and the market, etc." Rothbard needed to fully integrate his analysis with the previously deduced utility and price theories because "most existing textbooks tend to present this material in a series of disconnected chapters, and the effect is to fail to present an adequate analysis." "The various parts of economic analysis," Rothbard concluded, "can only be correctly presented and fully comprehended as integral parts of a total picture," and this included joining together monetary and price theory.[107]

Even the Austrian economists before Mises neglected money. In the Mises seminar from the end of 1952 to early 1953, Rothbard records his mentor stating that "Jevons, Menger, [and] Bohm-Bawerk [*sic*], generally

[105] Rothbard, "Chapter II," pp. 79–80.
[106] Rothbard, "Progress Report, January 1 to October 1, 1952," p. 8.
[107] Rothbard, "Progress Report, October 1, 1952 to April 1, 1953," p. 2.

neglected dealing with money," and "Walras also was of mixed virtues on money." They believed that "marginal utility theory . . . does not hold true for money; the marginal utility of money does not decrease" as its supply increases. These economists "in the great revolution of marginal utility doctrine" asserted that "to search for economic reality, they must 'remove the veil of money' over the reality." They did not realize, Rothbard recalls Mises as stating, that "this 'veil' has its own rules and laws which must be dealt with," and "there are in the market effects that are only due to *money*." Rothbard realized that his textbook would need to elaborate upon Mises's theories concerning the marginal utility of money and make sure that his price theory included it.[108]

In chapter 3, titled "The Pattern of Indirect Exchange," Rothbard explained "the various defects of a system of direct exchange" and "the process by which a medium of exchange develops on the market."[109] Understanding the differences between barter and indirect exchange is crucial, for money is not a veil: "direct exchange . . . leave[s] very little scope for the market or for production" while money facilitates the "splitting of production into minute branches."[110] This is because money allows for calculation—the computation of revenues, costs, profits, and losses—an essential tool for the "investor-producer"—that is, the "entrepreneur" who needs to use "personal judgment" to forecast the future and avoid production errors. The entrepreneur needs "to keep a rather fine account of whether his estimates were correct, and moreover, *how far* they erred."[111] Therefore, the entrepreneurial judgment that money enables constitutes an essential precondition for the existence of multiple production stages and complex and interconnected markets. Contrary to writers who wish to "analyze direct exchange only and then to insert money somewhere at the end of the analysis," the economist must analyze an economy in which money is exchanged for goods and services.[112]

[108] Murray N. Rothbard, "Ludwig von Mises Seminar, 1952–53, Winter Session," n.d., pp. 1–3, Rothbard Papers.
[109] Rothbard, "Progress Report, October 1, 1952 to April 1, 1953," p. 2.
[110] Rothbard, *Man, Economy, and State*, pp. 193–94.
[111] Murray N. Rothbard, "Chapter III: The Pattern of Indirect Exchange," n.d., pp. 31–32, 36, Rothbard Papers.
[112] Rothbard, *Man, Economy, and State*, p. 194.

Rothbard then used his utility analysis to describe the "principles of [money] allocations in accordance with individual value-scales."[113] He showed that an individual allocates his money on the basis of the marginal utility of consumer goods that satisfy present ends, producer goods to satisfy future ends, or a cash balance that deals with the uncertainty over how and when to spend money. These are the "*three and only three ways*" to allocate money, and for a given unit of money, he will choose whichever option has the highest marginal utility ranking and satisfies the most highly ranked end. As the individual spends additional equally sized amounts of money, the marginal utility of each successive unit will decline "because each further unit spent will be devoted to less urgently desired" ends. "It is in accordance with these principles," Rothbard concludes, "that each man will allocate his money stock." Rothbard had thus shown how the allocation of money follows Mises's ordinal law of marginal utility, like the allocation of all other goods.[114]

Rothbard then integrated these monetary principles into his price theory in chapter 4, titled "Money and Prices," which he described as dealing "with the crucial concept of money-prices . . . in all their ramifications." He applied his earlier deductions from chapter 2 to derive "supply and demand schedules," "money-prices," and the equilibration process.[115] He easily extended the law of demand to a monetary economy: an individual ranks the marginal utility of units of a good—say, butter—and the marginal utility of units of money. At a lower money price of butter, the buyer will purchase an equal or greater amount of butter because the additional unit of butter satisfies lower-ranked ends. "Because of the law of utility," Rothbard concludes, "an individual demand curve must be either 'vertical' as the hypothetical price declines, or else rightward-sloping." It can never be "leftward-sloping."[116]

At the same time, the demand for butter is interrelated with the demands for other goods because the sum of money could purchase other goods of

[113] Rothbard, "Progress Report, October 1, 1952 to April 1, 1953," p. 3.
[114] Rothbard, *Man, Economy, and State*, pp. 219–20.
[115] Rothbard, "Progress Report, October 1, 1952 to April 1, 1953," p. 3.
[116] Rothbard, *Man, Economy, and State*, p. 240.

higher value. "On the basis of his utility scale," the consumer "*will spend money on each particular good until the marginal utility of adding a unit of the good ceases to be greater than the marginal utility that its money price on the market has for him*." Rothbard terms this "the law of consumer action in a market economy." An individual will only spend money on butter if the marginal utility of the additional unit of butter is greater than the marginal utility of the forgone unit of money. In addition, the fact that all consumers' goods are "*partial* substitutes for one another" and compete for an individual's money balances means that "*the more substitutes there are available for any given good, the more elastic will tend to be the demand schedule . . . for that good*." Rothbard calls this "the law of the interrelation of consumers' goods." This means that as the supply of consumer goods increases in the economy, the demand curves for goods tend to become more sensitive to changes in price. Rothbard credits his analysis of "the substitutive interrelations of consumers' goods" to Wicksteed.[117]

Rothbard then investigates what happens when the demand or the supply of a given good—say, good A—changes. "When we realize that the demand schedules are determined by individual value scales and . . . a rise in the marginal utility of [good] A necessarily means a relative fall in the utility of other consumer goods," an increased demand for good A results in a higher price of A and causes individuals to devote less money to lower-ranked ends. This "lead[s] to decreased demand schedules and *falling* prices for goods B, C, [and] D." If goods B, C, or D are complements "whose uses are closely linked together" with good A, then the demand for those goods will increase because they are part of the same "consumption 'package.'" If the supply of good A changes, the demand for complements moves in the same direction, but the ultimate effect on the demand for substitutes depends on whether the demand for good A is inelastic or elastic, because the elasticity determines how much money will be spent on good A and hence how much money can be spent on other goods. If the demand for good A is inelastic, for example, then a decrease in the supply of good A causes individuals to spend more on good A and less on substitute goods B, C, and D.[118]

[117] Rothbard, *Man, Economy, and State*, pp. 280–82. Wicksteed, *Common Sense*, pp. 21–22.
[118] Rothbard, *Man, Economy, and State*, pp. 285, 287–88.

Rothbard's analysis leads to two important results. First, determining whether goods are substitutes or complements with other goods is not a simple positive or negative price relationship as argued by standard neoclassical theory.[119] On the contrary, in the previous example, substitute goods have an inverse relationship between their prices because a decrease in the supply of a good along an inelastic demand schedule actually decreases the demand for substitutes. Second, a change in the price of one good sets in motion a new equilibration process that revolutionizes the demand for other goods and hence the entire structure of money prices. Supply and demand in one market are not hermetically sealed off from supply and demand in other markets. These conclusions come from recognizing that individuals rank "values for goods and money" on the same value scale according to the principles of marginal utility.[120]

Rothbard finished his analysis of "the marginal utility of money" in chapter 7, on money, completed by October 1955.[121] He placed this chapter after two chapters on production theory.[122] In writing chapter 7, he elaborated on many important concepts discussed in the sample money chapter he wrote for Mises. Most fundamentally, he applied Wicksteed's total demand-stock framework to money. Rothbard derived the "*exchange demand for money* (by sellers of all other goods that wish to purchase money)" and "*reservation demand for money* (the demand for money to hold by those who already hold it)." In conjunction with the money stock, the "*total demand for money*" determines the PPM. This "value-array of money" is a list of the various goods money can buy and "has no uniquely expressible unit." Therefore, changes in the PPM cannot be measured by a "single 'price level.'"[123]

With the total demand-stock analysis for money, Rothbard shows how, as a result of alterations in the supply or demand for money, "the

[119] Stigler, *Theory of Price*, p. 88.

[120] Rothbard, *Man, Economy, and State*, p. 288.

[121] Rothbard, *Man, Economy, and State*, p. 755.

[122] Murray N. Rothbard, "Chapter V: Producers' Activity," n.d., pp. 1–90, Rothbard Papers; Murray N. Rothbard, "Chapter VI: Monopoly and Competition," not found in Rothbard Papers; Murray N. Rothbard, "Chapter VII: Money," not found in Rothbard Papers.

[123] Rothbard, *Man, Economy, and State*, p. 756. Murray N. Rothbard, "Progress Report, April 1, 1955 to October 1, 1955," n.d., p. 1, Rothbard Papers.

movement of prices from one equilibrium position to the next will not take place smoothly and simultaneously." Changes "occur in step-by-step fashion. . . . Some people react more quickly than others [and] movements of prices will differ in the speed of reaction to the changed situation." The first receivers are "the greatest gainers" because their selling prices rise before their buying prices rise, while the last receivers are "the greatest losers." When the adjustments do not affect time preferences or the supply of resources the "approximate first half of the recipients of the new money are exactly counterbalanced by the losses of the second half." For this reason, "there is no social utility in an increased supply, nor any social disutility in a decreased supply, of money. This is true for the transition period as well." Changes could lead to a "permanent shift in general time preferences" and thereby influence the production of consumer goods, but this could occur in either direction. Furthermore, the supply of resources could increase under a system of commodity money: "an increase in gold is socially useful . . . [if] it makes possible an increase in the nonmonetary, direct, use of gold," but in this case the new gold does not increase the money supply per se.[124]

Significantly, chapter 7 contained the "Determination of Prices: The Goods-Side and Money Side," "a brief but important section weaving in the various analytic strands determining prices on the market."[125] In this section, Rothbard showed how the prices of individual goods, determined by the total demand and stock for each good, and the purchasing power of money, determined by the total demand and stock for money, "blend together." The stock of money, the stocks of goods, the reservation demand for money, and the reservation demand for goods are "the ultimate determinants of the PPM" and hence the array of individual prices. When the stock of money or the reservation demand for goods increases, the prices of goods will rise and the PPM will fall; when the stock of goods or the reservation demand for money increases the prices of goods will fall and the PPM will rise. "Thus," Rothbard states, "the ultimate determinants of the PPM as well as of specific prices are the subjective *utilities* of individuals and the given

[124] Rothbard, *Man, Economy, and State*, pp. 812–15.

[125] Rothbard, "Progress Report, April 1, 1955 to October 1, 1955," p. 3.

objective stocks of goods." This is the "Austrian-Wicksteedian theory of price [applied] to all aspects of the economic system."[126]

This integration of the determination of the prices of goods and of money is significant because it means that "no longer is there need for an arbitrary division between barter-type analysis of relative goods-prices and a holistic analysis of the PPM." The supply and demand for an individual good is related to the supply and demand for money and vice versa. "If the stock of money increases," for example, "whether we treat one good or all goods, the price or prices will *increase, ceteris paribus*." Moreover, the intricate connection between the supply of and demand for goods and the supply of and demand for money means that "*money can never be neutral. . . .* And one set of conditions" that changes prices, such as an increase in the stock of money, "can never precisely offset another set of factors," such as an increase in the reservation demand for money. A change in the stock of goods or money, or in the reservation demand for goods or money, sets in motion processes that cause the entire constellation of individual prices and production to adjust.[127]

Thus, by the mid-1950s, Rothbard used the praxeological method to deduce, step-by-step, the laws of utility, the pricing of consumer goods, consumer choice in a monetary economy, and the pricing of money and demonstrated how they were all related. The rapid progress in Rothbard's writing of chapters 1 to 4 and chapter 7 show Rothbard's enormous intellectual evolution since Columbia. Discovering Mises and reading *Human Action* enabled him to identify the deficiencies in his neoclassical training. Rothbard then discarded this framework and embraced Mises's praxeology, quickly mastering it by elucidating his mentor's deductions and filling in gaps in Mises's system with his own deductions.

He would continue this procedure when tackling production theory in chapter 5. A relatively undeveloped component of Mises's system, the analysis of production opened the door for the next stage in Rothbard's intellectual development.

[126] Rothbard, *Man, Economy, and State*, pp. 815–17.
[127] Rothbard, *Man, Economy, and State*, pp. 816–18.

Part III

A Böhm-Bawerkian Treatise, 1953–1955

Murray Rothbard's project drastically changed in mid-1953. Unable to rely on Mises's sparse treatment of production theory, Rothbard adopted his old Marshallian approach, focusing on an individual firm that faced fixed prices and restricted investment decisions. But he soon recognized the pitfalls of Marshallian partial equilibrium and discarded it for Austrian general equilibrium, emphasizing the Böhm-Bawerkian capitalist-entrepreneur's ability to invest in multiple firms across the structure of production and influence market prices. In doing so, Rothbard finished the Böhm-Bawerkian system by integrating the pure time preference theory of interest of Frank A. Fetter and Ludwig von Mises into the production structure analysis of Knut Wicksell and F. A. Hayek. This interrelatedness approach led Rothbard to differentiate between factor incomes, apply Mises's theory of the impossibility of socialist economic calculation to a vertically integrated firm, and expose the flaws of neoclassical monopoly and competition theory. With these theoretical breakthroughs, by 1955 Rothbard moved beyond his initial goal of "bringing to the surface and clarifying" his mentor's "edifice" to deducing the architectonic edifice of praxeological economic theory along the lines of Mises's "great book" suggestion.[1]

[1] Murray N. Rothbard to Herbert C. Cornuelle, June 28, 1952, p. 1, Rothbard Papers; Ludwig von Mises to Murray N. Rothbard, May 29, 1950, p. 1, Rothbard Papers.

A Marshallian Production Theory

Early on, Rothbard recognized that his textbook "cannot simply be a paraphrase of *Human Action*" because "many essential points must be deduced originally or with the help of other works."[2] Mises frequently assumed his readers possessed advanced knowledge of economic theory, such as Böhm-Bawerk's theory of price. In some cases, he left a theory undeveloped, such as the explanation of individuals' and firms' production decisions. Although Mises analyzed "big-scale production," his term for economies of scale, Rothbard noted that he "only tangentially" dealt with a firm's cost schedules and output decisions.[3] This resulted in large part from Mises writing *Human Action* without regard to Edwin H. Chamberlin and Joan Robinson's monopolistic competition revolution in the 1930s and instead relying on the older neoclassical distinction between the competitive price and monopoly price.[4] In his review of Mises's *Nationalökonomie*, Hayek made this point: "He seems to have been little affected by the general evolution of our subject during the period over which his work extends. . . . This seems to be particularly true with regard to the more recent developments of the theory of competition."[5] Mises's brief analysis of production forced Rothbard to initially rely on an eclectic blend of Mises and the Marshallian economists he read at Columbia, mainly his former teacher George J. Stigler, for his textbook's production theory chapter.

In his first progress report on the book, in October 1952, Rothbard wrote that a future chapter would need to include "a discussion of revenue and costs, [and] assets and liabilities of the firm."[6] By his April 1953 progress

[2] Murray N. Rothbard, "Progress Report, January 1 to October 1, 1952," n.d., p. 7, Rothbard Papers.

[3] Ludwig von Mises, *Human Action: A Treatise on Economics*, scholar's ed. (Mises Institute, 2008), p. 338; Murray N. Rothbard to Richard C. Cornuelle, "Textbook or Treatise?," p. 1, Rothbard Papers. Mises, *Human Action*, pp. 336–47, 356–57.

[4] Edward H. Chamberlin, *The Theory of Monopolistic Competition: A Re-Orientation of the Theory of Value* (Harvard University Press, 1933); Joan Robinson, *The Economics of Imperfect Competition* (Macmillan, 1933).

[5] F. A. Hayek, review of *Nationalökonomie: Theorie des Handelns und Wirtschaftens*, by Ludwig von Mises, *Economic Journal* 51, no. 201 (1941): 125. Ludwig von Mises, *Nationalökonomie: Theorie des Handelns und Wirtschaftens* [Economics: Theory of action and exchange] (Editions Union Genf, 1940).

[6] Rothbard, "Progress Report, January 1 to October 1, 1952," p. 9.

report, in his chapter 4, "Money and Prices," Rothbard titled the prospective section 5 "Producers' Activity: Competitive Price and Monopoly Price," planning to write future sections that dealt "with the monopoly question, . . . with costs of the firm, . . . with producers' decisions and demand for factors, and finally with the prices of the various factors and resulting incomes."[7] Shortly thereafter, Rothbard decided to develop this section into chapter 5, "Producers' Activity."[8] In doing so, he reached a breakthrough in his emerging theoretical edifice.

In chapter 5, Rothbard argues that "producer activity is vital" because it determines "the size of the stock thrown on the market" and "the money prices of factors of production." Clearly, Rothbard planned to construct his production theory on the foundations of his theory of market pricing deduced from chapters 2 to 4. However, Rothbard also decided to restrict his analysis of "'investment opportunities'" to a given firm's "line of production" instead of focusing on investment in the overall structure of production. This fateful decision confines chapter 5 to Marshall's partial-equilibrium analysis of a single firm, which must decide how much of a given good to produce and sell at an exogenously given price, and the amount and combination of inputs it must purchase at exogenously given prices to produce the good.[9]

In section 1, "The Demand for a Firm's Product," Rothbard focuses on a firm's output decision, which involves the selling price of the firm's product, the prices of the inputs it purchases, and its production function or "the relationship between physical input and product." Rothbard supposes that the firm requires factors X and Y to make good A. He assumes their prices are "fixed on the market" when he describes various hypothetical quantities of X and Y that cost the same amount of money to produce different amounts of good A. With these possibilities, and with the additional assumption that regardless of the firm's choice "the market supply curve [of good A] will not be affected sufficiently to lower the price"—that is, the

[7] Murray N. Rothbard, "Progress Report, October 1, 1952 to April 1, 1953," n.d., pp. 3–5, Rothbard Papers.

[8] Murray N. Rothbard, "Chapter V: Producers' Activity," n.d., pp. 1–90, Rothbard Papers. Murray N. Rothbard, "*Man, Economy and State*, Original Chapter 5: Producers' Activity," ed. Patrick Newman, *Quarterly Journal of Austrian Economics* 18, no. 4 (2015): 487–561.

[9] Rothbard, "Chapter V," pp. 1–3, 5.

firm faces a horizontal demand curve—the very small firm will choose the combination of X and Y "that maximizes the physical product from a given amount of money invested." Although he never allows changes in input prices, Rothbard occasionally drops the restrictive price-taking assumption for output and investigates firms that face downward-sloping demand curves. Here, if the firm faces an elastic demand curve "*at and above the point of maximum output*" for a given amount of invested money, the firm will "sell at [the] point of maximum output."[10]

In section 2, "Competitive Price and Monopoly Price," Rothbard describes the maximum-output price as "*the competitive price*" regardless of whether it corresponds with a horizontal or downward-sloping demand curve. With a downward-sloping demand curve, however, if "the demand curve . . . is inelastic at the point of maximum output," then to maximize revenue the firm will "supply less for the market than [it] could have done with the purchased factors" and reduce production of the stock. In this case, "the resulting price is termed *the monopoly price*" because of the "restrictive cut back from maximum productivity." Therefore, depending on the individual firm's production decisions, the equilibration process will lead to either competitive prices or to monopoly prices.[11]

In section 3, "The Product and Outlay Schedules of the Firm," Rothbard elaborates on "the activity of the firm and its *production function*," particularly the "ratios between the quantities of factors." Assuming "given factor prices," he deduces the "*the rate of outlay substitution*, i.e., the rate at which one factor must be subtracted to compensate for the addition of another factor" to achieve a constant expenditure on inputs. He shows that it "*is equal to the ratio of the money-prices of the two factors*." He then investigates "the alternative combinations of factors which can produce" a given amount of output. Due to the "*imperfect substitutability of factors*," if the firm increases its purchases of X, it will need to use less of Y to "produce the same [amount of] product."[12]

[10] Rothbard, "Chapter V," pp. 1, 6–7, 12.
[11] Rothbard, "Chapter V," pp. 12–14.
[12] Rothbard, "Chapter V," pp. 36–39.

Rothbard then deduces the "*marginal rate of product substitution*," defining it as "the ratio of the amount of the second factor that can be diminished as a result of an increase in the first factor." He demonstrates that "*the maximum product combination for any given outlay of money is also the minimum outlay combination for that particular physical product*," which proves that if the rate of product substitution is different from the ratio of fixed factor prices, the firm will "shift to other alternatives until the two rates are approximately equal." Thus, "the firm will always tend to produce *so that the rate of product substitution between the factors equals the ratio of their money prices*."[13]

Rothbard explained why this equalization was important. It "will fully emerge as essential to an analysis of the prices of factors of production, and, specifically, the demand schedules of the producers for these factors." Rothbard planned to derive such a demand curve later in chapter 5 by exogenously lowering the factor's price and showing how this would induce the firm to increase its quantity demanded.[14]

With the exception of the competitive-monopoly price distinction that Rothbard explicitly borrowed from Carl Menger, Friedrich von Wieser, Frank Fetter, and Mises, the aforementioned sections largely derive from Stigler's Marshallian textbook and the newer Marshallian-Walrasian textbook by E. T. Weiler.[15] Rothbard references their writings throughout chapter 5, which is surprising because he previously criticized Stigler and Weiler in private letters.[16] This tension runs throughout the chapter when Rothbard subtly criticizes many parts of his own production theory. For example, after discussing a firm so small it cannot affect the output price, Rothbard realizes that "strictly . . . [the firm's] minute change will tend to affect the price," which completely exposes the unrealism of the fixed-price assumption.

---

[13] Rothbard, "Chapter V," pp. 40, 43, 46.

[14] Rothbard, "Chapter V," p. 47.

[15] Frank A. Fetter, *Economic Principles* (Century, 1915), pp. 73–85; Carl Menger, *Principles of Economics* (Free Press, 1950), pp. 207–25; Mises, *Human Action*, pp. 278, 354–84; George J. Stigler, *The Theory of Price* (Macmillan, 1946); E. T. Weiler, *The Economic System: An Analysis of the Flow of Economic Life* (Macmillan, 1952); Friedrich von Wieser, *Social Economics* (George Allen & Unwin, 1927), pp. 204, 211–12.

[16] Rothbard to Cornuelle, June 28, 1952, p. 1; Murray N. Rothbard to Ludwig von Mises, May 18, 1950, p. 1, Rothbard Papers.

Rothbard also grudgingly uses the terms monopoly price and competitive price, noting that "the terminology is the result of an old neoclassical preoccupation with single 'industries,'" and every firm which "obtains a monopoly price is not beyond competition." Furthermore, he signals a preference for the older definition of monopoly as "*a grant of special privilege by the State*" instead of the "highly misleading" competitive-monopoly price classification. Lastly, he partially recognizes the deep flaw in his analysis of a firm's decisions, noting that "some writers discuss the activity of the firm as if this were the most appropriate manner of analysis. . . . However, it is clear that the beginning point is the decision to invest a certain amount of money."[17]

This tension becomes even more apparent in the final section when Rothbard "return[s]" to the theory of investment decision briefly mentioned at the beginning of chapter 5. In section 4, "The Output and Investment Decision of the Producer," Rothbard moves away from analyzing the isolated firm by investigating how much an individual producer will invest, computing hypothetical "expected revenues," "expected net income," and "*expected rate of net income*." He recognizes that this decision—not the activity of the firm after it receives invested funds—is the "central one in the analysis of productive activity on the market. For the question is applicable to all producers." By means of "parceling out quotal parts of ownership of a firm's assets to different investors in various *shares*," individuals will invest in multiple firms and hire "managers to supervise the actual production." Each investor will try to maximize "the rate of net income from each unit of money that he invests, therefore . . . maximizing his total net income." Rothbard reaches a highly significant conclusion: "to pursue this approach will lead us to a theory of the savings and investment of the investor, rather than of the output of the firm, and thence to the theory of the savings and investment of all the investors, indeed all the individuals, in the economy."[18]

Continuing to elaborate on this insight, Rothbard deduces that an investor's decision is "inextricably connected with the problem of *time preference*," a corollary of the action axiom that refers to how individuals place a premium on present consumption over future consumption. This

[17] Rothbard, "Chapter V," pp. 8, 16, 26, 41. Rothbard, "Chapter V," pp. 7, 14, 36.
[18] Rothbard, "Chapter V," pp. 36, 47, 61–62, 64–65, 68.

connection exists because any individual must always weigh "how much he will save and invest [for future consumption] compared to the amount he will consume [in the present]." Incorporating time preference into his marginal utility analysis, Rothbard deduces that the investor must "choose between the [marginal] *utility of an expected future net money income*, and between the [marginal] *disutility of present consumer goods forgone*." He will invest in a given firm until the marginal rate of return is less than the marginal return from investing in alternative firms and will invest in general until the marginal rate of return is less than his "marginal rate of time preference."[19]

This "law of investment decision" demonstrates that "*there is no precise theory of the determination of the investment in, and output of, the firm* . . . because [a] firm cannot be considered in isolation from the other firms in the economy." The amount that an individual invests in any firm depends on the alternative returns he could earn from investing in other firms as well as his time preference. In contrast, the Marshallian theory argues that the manager maximizes a firm's net income by investing money raised on capital markets until its marginal income, or marginal revenue, is equal to its marginal cost, which includes the explicit interest cost of the invested funds. But the law of investment decision demonstrates that contrary to this MR = MC principle, an investor may maximize *his* net income by spending less in a given firm if he can make more money by investing in other businesses. In other words, the correct vantage point for marginal analysis and production theory is the investor, not the firm. Rothbard's realization that most of the Marshallian theory was seriously flawed caused a seismic shift in his textbook project.[20]

From Textbook to Treatise

In mid-1953, Rothbard began to realize that he needed to revise his production theory because its partial equilibrium framework narrowly focused on the isolated firm and ignored the important questions of investment and factor-price formation. He articulated his concerns in August when

[19] Rothbard, "Chapter V," pp. 64–65, 69, 79, 83.
[20] Rothbard, "Chapter V," pp. 64, 79.

he criticized Fritz Machlup and Edith Penrose's proposal to the Volker Fund on the "'theory of growth of the firm.'" Rothbard approved their desire to remove the restrictive assumption that "'the firm produced only one product.'" However, this did not go far enough because the important question is how much an investor should allocate among various firms. "If we wish to eliminate all restrictions," contrary to Machlup and Penrose, "we wind up not with a 'theory of the firm' at all, but with a *theory of the individual investor*. . . . As a matter of fact, in the course of writing my textbook this summer, I have integrated the theory of the firm and the theory of the individual investor in a way which, as far as I know, has never been done—although the essence and foundation is in Mises."[21]

At the end of the year, Rothbard intensified his Misesian criticism of the Marshallian theory of the firm in a review of a Volker Fund proposal to sponsor an economics seminar in the following summer built around Stigler's *Theory of Price*.[22] Rothbard emphasized the differences between the Chicago School and the Austrian School, in response to Stigler's "almost outrageous ridiculing of Böhm-Bawerk" in his dissertation, *Production and Distribution Theories*.[23] Rothbard appeared to totally repudiate his chapter 5, now caustically criticizing Stigler's price-taking and perfect knowledge assumptions as "unrealistic and simple-minded" and his "Theory of the Firm [as] . . . an abstract, erroneous analysis." Stigler's approach neglects "interrelations and diverts attention from the picture of the structure of the economy itself." In contrast, "the great merit of 'Austrian' economics is that [it] analyzes the broad interrelations between individuals that form the economic system." Rothbard concludes that teaching from Stigler's *Theory of Price*—which he had received at Columbia directly from Stigler—"would not be the type of course conducive either to a sound knowledge of economics or to an understanding of the capitalist system."[24]

[21] Murray N. Rothbard to Herbert C. Cornuelle, August 19, 1953, p. 2, Rothbard Papers. Edith Penrose, *The Theory of the Growth of the Firm* (John Wiley, 1959); Murray N. Rothbard to Kenneth S. Templeton, December 23, 1960, pp. 1–3, Rothbard Papers.

[22] Lawrence C. Lockley to Richard C. Cornuelle, December 13, 1953, pp. 1–2, Rothbard Papers.

[23] Murray N. Rothbard to Richard C. Cornuelle, December 25, 1953, p. 2, Rothbard Papers. George J. Stigler, *Production and Distribution Theories* (Macmillan, 1941), pp. 179–227.

[24] Rothbard to Cornuelle, December 25, 1953, pp. 1–3.

By early 1954, Rothbard decided to completely rewrite his production theory. This decision is noteworthy: while he had previously revised and rewritten parts of chapters, Rothbard never started over. He was now encountering the struggles that beset economists who try to develop new theories. Importantly, the development of a wholly new production theory required reorienting the project's main purpose.

In February, Rothbard sent a letter titled "Textbook or Treatise" to Richard C. Cornuelle, the younger brother of Herbert C. Cornuelle, who was a student at NYU who took Mises's seminar and now Rothbard's main contact at the Volker Fund. In "the theory of production where the whole cost-curve situation has to be faced, Mises is not much of a guide." This was an important setback because most "present-day textbooks" focus on "'the theory of the firm.'" He declared chapter 5 a complete failure, now "being completely rewritten to omit the 'theory of the firm' and cost-curve approach." Furthermore, Rothbard not only disagreed with prevailing Marshallian doctrine but also recognized that Mises "has not freed himself from the shackles of the old-neoclassical approach" because "there is no such thing as a 'monopoly price' versus 'competitive price' on the free market." He believed the theory to be "outright nonsense."[25]

Given that Rothbard now wanted to devote a significant portion of his book to correcting the errors in Mises and modern-day production theory, he announced to Cornuelle that his work can no longer "be a textbook of general principles in the traditional sense. It is too revolutionary vis-à-vis received doctrine and even some areas of Misesian doctrine." Instead, he proposed turning it into a "general treatise in the Austrian-libertarian tradition," a great book similar to Böhm-Bawerk's *Capital and Interest*, Philip Wicksteed's *Common Sense of Political Economy*, Fetter's *Economic Principles*, and Mises's *Human Action*.[26] He would also utilize contemporary neoclassical authors who still followed Lionel Robbins and applied

[25] Rothbard to Cornuelle, "Textbook or Treatise?," pp. 1–2. Brian Doherty, *Radicals for Capitalism: A Freewheeling History of the Modern American Libertarian Movement* (PublicAffairs, 2007), pp. 184, 206.

[26] Rothbard to Cornuelle, "Textbook or Treatise?," pp. 2, 4. Eugen von Böhm-Bawerk, *Kapital und Kapitalzins* [Capital and interest], 4th ed. (Gustav Fischer, 1921); Fetter, *Economic Principles*; Philip H. Wicksteed, *The Common Sense of Political Economy* (Macmillan, 1910).

the deductive method to production and whom he continually informed the Volker Fund about.[27] The book's main goal now was to "command the attention of the profession as a treatise because of its considerable elaborations in the areas not developed by Mises; its differences from Mises in such areas as monopoly, banking ethics, and government (although I do not intend to *cite* any specific differences with Mises in the book); and its refutations of current economic theory." Only by improving the Misesian edifice could this emerging economic theorist convince the profession to reestablish economics on its proper foundations.[28]

Since Rothbard envisioned his treatise to continue the Austrian-libertarian tradition, it constituted part of what Rothbard started to describe as a "comprehensive and integrated structure . . . a Science of Liberty" that explained the workings of the free market and voluntary choice in economics, history, ethics, political science, and other scholarly fields.[29] Importantly, Rothbard later explained that this all-encompassing project in political economy paralleled the endeavors of "Ludwig von Mises, Frank H. Knight, and F.A. Hayek," economists who realized that "it was vital to explore related and fundamental problems of philosophy, political theory, and history" so they could "construct a broader systematic theory . . . in which economics could take its place as a consistent but subsidiary part." That Rothbard strongly disagreed with these thinkers on various aspects of free-market political economy, such as natural rights, utilitarianism, spontaneous order, and even the term libertarianism, does not change the fact that Rothbard envisioned his science of liberty as following in their footsteps and building upon their efforts.[30]

[27] Lionel Robbins, *An Essay on the Nature and Significance of Economic Science*, 2nd ed. (Macmillan, 1935); Murray N. Rothbard, "Readings in Current Economics—1954," n.d., pp. 1–11, Rothbard Papers; Murray N. Rothbard, "Readings in Economics and Political Economy—1955," n.d., pp. 1–7, Rothbard Papers; Murray N. Rothbard, "The Best Journal Articles of 1956: Economics and Politics," n.d., pp. 1–10, Rothbard Papers.

[28] Rothbard to Cornuelle, "Textbook or Treatise?," p. 4.

[29] Murray N. Rothbard to Richard C. Cornuelle, "Suggestions for a General Research Program for the Volker Fund," April 3, 1954, pp. 7–8, Rothbard Papers.

[30] Murray N. Rothbard, introduction to the 1st ed., in "*Egalitarianism as a Revolt Against Nature*" *and Other Essays*, 2nd ed. (Mises Institute, 2000), p. xvi. Murray N. Rothbard, "Confidential Memo to the Volker Fund on F. A. Hayek's *Constitution of Liberty*," January 21, 1958, in *Murray N. Rothbard vs. the Philosophers: Unpublished Writings on Hayek, Mises,*

Shortly after deciding to reorient his textbook project, Rothbard discussed his science of liberty and how to advance Austrian economics and libertarianism in a memo to Cornuelle titled "Suggestions for a General Research Program for the Volker Fund." He was all too aware that the profession had dismissed Mises's *Human Action* and a similar fate could befall his own treatise. The reason for the lack of "Austrian-libertarian economics" in "the top graduate schools in the country" was because there existed no "cohesive, high-powered group of libertarian-scientists" that communicated to students and other academics through "an active libertarian center." Rothbard believed that the time was ripe to organize such an institute.[31]

Initially, Rothbard hoped that the Foundation for Economic Education would become a "libertarian Institute for Advanced Study, [by] publishing books, pamphlets, and a scholarly journal." But by the mid-1950s, Leonard Read "began to insist that FEE publications refrain from any kind of intellectual critique of statist views or measures" and instead concentrate on "converting housewives, high school students, and, to some extent, blue-collar industrial employees."[32] Consequently, Rothbard urged the Volker Fund to create a full-blown research center with a "professional journal and professional society." Only through such an organization could Austrian ideas and works, such as Rothbard's treatise, overcome the profession's denigration. "An active libertarian center," Rothbard concluded, "would impress the fact of present day Austrian-libertarian economics on the academic world, and force them to take account of it."[33]

The implications of Rothbard's letters are clear. By early 1954, Rothbard's ambition had greatly expanded: not only would he write an Austrian treatise to rescue economics and demonstrate the efficacy of the free market, but

Strauss, and Polanyi, ed. Roberta A. Modugno (Mises Institute, 2009), pp. 61–70; Murray N. Rothbard, "On *Freedom and the Law*," *New Individualist Review* 1, no. 4 (1962): 37–40; Murray N. Rothbard, "The Symposium on Relativism: A Critique," n.d., in *Murray N. Rothbard vs. the Philosophers: Unpublished Writings on Hayek, Mises, Strauss, and Polanyi*, ed. Roberta A. Modugno (Mises Institute, 2009), pp. 104–20.

[31] Rothbard to Cornuelle, "Suggestions for a General Research Program for the Volker Fund," pp. 1, 7–8.

[32] Murray N. Rothbard, "Toward a Strategy for Libertarian Social Change," April 1977, pp. 133, 135, Rothbard Papers.

[33] Rothbard, "Suggestions for a General Research Program for the Volker Fund," p. 8.

his treatise would be but a component of an overarching political economy that a research center would promote. This multigoal project was a daunting task for even a group of scholars, but Rothbard was undaunted. His first step was to complete the economics treatise.

Austrian General Equilibrium

Rothbard spent the rest of 1954 and part of 1955 rewriting chapter 5 of his manuscript. He relied heavily on Böhm-Bawerk's *Capital and Interest*, which Mises praised as "the most eminent contribution to modern economic theory."[34] The central drivers in Böhm-Bawerk's system are the capitalist-entrepreneurs, or the "capitalist-undertaker[s]" who forecast the full range of consumer desires and accordingly allocate the "productive powers" in multiple firms along various time horizons. Although it appears as if factor prices are exogenously fixed, Böhm-Bawerk demonstrates that the "law of costs" shows how "the value of the means of production, and therefore the value of the costs, is regulated by the value of their products," and each capitalist-entrepreneur influences input prices by allocating producers' goods according to their estimations of consumer demand.[35]

The centrality of Böhm-Bawerk's treatise to Rothbard's revised production theory cannot be overstated. Rothbard described *Capital and Interest* as "one of the all-time great masterpieces of economic thought [that] . . . is still sound today." If only "one-tenth of the time and energy . . . lavished . . . [on] an enormously inferior work like Marshall's *Principles*" had been directed to *Capital and Interest*, "the history of economic thought in our time would be enormously different." This was because the "only translation" of *Capital and Interest* in English was the first edition. As a result, the Anglo-American community was not aware that Böhm-Bawerk had refuted the "deprecatory attacks of Alfred Marshall and his followers." Consequently, "Austrian

[34] Ludwig von Mises, "*Capital and Interest*: Eugen von Böhm-Bawerk and the Discriminating Reader," *Freeman* 9, no. 8 (1959): 52.

[35] Eugen von Böhm-Bawerk, *The Positive Theory of Capital*, trans. William Smart (London, 1891), pp. 22, 82, 114, 183–84. *The Positive Theory of Capital* is the second volume of *Capital and Interest*.

economics was written off in England and America as having been partly refuted, partly synthesized, by Alfred Marshall."[36]

Rothbard subsequently described his Böhm-Bawerkian production theory as a "'general equilibrium' analysis in the dynamic Austrian sense," a "complete break with the currently fashionable [Marshallian] theory of the firm . . . [and] the static, currently popular Walrasian" general equilibrium. Austrian general equilibrium theory analyzes interrelations in the economy by showing how a change in the economic data reverberates throughout capitalist-entrepreneurs' pricing and production decisions. Rothbard previously utilized the basics of this framework in his preliminary money chapter when he demonstrated the economic consequences of a change in the money supply and in chapter 4 when he analyzed the interrelatedness of prices of consumers' goods.[37]

In what survives of the progress report for 1954, Rothbard described his new production theory as "one interconnected structure." Central to this Austrian general equilibrium analysis was Mises's "Evenly Rotating Economy."[38] In chapter 2, Rothbard briefly mentioned the Misesian long-run equilibrium, the "*final state of rest*" that a market price tends to if consumer preferences, resources, and technology remain constant. But "conditions, such as the demand curve, always change in the interim, thus setting a new final state as the goal of market prices. The final state is never reached."[39] Rothbard elaborated on this mental construction in his revised chapter 5.

The evenly rotating economy (ERE) is indispensable for Austrian general equilibrium theory because in the real world "individual value scales, technological ideas, and the quantities of the means are always changing

[36] Murray N. Rothbard to Ivan R. Bierly, November 6, 1959, p. 1, Rothbard Papers. Alfred Marshall, *Principles of Economics*, 8th ed. (Macmillan, 1920).

[37] Murray N. Rothbard, *Man, Economy, and State with Power and Market*, 2nd scholar's ed. (Mises Institute, 2009), pp. lvii.

[38] Murray N. Rothbard, "Progress Report [fragment]," n.d., p. 2, Rothbard Papers. Although Rothbard later referenced his "discussion in the previous two Progress Reports," complete copies of reports from April 1953 to December 1954 have unfortunately not survived. Furthermore, Rothbard did not save a copy of his revised chapter 5. Murray N. Rothbard, "Progress Report, December 1, 1954 to April 1, 1955," n.d., p. 1, Rothbard Papers.

[39] Murray N. Rothbard, "Chapter II: Economics of the Unhampered Market: Direct Exchange," n.d., p. 80, Rothbard Papers.

[and] continually impel the economy in various directions." The economic theorist cannot fully investigate the effects of one change by simply observing marketplace activities because "before the effects of any one change are completely worked out, other changes intervene." Therefore, the theorist must, "by the use of reasoning," analyze what would happen if the data remained constant and the final states of rest in all markets resulted. If this unrealistic situation were to occur, the "state of *final equilibrium*" in all markets would be reached which would be "*evenly rotating*, i.e., in which the same activities tend to be repeated." Only with this construct, "a world where there is no change and where given conditions are allowed to work themselves out to the full," can the economic theorist understand the "complexity of the market system . . . in a world of continual change."[40]

Rothbard stresses that unlike unrealistic assumptions such as "'indifference classes' and . . . infinitely small steps," the "'unrealistic' concept [of] final equilibrium" comports with the praxeological method because the ERE is only a preliminary tool used to understand the real world. Starting from this situation, the theorist introduces a change and mentally holds all other data constant, observing how the alteration works itself out to reach a new final equilibrium. Once the economist logically deduces the effects of the relevant change, the assumption of the ERE, like other "restrictive" assumptions, can be "dropped." What remains are the realistic laws that accurately explain economic phenomena. This reasoning contrasts with neoclassical economics' logical chains of thought based on "false premises," which are not dropped at the end of the analysis and therefore constitute "the basis of highly elaborate theoretical structures."[41]

Equally important to note is that Austrians' use of the ERE contrasts with neoclassical approaches to long-run equilibrium. The mathematical theorems used to explain Walrasian general equilibrium cannot "describe the *path* by which the economy approaches" the final states of rest, the crucial equilibrating "analysis that is significant for human action." The Marshallian "long run" of a single firm fails by not "taking account of all the interrelations in the economy." Moreover, Marshall considered this

[40] Rothbard, *Man, Economy, and State*, pp. 321–22.
[41] Rothbard, *Man, Economy, and State*, pp. 322, 348, 368.

"'long run' as actually existing . . . [and as] something that can be spotted and marked by an observer," even though "the long run, by its very nature, *never does and never can exist. . . . It is not observable*, or real, as are actual market prices."[42]

Armed with the ERE, Rothbard scrapped his earlier Marshallian production theory and erected a Böhm-Bawerkian one. As he explained in his progress report, his primary focus is the capitalist-entrepreneurs who "*advance* saved money to the factors."[43] Rothbard first started with the ERE where entrepreneurship was absent and only capitalists existed. He assumes that the factors of production (land, labor, and capital goods) differ in their specificity and are unequally "suited to the production of all possible products." In such a world, capitalists invest their savings by paying labor and owners of land "to produce capital goods," which are in turn bought by other capitalists and "transformed into lower and lower orders of capital goods, until consumers' goods are reached." Capitalists earn only "*the rate of interest*" determined by "the universal fact of time preference." This natural or "'pure rate of interest' corresponds to Mises' term 'originary rate of interest.'"[44]

Rothbard then elaborates on the equilibrating processes that lead to the ERE. In the world of uncertainty, the capitalist is also an entrepreneur who must forecast the future. In addition to earning interest, he also earns "entrepreneurial *profits* when [his] return is more than interest [and] suffers entrepreneurial losses when [his] return is less than interest." Returns among production processes are equalized by capitalist-entrepreneurs moving from losing lines to profitable lines until there is "a uniform rate of interest in the" ERE.[45] This exercise shows that interest is conceptually different from profits because interest will still exist in the ERE while profits will not. Thus, preliminary use of the ERE had already enabled Rothbard to outline the capitalist function and the stages of production, which led

[42] Rothbard, *Man, Economy, and State*, pp. 325, 356, 358–59.

[43] Rothbard, "Progress Report [fragment]," p. 2.

[44] Rothbard, *Man, Economy, and State*, pp. 329, 331, 349, 351.

[45] Rothbard, *Man, Economy, and State*, pp. 329, 331, 349, 351, 354, 371.

him to explicate the differences between the profit and interest earned by capitalist-entrepreneurs.[46]

Rothbard continued to explain the investment decisions of capitalist-entrepreneurs. They can invest in multiple firms "throughout the length and breadth of the production structure." Although Rothbard no longer uses the term *law of investment decision* from his earlier chapter 5, he invokes its reasoning by stating that a capitalist-entrepreneur will compare different potential investments and choose the "line that earns him the greatest *rate* of return." In a dynamic world, capitalist-entrepreneurs will maximize their return by weighing the potential return in one firm with alternative returns that could be earned in other firms. A capitalist-entrepreneur will invest in a single firm until the marginal rate of return is less than the marginal return from investing in other firms. He will invest in multiple firms until the marginal rate of return is no longer greater than his marginal rate of time preference.[47]

This leads to a critical realization: because capitalist-entrepreneurs will invest in multiple firms, there is no theory determining investment in a single isolated firm. As Rothbard clarified in a letter to New York University graduate student Edward C. Facey, profit maximization will not occur by investing in a single firm until "total revenue [minus] total cost is greatest." This error is based on the unrealistic assumption that the capitalist-entrepreneur "can *only* keep investing in that particular firm and nowhere else." Consequently, because "only the Austrian theory" analyzes "each firm . . . in relation to other firms," the Marshallian theory of the firm, related cost-curve analysis, and the MR = MC condition must be discarded. Rothbard made a critical point: a realistic production theory that incorporates the ability to invest in multiple lines of production can result only from an analysis of the capitalist-entrepreneur, not the hermetically isolated firm.[48]

---

[46] Rothbard, *Man, Economy, and State*, pp. 351, 354.

[47] Rothbard, *Man, Economy, and State*, pp. 350–51.

[48] Murray N. Rothbard to Edward C. Facey," October 18, 1956, pp. 4–5, Rothbard Papers. Stevan Bennett, "Former Professor Edward Facey Shaped Hillsdale's Economics Department," Collegian, September 22, 2016, https://hillsdalecollegian.com/2016/09/former-professor-edward-facey-shaped-hillsdales-economics-department/.

Equipped with this understanding of the interrelatedness of firms, Rothbard proceeded to explain the demand for factors without assuming fixed factor prices, either in the ERE or in the dynamic world of uncertainty. The "chief error," Rothbard emphasizes, "of basing a causal explanation of factor pricing on the *assumption of given factor prices*" is that it assumes as given the very problem to be solved—the prices for productive factors. Instead, Rothbard uses "marginal productivity analysis" to explain the pricing of specific and nonspecific factors. He demonstrated how capitalists' estimations of future consumer valuations determine the "general schedule" of a factor's marginal value product (MVP)—that is, the additional revenue that will be earned in the future from hiring an additional unit of the factor. The MVP schedule, in conjunction with its supply, results in the factor's pricing and allocation according to consumer demand. Through capitalists bidding a factor away from its lower-valued uses to those valued more highly, the final equilibrium factor price is established. "Thus, by looking at a factor in all of its interrelations," Rothbard is "*able to explain the pricing of its unit service without previously assuming the existence of the price itself.*"[49]

Achieving this feat allowed Rothbard to use Böhm-Bawerk's law of costs against competing neoclassical theories. In the ERE, if interest is assumed to be "an opportunity cost for an individual investor," then "*price will equal average money cost for every good.*" However, the "curious conclusion . . . that *costs determine price*" does not follow because factor incomes are "the *result* of sales to consumers." Although "factors are paid in *advance* of the sale of the product, . . . capitalist-entrepreneurs speculatively advance money" based on their expectation of future consumer demand. This leads to the law of costs: the prevailing prices of factors that a capitalist-entrepreneur confronts are simply reflections of all other capitalist-entrepreneurs' estimations of consumer demand in other lines.[50]

The law of costs exposes the flaws in the Marshallian and Walrasian theories. "The 'cost curves' so fashionable in current economics" assume fixed factor prices for the firm. When the economist considers only the single firm and abstracts from price formation, "it *appears* as if costs (at

---

[49] Rothbard, *Man, Economy, and State*, pp. 454–55, 475–77.
[50] Rothbard, *Man, Economy, and State*, pp. 354–56.

least in the sense of the prices of factors) are somehow given, and beyond [that firm's] control." This is erroneous because factor prices are "determined solely by consumers' demand for all uses," including those the individual firm caters to. On the other hand, when the economist "takes refuge in the irrelevant mathematics of the [Walrasian] 'general equilibrium' school," he does appreciate interconnectedness more than when using partial equilibrium. The crippling flaw, though, is that the Walrasian economist cannot understand how capitalist-entrepreneurs' estimations of consumer demand and costs of production bring the economy from one final equilibrium to another. Both approaches, Rothbard trenchantly concludes, are "equivalent to abandoning economics."[51]

By the end of this investigation, Rothbard had firmly established the importance of Austrian general equilibrium theory and its uniqueness in analyzing economic interrelations. But Rothbard was not content to rest there. Böhm-Bawerk's production theory covered much more, especially the relationship between the interest rate and the process by which goods move through the stages of production. Both Mises and Hayek built upon Böhm-Bawerk's capital theory in their own separate ways, and Rothbard now turned to improving upon and integrating their analyses.

Interest and the Structure of Production

When rewriting chapter 5, Rothbard accomplished an extremely significant breakthrough: "the Fetter–Mises pure time-preference theory of interest is synthesized with . . . the Austrian theory of the structure of production."[52] While Böhm-Bawerk pioneered both concepts, Mises recognized that his errors caused economists to develop capital and interest theory along different lines. According to him, Böhm-Bawerk showed the importance of time preference in determining the interest rate and "unmasked the fallacies of the naïve productivity explanations of interest, i.e., of the idea that interest is the expression of the physical productivity of factors." Unfortunately, he later "based his own theory to some extent on the productivity approach," referring "to the technological superiority of more time-consuming roundabout

[51] Rothbard, *Man, Economy, and State*, pp. 588–89.
[52] Rothbard, *Man, Economy, and State*, p. lvii.

processes of production" as part of the reason why individuals prefer present consumption to future consumption. Similarly, while Böhm-Bawerk correctly emphasized the "roundabout ways of production requiring more time" and the "role played by the period of production," he failed to recognize the irrelevance of "the length of time expended in the past for the production of capital goods [and that] . . . the 'average period of production' is an empty concept."[53]

As a result of Böhm-Bawerk's mistakes, Mises's follower Hayek concentrated on the structure of production in his *Prices and Production*, a work Rothbard considered "an excellent contribution to the analysis of the production structure."[54] However, while this work greatly refined and improved Böhm-Bawerk's temporal stages framework, it de-emphasized time preference as a cause of interest. A similar procedure was followed by Knut Wicksell, who engaged in a "brilliant discussion of capital and the production structure and the role of time in production."[55] Partially in response to this, Mises's *Human Action* focused on defending the pure time preference interest theory formulated by Fetter, who had criticized Böhm-Bawerk's eclectic approach. Healing the disjunction between the capital and interest theories of Mises and Hayek was one of Rothbard's major ambitions in his treatise.[56]

Rothbard began by reorienting Böhm-Bawerk's aggregate time market along pure time-preference lines. Böhm-Bawerk had demonstrated how the "demand for labour . . . from the Capitalist-Undertakers" codetermined, along with the supply of labor, the long-run return on investment. In particular, he showed how the interest "agio . . . is given in the form of a price for labour which remains under the amount of the future product of labour." In other words, capitalists advance present money to factors in exchange for a greater amount of future money from selling the finished

[53] Mises, *Human Action*, pp. 478, 485–86, 524–25.

[54] Rothbard, *Man, Economy, and State*, p. 402. F. A Hayek, *Prices and Production*, 2nd ed. (Routledge & Kegan Paul, 1935).

[55] Rothbard, *Man, Economy, and State*, p. 506. Knut Wicksell, *Lectures on Political Economy*, vol. 1, *General Theory* (Routledge & Sons, 1934).

[56] Joseph T. Salerno, introduction to *Man, Economy, and State with Power and Market*, 2nd scholar's ed., by Murray N. Rothbard (Mises Institute, 2009), p. xxvii.

product. Interest, therefore, is the spread between the cumulative prices of the stages in the structure of production.[57]

Working within the evenly rotating economy, Rothbard used "the schedule of time-preference valuations" to show how the capitalist's supply of savings to factors of production is based on his marginal utility rankings of present and future money. The capitalist weighs the marginal utility of present money, which can be spent on present consumer goods, with the marginal utility of future money, which can be spent on consumer goods at a later date. If the capitalist ranks the marginal utility of a sum of present money lower than the marginal utility of a greater sum of future money, he will supply savings to workers and other inputs. Continuing the analysis, Rothbard shows that original factors' (workers' and landowners') demand for savings is determined by their marginal utility rankings of present money against greater sums of money that could be earned from selling goods in the future. These time market schedules are then "aggregated on the market to form market-supply and market-demand schedules for present goods in terms of future goods." The supply of and demand for savings then determines the interest rate.[58]

This "pure rate of interest," Rothbard emphasizes, "is determined *solely by the time preferences of the individuals in society, and by no other factor*." He expands on this point by refuting "Böhm-Bawerk's highly unfortunate lapse into a productivity theory of interest, coupled with a critique of Irving Fisher's concessions to the productivity doctrine," by utilizing the "brilliant dissections" of Fetter.[59] Briefly, Fisher, who built on Böhm-Bawerk, argued for an eclectic theory of the interest rate. According to him, time preferences determine the supply of savings, while the ability to transform factors of production into consumers' goods determines the demand for savings.

[57] Böhm-Bawerk, *Positive Theory of Capital*, pp. 314–315, 336.

[58] Rothbard, *Man, Economy, and State*, pp. 379, 388. Rothbard, *Man, Economy, and State*, pp. 379–89, 404–7.

[59] Rothbard, *Man, Economy, and State*, pp. 389, 425. Frank A. Fetter, "Capitalization Versus Productivity: Rejoinder," *American Economic Review* 4, no. 4 (1914): 856–59; Frank A. Fetter, "Davenport's Competitive Economics," *Journal of Political Economy* 22, no. 6 (1914): 550–65; Frank A. Fetter, "Interest Theories Old and New," *American Economic Review* 4, no. 1 (1914): 68–92; Frank A. Fetter, "The 'Roundabout Process' in the Interest Theory," *Quarterly Journal of Economics* 17, no. 1 (1902): 163–80; Irving Fisher, *The Theory of Interest: As Determined by Impatience to Spend Income and Opportunity to Invest It* (Macmillan, 1930), pp. 61–98, 150–77.

Significantly, Rothbard stresses that this eclectic theory became standard "neoclassical doctrine," which concentrated on financial markets and asserted that the "producers' loan market *determines* the rate of interest."[60]

Rothbard exposes the flaws in this reasoning. The "cardinal error" is that investing in the transformation of producers' goods into consumers' goods enhances "*physical* productivity" but not "value-productivity or the monetary return on investment" per se. This rate of return is governed solely by individuals' valuations of present and future money, or their "time-preference schedules." Furthermore, firms' demand for loanable funds is "determined by the rates of return that can be achieved in investments" in the production structure and not the other way around. Unlike "neoclassical analysis," Austrian theory demonstrates that the "producers' loan market has a purely subsidiary and dependent role." The pure rate of interest originates in the production structure and not the loan market.[61]

Rothbard finished his analysis of the time market by demonstrating the connection between the interest rate and the proportion of social income spent on consumer goods versus investment during a given time period. The individual's time preference determines "the amount of his money income to be devoted to saving and the amount to be devoted to consumption." The higher time preferences are, the higher the rankings of present consumption are to future consumption and "the greater will be the proportion of consumption to savings." "Lower time-preference schedules," in contrast, mean lower rankings of present consumption relative to future consumption and lead to a lower consumption-savings ratio. Therefore, time preferences determine "*both the market equilibrium interest rate and the proportions between consumption and savings (individual and aggregate).*" They are different "side[s] of the same coin." The realization that lower time preferences lead to a lower interest rate and consumption-savings ratio while higher time preferences result in the opposite would play an important role in Rothbard's explanation of how changes in time preferences affect the capital structure.[62]

[60] Rothbard, *Man, Economy, and State*, p. 421.
[61] Rothbard, *Man, Economy, and State*, pp. 423–25.
[62] Rothbard, *Man, Economy, and State*, pp. 400–401.

With the time market fleshed out, Rothbard shifted to Böhm-Bawerk's structure of production theory. He defended the concept of a separate land factor (i.e., natural resources) against modern followers of Frank H. Knight, a member of the Chicago School who criticized Austrian capital theory.[63] Economics books such as Stigler's *Theory of Price* lumped land in with capital goods, making it "almost impossible to arrive at a satisfactory theory of production and its structure."[64] They failed to recognize Mises and Hayek's insight that capitalists' "permanent alterations" in the natural environment, such as a tunnel blasted through a mountain or "land that has been irrigated by canals or altered through the chopping down of forests," are land.[65] Capitalists do not worry about reproducing the physical change and treat it as given. Once "the permanent are separated from the nonpermanent alterations . . . the structure of production no longer stretches back infinitely in time" and "it would not take many years for the whole capital-goods structure to collapse, if no work were done on maintenance and replacement."[66]

Rothbard also modified Hayek's definition of land by focusing on "the physical *need and possibility* of reproducing" capital goods.[67] Hayek argued that permanence was the only criterion for the land factor, meaning that depletable natural resources that cannot be reproduced, such as a copper mine or crude oil, are capital goods. Rothbard believed "Hayek's classification" to be in error.[68] This is because capitalists view such resources as finite in supply and given for future production. They can conserve the resource and create substitutes but they cannot produce more of it. This means that land factors are those goods that are permanent or naturally

[63] Frank H. Knight, "Professor Hayek and the Theory of Investment," *Economic Journal* 45, no. 177 (1935): 77–94.

[64] Murray N. Rothbard, "Appendix C: The Neglect of Urban Land in Economic Analysis," n.d., p. 2, Rothbard Papers. Stigler, *Theory of Price*, pp. 321–22.

[65] Rothbard, *Man, Economy, and State*, p. 484. F. A. Hayek, *The Pure Theory of Capital* (University of Chicago Press, 1941), pp. 54–58; Mises, *Human Action*, p. 634.

[66] Rothbard, *Man, Economy, and State*, p. 484. Rothbard, *Man, Economy, and State*, pp. 483–85.

[67] Rothbard, *Man, Economy, and State*, p. 497.

[68] Rothbard, "Progress Report, December 1, 1954 to April 1, 1955," p. 2.

depletable and irreproducible while capital goods are only nonpermanent and reproducible goods.[69]

With the structure of production framework defended, Rothbard integrated it and his interest theory into the theory of factor pricing. Knightians such as Earl Rolph argue that in long-run equilibrium, firms pay factors their marginal value product, which is equal to the present value of their "immediate product," such as a few "stakes in the ground" at the beginning of construction.[70] To the contrary, Rothbard explains, capitalists only value the work those factors complete in the present because they can sell the finished building, which embodies their actual marginal product, in the future. Time preference and the consequent discounting of money earned in the future means that what capitalists really pay factors is the "discounted value of their marginal product" (DMVP). Rothbard's defining of factor incomes as discounted marginal value products emphasizes the future-oriented nature of production and that interest is a spread between prices paid to factors and the revenue earned from selling the product.[71]

Rothbard's advances concerning the time market, the land factor, and a factor's discounted marginal value product laid the groundwork for him to transition from the static analysis of the capitalist and the evenly rotating economy to the dynamic world of the capitalist-entrepreneur. In particular, Rothbard proceeded to demonstrate "the relationship between savings and production, and the rate of interest" and how changes in time preferences reconfigure the structure of production. In this deployment of Austrian general equilibrium theory, Rothbard finished the goal he set out to achieve: synthesizing Hayek's important writings on the capital structure with the Fetter–Mises pure time-preference theory of interest.[72]

Rothbard appropriately starts with the ERE, where "net savings-investment is zero." In such a world, "the production structure remains constant"

---

[69] Rothbard, *Man, Economy, and State*, pp. 496–99.

[70] Earl Rolph, "The Discounted Marginal Productivity Doctrine," *Journal of Political Economy* 47, no. 4 (1939): 544.

[71] Rothbard, *Man, Economy, and State*, p. 505.

[72] Murray N. Rothbard, "Savings, Interest, and Production," n.d., p. 180, Rothbard Papers. Hayek, *Prices and Production*; F. A Hayek, "The 'Paradox' of Saving," *Economica*, no. 32 (1931): 125–69.

and "price spreads conform to the aggregate of individual time-preference schedules." He then introduces a change in individuals' utilities that disrupts the ERE: "a lowering of time-preference schedules" on the aggregate time market that decreases consumption and increases investment. Rothbard continues the analysis by explicating the equilibrating process that brings the economy to a new ERE. The decline in "final consumers' spending" leads to "declining money incomes and prices . . . along the production structure." At the same time, "*another* force"—the increase in investment from capitalist-entrepreneurs' directly plowing their savings into firms or lending them to firms on the loan market—exerts its influence in "higher-order production stages." In the lower stages, "prices fall because of the lower consumer demand and the resulting shift of investment capital from the stages nearest consumption." In the higher stages, "increased investment expenditures . . . raises the prices of the factors."[73]

After enough time has passed and the permanently lower consumption-savings proportion allows the "longer production processes" to be completed, their "increased productivity leads to a greater physical supply of capital goods." This increases the supply of consumer goods and causes their prices to fall. Overall, the lower time preferences "lessens the spreads of cumulative prices" and hence the pure rate of interest.[74] Once the change works itself out, the economy comes to rest in another final equilibrium and "the activities in the system continue endlessly in an ERE."[75]

Rothbard elaborates on the change in cumulative price spreads. The change in relative demands leads to nonspecific factors leaving the lower stages for the higher stages "where the monetary demand for factors has increased," while specific factors suffer permanently smaller incomes in the lower stages and receive permanently larger incomes in the higher stages. Rothbard further investigates the change in the prices of the original factors land and labor. Their increased productivity from "more productive and longer production processes, and a fall in the discount or interest rate concomitant with falling time preference . . . impel an increase in the real

[73] Rothbard, *Man, Economy, and State*, pp. 517–19, 521–22.

[74] Rothbard, *Man, Economy, and State*, pp. 522, 525.

[75] Rothbard, "Savings, Interest, and Production," p. 200.

prices of factor services." "The conclusion," Rothbard recognizes, "is that in a progressing economy with increases in gross savings and investment . . . *real* wages and rents will rise."[76]

Ultimately, an increase in savings is far more important for economic growth than technological inventions because "while knowledge is a limit, *capital* is a narrower limit." "Knowledge can and does exist without" the necessary savings needed to implement technologies. Building on Böhm-Bawerk and Mises, Rothbard explains that what is lacking in "'backward' or 'underdeveloped' countries . . . is not knowledge of Western technological methods . . . [but] the supply of saved capital needed to put the advanced methods into effect." A capitalist-entrepreneur's new technological innovation, such as oil-drilling or tractors, can "be put to use only by saving." "That," Rothbard emphasizes, "is the important limit on his investment."[77]

Thus, Rothbard used Austrian general equilibrium analysis supplemented by the ERE to deduce the causal link between changes in time preferences and changes in the interest rate and the structure of production. Dropping the assumption of the ERE, Rothbard's analysis yielded an exact theorem applicable to the real world economy, an important implication of which is that falling time preferences tend to bring about a progressing economy featuring a lower interest rate, larger stock of capital goods, and increased labor productivity. In showing this, Rothbard synthesized the Fetter–Mises pure theory of time preference with Hayek's structure-of-production analysis and joined the ranks of eminent production theorists.

Rents and Economic Calculation

With the completion of the Hayekian structure-of-production edifice, Rothbard could now use Austrian general equilibrium to further "develop the analysis" of production on the free market in a world of uncertainty. This included examining the various prices earned by particular factors, the incomes of capitalist-entrepreneurs, and the importance of calculating

[76] Rothbard, *Man, Economy, and State*, pp. 522, 525–26.
[77] Rothbard, *Man, Economy, and State*, p. 542.

profits and losses. Notably, he would analyze these concepts in ways Mises had not done and refine his mentor's work.[78]

When Rothbard moved to factor pricing, he recognized that "the subject of 'rent' is one of the most confused in the entire economic literature." The "classical writers" erroneously argued that "wages were the 'reward' of labor, rents the 'reward' of land, and interest the 'reward' of capital goods." Land, which was supposedly fixed in supply, earned rent, and classical economists considered it an unnecessary earning because it was the "differential" between the price paid to a given land factor and the "zero" price needed to acquire the "most inferior working land."[79] Building on this, Marshall defined rent as a return that a firm pays to any factor fixed in supply which it cannot substitute in production. He reasoned that because the supply of "durable capital goods" may only be fixed "temporarily," this rent is only earned for a period of time and can therefore be classified as a quasi rent—the difference between the price paid to the factor and its long-run cost.[80] Modern disciples of Marshall, including Stigler, elaborated on quasi rents.[81]

In *Human Action*, Mises stated that "the sophisticated distinction between 'rents' and 'quasi-rents' is spurious" but that "the differential-rent idea, by and large, can be adopted by the subjective-value theory."[82] For this reason, Rothbard considered Mises "under classical influence."[83] He confided to Ludwig Lachmann that "one thing which I try to do in my book . . . is a resurrection of Frank Fetter . . . [and] his superb theory of rent, which lies a mouldering-in-the grave—even Mises doesn't see its contribution."[84]

True to his word, Rothbard used rent to signify "the sale and purchase of the *unit services*" of all factors. In the evenly rotating economy, "the rental price" of a factor equals its "discounted marginal value product [and] *the capital value of a 'whole factor' will be equal to the sum of its future rents, or the sum of its* DMVPs." Although capital goods earn "a *gross rent*, since

[78] Rothbard, *Man, Economy, and State*, p. 500.
[79] Rothbard, *Man, Economy, and State*, pp. 351–52, 488, 603.
[80] Rothbard, *Man, Economy, and State*, pp. 558. Marshall, *Principles of Economics*, pp. 413–24.
[81] Stigler, *Theory of Price*, pp. 179–81.
[82] Mises, *Human Action*, pp. 631–32.
[83] Murray N. Rothbard to Richard C. Cornuelle, August 31, 1955, p. 2, Rothbard Papers.
[84] Murray N. Rothbard to Ludwig M. Lachmann, February 14, 1957, p. 7, Rothbard Papers.

all have unit services and prices for them," they do not generate a separate interest income and thus their gross rent can be divided into interest paid for saving, rents paid to original factors, and rents paid for capital goods purchased from other capitalists (which can in turn be broken down in the same manner). This means that "on net, only labor and land factors—the ultimate factors—earn rents." In the ERE, the only net incomes that will be earned will be the net rents of the original factors and the interest earned from foregoing present consumption.[85]

With Rothbard's definition of rent as the hire price, "the marginal land will earn *not* zero, but only *close* to zero, rent" because it still has a positive discounted marginal value product. Moreover, the hire price of a factor "does not depend on the existence of a poorer factor of the same general category [like] the 'differential' basis of rent." Furthermore, capital goods earn only a rent; they do not earn "'quasirents' temporarily. . . . Nowhere does this special type of income exist." Thus, Rothbard had shown how rent was not a special exception to factor incomes but rather the unifying principle that could be used to describe the hire price of factor services, thereby encompassing all factor incomes.[86]

After discussing factor prices, Rothbard turned to the incomes of the capitalist-entrepreneurs. Most importantly, capitalists "advance present funds to labor and land factors and earn interest" as well as profit from "uncertainty-bearing in an ever-changing world." In the ERE, capitalists earn an interest return and pay factors their DMVPs. In the uncertain world, capitalist-entrepreneurs earn profits, an excess above their interest return, when they accurately judge the future and recognize that factors are "*underpriced and undercapitalized*" in relation to their true DMVPs. In addition to profits and interest, capitalist-entrepreneurs can earn other incomes. To the extent they "may also be their own managers" of the firms they invest in, they earn "an implicit *wage of management*" equal to the wage that would be paid to an outside manager. While this is commonly recognized in economics, Rothbard proposed the novel concept of the "'rent of decision-making ability,'" a return to capitalist-entrepreneurs for their "skills needed

[85] Rothbard, *Man, Economy, and State*, pp. 488, 490, 558.
[86] Rothbard, *Man, Economy, and State*, pp. 558, 560, 563.

to hire proper managers and invest in the most efficient processes." This innovation came from "one of those extremely fertile but neglected hints of . . . Böhm-Bawerk," who understood the capitalist-entrepreneur's unique "'intellectual superintendence.'"[87]

With the identification of factor prices and business incomes complete, Rothbard approached the difficult subject of "Market Calculation and Implicit Earnings" in chapter 5 of his treatise.[88] In "Economic Calculation in the Socialist Commonwealth" and *Socialism: An Economic and Sociological Analysis*, Mises argued that a socialist society could not engage in economic calculation—that is, it could not allocate scarce factors of production to competing ends by computing their relative returns in terms of a cardinal unit.[89] This is because socialism abolishes both the general medium of exchange and private property in the means of production, making it impossible for individuals to utilize monetary computations and figure out the returns of various production processes using monetary revenues, costs, profits, and losses. Mises's insights sparked the famous socialist calculation debate in the 1930s. Neoclassical economists, under the influence of Walrasian general equilibrium theory, dismissed Mises's theory and argued that a socialist government could theoretically calculate if it used a system of mathematical equations that describe general equilibrium.

During his graduate studies at Columbia, Rothbard learned the standard Walrasian perspective on the calculation debate in Professor Abram Bergson's lectures, a notable expert on the Soviet economy who wrote the definitive mainstream survey article on socialist economics and the socialist calculation debate.[90] He discovered that Bergson was mistaken after read-

[87] Rothbard, *Man, Economy, and State*, pp. 510, 601–3. Eugen von Böhm-Bawerk, *Capital and Interest: A Critical History of Economical Theory* (London, 1890), 8.

[88] Rothbard, *Man, Economy, and State*, p. 606.

[89] Ludwig von Mises, "Die Wirtschaftsrechnung im sozialistischen Gemeinwesen" [Economic calculation in the socialist commonwealth], *Archiv für Sozialwissenschaften* 47 (1920): 86–121; Ludwig von Mises, *Die Gemeinwirtschaft: Untersuchungen über den Sozialismus* [Socialism: An economic and sociological analysis] (Gustav Fischer, 1922).

[90] Abram Bergson, "Socialist Economics," in vol. 1 of *A Survey of Contemporary Economics*, ed. H. S. Ellis (Richard D. Irwin, 1948), pp. 412–48. Murray N. Rothbard, "The End of Socialism and the Calculation Debate Revisited," in *Economic Controversies* (Mises Institute, 2011), p. 830.

ing the new edition of Mises's *Socialism* in mid-1951.[91] Quickly grasping its insights, he recognized that Mises's demonstration of "the impossibility of economic calculation under socialism" is a "very important one" that "most economists" fail to understand. By the end of the following year, he read the "very good" *Collectivist Economic Planning* that Hayek edited and Trygve J. B. Hoff's "very fine" *Economic Calculation in the Socialist Society*.[92]

By the time he had decided to write a treatise in 1954, Rothbard was pondering whether he would discuss "Socialism and Economic Calculation" in his analysis of government intervention or the free market. His rationale for the latter was that "the inability of a socialist government to calculate is a special case of the inability of any firm to calculate for departments internal to itself, if there is no external market to which to refer." Rothbard arrived at this important refinement of Mises's argument through his discussions with George Reisman, a young participant in Mises's seminar "who raised the question of how extensive the number of firms in the economy must be in order to have calculation . . . an uncharted area for study."[93]

Rothbard arrived at this conclusion by once again utilizing Austrian general-equilibrium analysis, investigating how the interrelationships among factor markets in an economy affect capitalist-entrepreneurs' calculational abilities. "The different sources of income" of the capitalist-entrepreneur "owners" of a particular firm can only be distinguished by referring to "*prices on the market*." After a capitalist-entrepreneur pays out explicit costs to other owners of capital goods and original factors, he needs to determine his "implicit expenses," particularly the interest and wages "foregone by engaging in the business." To do so, he "looks around at the economy [and] estimates approximately what he would have received in wages of management if he had gone to work for a competing firm" as well as "what he can pretty well call the ruling rate of interest." Without the ability to

[91] Ludwig von Mises, *Socialism: An Economic and Sociological Analysis*, new ed. (Yale University Press, 1951). Murray N. Rothbard to Richard C. Cornuelle, June 14, 1951, p. 1, Rothbard Papers.

[92] Murray N. Rothbard to Richard C. Cornuelle, November 12, 1952, p. 1, Rothbard Papers. F. A. Hayek, ed., *Collectivist Economic Planning* (George Routledge & Sons, 1935); Trygve J. B. Hoff, *Economic Calculation in the Socialist Society* (William Hodge, 1949); Murray N. Rothbard to George C. Resch, November 1, 1961, pp. 1–2, Rothbard Papers; Murray N. Rothbard to Kenneth S. Templeton, September 8, 1959, p. 1, Rothbard Papers.

[93] Murray N. Rothbard to Richard C. Cornuelle, August 9, 1954, p. 2, Rothbard Papers.

estimate these opportunity costs, he could not determine whether he reaps an entrepreneurial profit or suffers a loss. These imprecise estimates are ascertained through the indispensable "tool of *ex post calculation*" and require "*an external market to which the entrepreneur can refer.*" Without such markets to estimate implicit costs, "there would be no rational way for entrepreneurs . . . [to] know how to arrange factors in their most value-productive combinations to earn the greatest profit."[94]

Therefore, the abolition of a significant market for a product, whether through producers' cooperatives or complete vertical integration, "introduce[s] *little bits of chaos* into the productive system." This leads to an important economic law: to prevent such chaos, "*for every capital good, there must be a definite market in which firms buy and sell that good.*" Further elimination of capital goods markets causes the "islands of noncalculable chaos [to] swell" and "the degrees of irrationality, misallocation, loss, impoverishment, etc., [to] become greater." In a world where "One Big Cartel" eliminates all factor markets, "complete economic chaos would prevail." "The *free market would never establish such a condition*" precisely because it would cause "heavy losses."[95]

This analysis, Rothbard concludes, builds upon the "challenging article by R.H. Coase," an economist of the Chicago School who had analyzed market determinants of the size of the firm.[96] Adding on to Coase's argument that the size of the firm will be limited by the increasing costs that result from making arrangements within a firm and not using the price system, Rothbard showed that the costs start to become increasingly prohibitive once the market for specific capital goods are eliminated. Furthermore, it "serves to expand the famous discussion of the possibility of economic calculation under socialism, launched by Professor Ludwig von Mises." Socialism cannot calculate, not "because it is socialist," but because one agent is trying to allocate scarce resources "without markets" to refer to.[97]

[94] Rothbard, *Man, Economy, and State*, pp. 606–8.
[95] Rothbard, *Man, Economy, and State*, pp. 609, 613–14.
[96] Rothbard, *Man, Economy, and State*, p. 613. R. H. Coase, "The Nature of the Firm," *Economica* 4, no. 16 (1937): 386–405.
[97] Rothbard, *Man, Economy, and State*, pp. 614–15.

The evidence suggests that Mises considered Rothbard's analysis an important contribution. In 1966, Geoffrey Gilbert, an undergraduate at Dartmouth College, asked Mises if he had published "a reply to Mr. Bergson's contention" that socialist economies could calculate.[98] "Concerning the problem of socialist economic calculation," Mises advised the student to consult the second edition of *Human Action* and Rothbard's treatise. Regarding Rothbard's work, Mises referenced the concluding pages where Rothbard summarized how the impossibility of economic calculation applied to either a socialist government or one private cartel and gave an overview of the socialist calculation debate.[99]

After extending his mentor's theorem regarding the impossibility of a socialist planner utilizing economic calculation, Rothbard completed chapter 5. He summarized the nature and importance of this achievement, recognizing that his "explanation of the free economic system constitutes a great architectural edifice." Starting from "human action and its implications," Rothbard used the praxeological "deductive apparatus" to explain the determination and interrelatedness of "the quantity of goods produced, the prices of consumers' goods, the prices of productive factors, the interest rate, [and] profits and losses." The central drivers in determining the "capital goods structure and total production" on the free market are the "profit-seeking" capitalist-entrepreneurs, who by "allocating resources to the most value-productive areas," "drive toward ever more efficient servicing of the desires of consumers."[100]

Monopoly and Competition

After completing and summarizing his extensive chapter 5, Rothbard continued to use Austrian general equilibrium theory to analyze production in a dynamic setting. He saved his most radical innovations for chapter 6, titled "Monopoly and Competition." Most importantly, Rothbard planned

[98] Geoffrey Gilbert to Ludwig von Mises, September 24, 1966, p. 1, Ludwig von Mises Collection, Grove City College.

[99] Ludwig von Mises to Geoffrey Gilbert, September 29, 1966, p. 1, Ludwig von Mises Collection, Grove City College. Ludwig von Mises, *Human Action: A Treatise on Economics*, 2nd ed. (Yale University Press, 1963), pp. 698–715; Rothbard, *Man, Economy, and State*, pp. 614–16.

[100] Rothbard, *Man, Economy, and State*, pp. 624–27.

to show how a consistent analysis of the market led to a theory of competition that did not compare the free market to unrealistic standards. This led him to explicitly criticize the prevailing Marshallian orthodoxy as well as his mentor Mises.[101]

One of the major reasons that convinced Rothbard to switch from writing a textbook to a treatise was his growing dissatisfaction with Mises's theory of competitive and monopoly prices. To build up to his criticism of the theory, Rothbard began chapter 6 by discussing "the concept of consumers' sovereignty" because it had "implications for the problems of competition and monopoly." The concept, which Mises invoked, was best articulated by William H. Hutt, who "used it as an ideal with which to contrast the allegedly imperfect free-market system."[102] Hutt argued that even though on the free market "people will tend to produce those goods most demanded by consumers," there are instances in which producers violate this standard by restricting production "to attain more monetary income than otherwise." The problem with this view, Rothbard explains, is that every individual producer always attempts to "maximize his 'psychic income'" by weighing the various marginal utilities of the monetary income, the nonpecuniary return from the type of work, and the leisure forgone. "It is *impossible*, not simply impracticable, to separate the leisure from monetary considerations" because if an individual can earn a higher income by working less, he also gains leisure, which is a consumer good. Therefore, "contrary to Hutt, each individual has *self-sovereignty*" over his private property and is free to pursue an expected monetary return and other nonmonetary factors. The free market is always tending to satisfy the desires of all individuals, not just consumers narrowly construed.[103]

Rothbard then analyzed the "neoclassical theory of monopoly price," held by Mises and other Austrian writers.[104] Rothbard argued that Mises

[101] Rothbard, "Progress Report, December 1, 1954 to April 1, 1955," p. 1.

[102] Rothbard, *Man, Economy, and State*, pp. 629, 631. William H. Hutt, "The Concept of Consumers' Sovereignty," *Economic Journal* 50, no. 197 (1940): 66–77; Mises, *Human Action*, scholar's ed., pp. 270–73.

[103] Rothbard, *Man, Economy, and State*, pp. 629–34.

[104] Rothbard, *Man, Economy, and State*, p. 672. Fetter, *Economic Principles*, pp. 73–85; Menger, *Principles of Economics*, pp. 207–25; Mises, *Human Action*, pp. 278, 354–84; Wieser, *Social Economics*, pp. 204, 211–12.

and others failed to realize "*the illusion in the entire concept of monopoly price*" on the free market. Economists cannot simply define a given price as competitive and any price above it that yields higher revenue as a monopoly price, because "the elasticity of the demand curve [does not] establish any criterion" for making such a judgment. In addition to the crucial Hayekian insight that "a demand curve is not simply 'given' . . . but must be estimated and discovered" by the capitalist-entrepreneur, the price will always be set "so that the *range above [it] will be elastic*."[105] Rothbard invokes the importance of economic interrelations and his criticism of consumers' sovereignty when he stresses that the theorist "cannot use 'restriction of production' as the test" because "production in other lines" is expanded if the released nonspecific factors are used or, if not, leisure increases "for the owner of a labor factor." In every case, the producer "will set his output at whatever point is expected to maximize his monetary earnings (other psychic factors being equal)." Therefore, the entire concept of a monopoly price "is meaningless. . . . There is only the 'free market price.'"[106]

Rothbard thought Mises's distinction between a competitive and monopoly price was due to Mises's straying from the praxeological method. Unlike the pure interest rate, there is "no prior rule available" to "*define and distinguish a 'monopoly price' from a 'competitive price*.'" While the pure interest rate "in practice, is not strictly separable from profits," the economist can deduce its existence "from the axioms of praxeology" and use it to understand market interest rates. But it is impossible for the economist to "separate conceptually an alleged 'restrictive' from a nonrestrictive act, and nowhere is it possible to define 'competitive price' in any way that would differ from the *free-market price*."[107] In other words, Mises failed to adhere to his own praxeological method when he used "a concept divorced from real action and employed as an actual reality and even an ideal."[108]

Once Rothbard had demonstrated that the economist could only analyze the free market price and not competitive and monopoly prices, he turned

[105] Rothbard, *Man, Economy, and State*, pp. 687–90. F. A. Hayek, "The Meaning of Competition," in *Individualism and Economic Order* (University of Chicago Press, 1948).

[106] Rothbard, *Man, Economy, and State*, pp. 688, 690, 698.

[107] Rothbard, *Man, Economy, and State*, pp. 696–98.

[108] Rothbard to Cornuelle, "Textbook or Treatise?," p. 2.

to the more recent literature from the 1930s and 1940s on "'monopolistic' or 'imperfect' competition," whose "differences . . . are not important." Unlike the earlier monopoly price theory, the monopolistic competition revolution's newer framework did set up "identifiable criteria for their categories—such as a perfectly elastic demand curve for pure competition. Rothbard shows that this assumption, which forms the basis for the entire theory, turns "out to be completely fallacious."[109]

Rothbard first presented his criticisms in a report for Mises's seminar in November 1954 "on monopolistic competition and on selling costs, which Mises had [him] do." He wrote that it received a "good reception from Mises," who even embarrassed him by repeatedly telling the seminar beforehand that "'soon we will hear a very interesting, a very good report by that great old reporter, Mr. Rothbard.'"[110] In his presentation, Rothbard attacked the root of the theory by going back to Marshall, whose "short-cuts and unreal assumptions" resulted in "'partial equilibrium analysis' [where] . . . an industry or firm is set aside and treated as if it were in isolation." Using the "infinitely small step . . . Marshall classified as 'competition' all industries where actions of the individual firm could not affect its selling price," while monopolies were "situations where the industry consisted of one firm, which determined its price by controlling the supply that it offered." This was at least what Marshall implied, since he "never defined what he meant by competition [and monopoly]." Rothbard exploded this reasoning: even for the "industries based on the model of the wheat farm, consisting of many firms producing homogenous products . . . the smallest economic unit is *not* infinitely small . . . and therefore its actions *do* have an effect, however small, on the price of the product."[111]

Rothbard made this point even more trenchantly in his treatise. "It is clear from our construction of the demand curve" that there can never be any horizontal stretch. A "very small increase in supply," all else constant,

[109] Rothbard, *Man, Economy, and State*, p. 720. Edward H. Chamberlin, *The Theory of Monopolistic Competition* (Harvard University Press, 1933); Joan Robinson, *The Economics of Imperfect Competition* (Macmillan, 1933); Robert Triffin, *Monopolistic Competition and General Equilibrium Theory* (Harvard University Press, 1940).

[110] Rothbard to Cornuelle, November 5, 1954, p. 1.

[111] Murray N. Rothbard, "The Theory of Monopolistic or Imperfect Competition," November 28, 1954, pp. 1, 3–4, Rothbard Papers.

must always lead to a "very small lowering of price." The error in assuming otherwise comes from the use of differential calculus where "infinite negligibility of steps" is used. Since the single firm exerts zero influence on the price, the Marshallians analyze it in complete isolation from other firms. In reality, although "the demand curve for each small wheat farm is likely to be very highly, *almost* perfectly, elastic . . . the fact that it is *not* 'perfect'" renders the perfect competition model nugatory. The result is inescapable: because "praxeology cannot establish *quantitative* laws" and distinguish demand curves by "*degrees of elasticity*," once the economist concedes "that all demand curves to firms must be falling . . . no further analytic distinctions" can be made.[112]

Rothbard continued his critique by scrutinizing the standard comparison between "monopolistic or imperfect competition [and] . . . the ideal world of pure competition." In "monopolistic competition (where the demand curve to each firm is necessarily falling)," the price is higher and production is lower compared to perfect competition. Thus, the "'welfare' case" for perfect competition is demonstrated.[113]

When criticizing this comparison, Rothbard utilized Joseph A. Schumpeter's point that larger firms "have lower costs" than smaller firms, Hayek's insight that "competition is actually a dynamic process," and even Chamberlin's own admission that the comparison fails to consider "diversity as a good."[114] But he makes his own unique contributions as well. First, if all demand curves are falling, perfect competition cannot be upheld as the "ideal system for the general welfare [because it is] . . . never realizable in practice." Second, as "Austrian general analysis" and the "classroom lectures of Professor Arthur F. Burns" demonstrate, the surplus factors are not trapped in an excess of inefficient, monopolistically competitive firms but must be utilized by firms outside the industry, meaning that they increase production and lower prices elsewhere in the economy. Rothbard's

[112] Rothbard, *Man, Economy, and State*, pp. 721–22.

[113] Rothbard, *Man, Economy, and State*, pp. 726–28.

[114] Rothbard, *Man, Economy, and State*, pp. 726, 728–29. Edward H. Chamberlin, "Product Heterogeneity and Public Policy," *American Economic Review* 40, no. 2 (1950): 85–92; Hayek, "The Meaning of Competition," pp. 92–106; Joseph A. Schumpeter, *Capitalism, Socialism, and Democracy* (Harper & Bros., 1942).

innovations, in conjunction with earlier critiques, demolish the welfare comparison between monopolistically and perfectly competitive firms. The only viable standard for welfare analysis, then, is to recognize that all firms without exception face downward-sloping demand curves.[115]

Thus, Rothbard dealt a devastating blow to the neoclassical paradigm, exposing the fatal flaws in the older competitive-monopoly price dichotomy and the newer perfect-imperfect competition distinction. He showed that both theories failed to properly consider economic interrelations among firms and presented an artificial and unrealistic depiction of isolated and hermetically sealed markets. In their place, Rothbard developed a theory of competition that recognized that capitalist-entrepreneurs move money capital and productive factors between firms and that firms always exert some influence on prices. It was a perfect capstone to his Böhm-Bawerkian production theory and convincingly demonstrated that Rothbard had advanced the Misesian paradigm.

A Böhm-Bawerkian Production Theory

With this critique, Rothbard completed his treatise's revised production theory. Using Austrian general equilibrium theory, Rothbard demonstrated that the capitalist-entrepreneur as opposed to the individual firm must be the central focus of production theory. He showed how this radical change in focus refuted the standard theory of investment in a firm, led to a theory of factor pricing that did not assume input costs as given, and elucidated the key Austrian contention that the value of consumer goods determines the value of producer goods.

Rothbard's refocusing of production theory naturally led to an improvement in Böhm-Bawerkian capital theory. Thus, starting with the ERE, Rothbard reconstructed the aggregate time market along pure time preference grounds, linked the interest rate with aggregate consumption-investment proportions, presented the structure of production as a forward-looking concept, and infused the interest rate into factor pricing. He then used this framework to analyze uncertainty and demonstrate that lower time

[115] Rothbard, *Man, Economy, and State*, pp. 720–21, 731–32.

preferences lengthened the capital structure and constituted the key ingredient for economic growth.

Rothbard also resurrected Fetter's theory of rent and applied Mises's theory of economic calculation to explain limitations on firm size. He finished his production theory by advancing a radically new theory of competition that avoided the flaws of older Austrian-neoclassical competition theory as well as the newer variant incorporated in the neoclassical synthesis. Rothbard recognized the originality of his accomplishment: his architectonic structure "involved emancipation from 90% of current textbook material."[116]

In the April 1955 progress report, he stated that his manuscript's chapter 5 "on production has grown to great length," a total of 425 pages, and did not include chapter 6, "Monopoly and Competition."[117] By October 1955, Rothbard decided to divide chapter 5 into five different chapters. After the first four chapters on praxeology and price theory, the new, shorter chapter 5 introduces the structure of production. Chapter 6, on the rate of interest, concerns the derivation of the Böhm-Bawerkian time market. In chapter 7, on the general pricing of factors, Rothbard formulates his unique theory of factor pricing. Chapter 8, on entrepreneurship, concentrates on the capitalist-entrepreneur and the effect that changes in his savings exert on the capital structure. In chapter 9, on particular factor prices and incomes, Rothbard elaborates on the differences between factors as well as the rents they receive. The previous chapter 6 on competition became chapter 10 and laid out Rothbard's criticisms of the competitive-monopoly price distinction and perfect competition. With the addition of the new chapters, the aforementioned chapter 7 on money turned into chapter 11, meaning that by late 1955, Rothbard had written eleven relatively complete chapters of the treatise.[118]

The completion of the revised production theory from chapters 5 to 10 was one of the most important milestones in Rothbard's development as an economist. It was clear to the Volker Fund that the bright graduate student,

[116] Rothbard to Cornuelle, August 9, 1954, p. 1.

[117] Rothbard, "Progress Report, December 1, 1954 to April 1, 1955," p. 1.

[118] Murray N. Rothbard, "Progress Report, April 1, 1955 to October 1, 1955," n.d., p. 2, Rothbard Papers.

before even receiving his PhD from Columbia, was already shouldering his way into the front ranks of postwar economic theorists. Rothbard not only exposed the errors in Marshallian production theory and Walrasian general equilibrium theory; he constructed an entirely new theoretical edifice that greatly surpassed Mises's limited writings on the topic. This was a monumental achievement made possible only with a thorough training in neoclassical economics and sedulous readings of Austrian texts, especially Böhm-Bawerk's.

Though the end was in sight, Rothbard was not finished. He still had to incorporate the important subject of government intervention into his body of praxeological theorems. This task would extend into chapters 12 and beyond, constituting the final part of his work.

Part IV
The Rothbardian Theory of Interventionism, 1955–1956

Murray Rothbard used his general-equilibrium approach with its emphasis on economic interrelations to erect a systematic framework of interventionism. He started by elaborating further on the concept of the purely free market and developing a comprehensive welfare theory. He then proceeded to create a typology of government policy, formulate a novel theory of monopoly that distinguishes between a monopoly price and a free-market price, develop an original theory of backward tax imputation, and analyze the calculational chaos caused by government expenditure. The capstone of Rothbard's analysis of interventionism was his integration of the Mises–Hayek theory of the business cycle into general economic theory. Rothbard was thus able to demonstrate how the boom could result only from credit expansion and not from an increase in the supply of commodity money such as gold. He also demonstrated how credit contraction during the bust promotes recovery. With these advances in the Austrian theory of the business cycle, Rothbard finally completed the monumental task of deducing the entire corpus of economic theory using the praxeological method.

The Purely Free Market

In 1955, Rothbard finished the "analytic bulk of the book" with chapter 12, on "the role that government would play in a purely free market."[1] Before

[1] Murray N. Rothbard, "Progress Report, April 1, 1955 to October 1, 1955," n.d., pp. 1, 4, Rothbard Papers.

exploring the effects of government policies, Rothbard realized that he needed to elaborate on the features of the free market he had only briefly sketched in chapter 2. He clarified his concept of the free market as an economic system with "self-ownership, no invasion of the person or property of others, no implicit or explicit theft, [and] first ownership of unused factors by the first user." This meant that the free market is a "society in which there is no violent invasion of anyone's person or property." The government, in striking contrast, "is the only organization in society *legally* equipped to use violence, and . . . the only agency that legally derives its revenues by compulsory levy." It is the primary institution that initiates violence, which means "*in practice* it will be the State to which analysis of violent intervention" applies.[2]

At this point, Rothbard reached a momentous stage in his treatise. So far, chapters 2 to 11 assumed that there was no invasion of private property, which, according to definitions in chapter 12, meant that there was no government at all. Chapter 12 justified this approach: "it is most convenient to begin with a pure system," either capitalist or socialist, "to analyze it at length, and then . . . analyze the consequences of . . . various 'mixed systems'" that incorporate violent intervention. But a socialist economy lacks a price system and thus the means of economic calculation. A socialist system would, therefore, not be able to economize resources and "must result *not* in order or 'planning,' but in *chaos*. . . . And it is obviously absurd to ground economics on an analysis of chaos." This means that the economist cannot begin with socialism and must start with "indirect exchange on the purely free market, and [then] analyze various types of violent intervention in the free market." For deducing the workings of a free market provides "the explanation of the seemingly mysterious processes of price formation, income, money, calculation, production, profits and losses, etc." Without familiarity with these processes and their intricate interrelations, it would be impossible to systematically trace out the effects of various government interferences or to conceive of what the wholesale abolition of the market

[2] Murray N. Rothbard, "Chapter XII: Government and the Free Market," n.d., pp. 1, 5–6, Rothbard Papers.

logically entails. The pure market, therefore, is indispensable in economic reasoning.[3]

Rothbard's analysis of a pure market economy had implicitly challenged his mentor's definition, for *Human Action* assumed that the free market operated under the night watchman government. Mises emphasized that "government interference always means either violent action or the threat of such action," but argued that such behavior was essential for the economy's smooth operation because "peaceful social cooperation is impossible if no provision is made for violent prevention and suppression of antisocial action."[4]

Rothbard boldly set out to challenge this assumption by sketching out how a pure free market with marketable defense and private "police forces, courts, etc." could actually work. In such a system, coercion would only be "defensive" and protect against invasions of private property. This contrasted with modern neoclassical economists such as William J. Baumol, who, in Rothbard's words, argued that "a purely free-market, Stateless, society either *cannot* exist, or would be so obviously helpless in certain areas that nobody (or hardly anybody) would wish it to exist."[5] Rothbard countered: "Police and judicial services could be sold to those individuals who purchase them." These "freely competitive defense agencies" would exist alongside a system of law developed in "*private* courts [and] voluntarily adopted by all of the people concerned." Police and arbitration agencies that provided reliable and prompt service would earn profits and drive less efficient firms out of business.[6]

Rothbard's application of the profit and loss mechanism to law and order was extremely controversial, even among libertarians. Mises had insisted that some form of government was absolutely necessary to the operation of the market economy, and now Rothbard was challenging that

[3] Rothbard, "Chapter XII," pp. 1, 3–4.

[4] Ludwig von Mises, *Human Action: A Treatise on Economics*, scholar's ed. (Mises Institute, 2008), p. 715. Mises, *Human Action*, pp. 238–39.

[5] Rothbard, "Chapter XII," pp. 6, 13. William J. Baumol, *Welfare Economics and the Theory of the State* (Harvard University Press, 1952); William J. Baumol, "Economic Theory and the Political Scientist," review of *Politics, Economics, and Welfare*, by Robert A. Dahl and Charles E. Lindblom, *World Politics* 6, no. 2 (1954): 266–77.

[6] Rothbard, "Chapter XII," pp. 8, 11.

position and arguing for private protection agencies. Though Rothbard realized his position would have far-reaching consequences for the reception of his Austrian-libertarian treatise, he determined that it was essential to developing a comprehensive framework of interventionism: government itself was an intervention into the market economy.

Reconstructing Welfare Theory

Rothbard finally introduced interference by the state, "the agency engaged in regularized violence on a large scale," in chapter 13, "Fundamentals of Intervention."[7] To fully explain the economics of government intervention though, Rothbard needed a welfare economics that compared the consequences of political actions with marketplace activities.

Rothbard's development of such a welfare economics evolved while he was writing his production theory. In 1954, he planned to accomplish this goal in an academic paper while "thinking about the Volker Fund program [and] the relation of economics to [the] ethics" of libertarianism. Despite this reference to libertarianism, Rothbard wrote his paper strictly as a scientific economist, with the result that "there is precious little ethics in it—just the statement of the problem at the end." His main goal was to "pillory the very fashionable 'welfare economics'" in the ruling neoclassical synthesis that economists "use to make pronouncements about government policy while still claiming to be strictly 'scientific.'"[8] Although Earl J. Hamilton, the editor of the *Journal of Political Economy*, "found it interesting" and "well done," he rejected the manuscript because of "the large mass of material on hand" that needed to be published.[9]

Undeterred by the setback, the following September Rothbard refined his thoughts on welfare economics in a report to the Mises seminar. He devoted extensive space to its history to show where the discipline had gone wrong. In doing so, he displayed a deep and extensive knowledge of the history of utility theory. In the late eighteenth and early nineteenth centuries,

[7] Murray N. Rothbard, "Chapter XIII: Fundamentals of Intervention," n.d., p. 13, Rothbard Papers.

[8] Murray N. Rothbard to Richard C. Cornuelle, February 10, 1954, p. 6, Rothbard Papers.

[9] Earl J. Hamilton to Murray N. Rothbard, June 10, 1954, p. 1, Rothbard Papers. Murray N. Rothbard to Earl J. Hamilton, May 24, 1954, p. 1, Rothbard Papers.

British classical economics grew out of "an atmosphere of utilitarianism" and "'the greatest happiness of the greatest number.'" These utilitarians assumed utility was cardinal and interpersonally comparable so it could construct "a single lump of 'social utility' or 'social welfare.'" This approach led to a weak defense of laissez-faire that contained "tortuously introduced qualifications" because certain interventions could purportedly increase social utility. British utilitarianism contrasted with the "French optimist school in the nineteenth century," who understood that the economists' "discovery of regularities, of harmonies, in the market economy is a powerful argument for *laissez-faire*."[10]

The position of the leading British classical economists was refined during the marginalist revolution of the 1870s with the discovery of incremental utility. Neoclassical economists now believed that marginalism would "permit interpersonal comparisons and additions of utility in economics." By the early twentieth century, they developed what came to be known as "Old Welfare Economics," best described in the Marshallian Arthur C. Pigou's *Wealth and Welfare* and *The Economics of Welfare*.[11] The old welfare economics, with its use of cardinal and interpersonally comparable utility, "attempted to invest economics with the scientific power to recommend government policies" such as subsidies, taxes, and regulations. For example, Pigou and others justified the progressive income tax on the grounds that because "the marginal utility of money . . . diminish[es] as its stock increases . . . a dollar is worth more to a poor man than to a rich man."[12]

However, the old welfare economics crumbled in the 1930s under the criticism that utility is ordinal and not subject to interpersonal comparisons or measurement. Lionel Robbins, who was still a Misesian at the time, introduced this criticism. He established as the benchmark for welfare economics the unanimity rule: "the only time an economist can say that 'social utility'

[10] Murray N. Rothbard, "Welfare Economics," September 1955, pp. 1–4, Rothbard Papers. Rothbard, "Progress Report, April 1, 1955 to October 1, 1955," p. 16.

[11] Rothbard, "Welfare Economics," p. 2. Arthur C. Pigou, *Wealth and Welfare* (Macmillan, 1912); Arthur C. Pigou, *The Economics of Welfare* (Macmillan, 1920).

[12] Rothbard, "Welfare Economics," pp. 4–5.

has increased is when everyone has gained in utility."[13] Unfortunately, the "New Welfare Economics" perpetuated the old paradigm's fallacies, as neoclassical economists adopted various rules to "get around this restriction." In particular, according to Rothbard, John R. Hicks and Nicholas Kaldor devised a compensation principle whereby social utility increases from an intervention if the "winners (in utility) . . . are able to compensate the losers," a compensation that only has to theoretically "take place." But this theoretical compensation was an impossible task because it relied on measuring and comparing ordinal utilities and "no one knows how each person's utility has been affected."[14]

In conclusion, economics by the time of the neoclassical synthesis that was developing in the mid-1940s had not yet figured out how to make welfare pronouncements without relying on cardinal utility. This meant that "welfare economics is currently in a deplorable state." Rothbard recognized the task that lay before him: he would have to construct an alternative welfare economics that built upon the Austrian conception of ordinal utility.[15]

Rothbard established the foundations of this welfare economics in his 1956 Mises Festschrift paper, "Toward a Reconstruction of Utility and Welfare Economics." Rothbard recognized that he could salvage welfare economics by incorporating Mises's theory of "*demonstrated preference* . . . that actual choice reveals, or demonstrates, a man's" ordinal utility rankings. Rothbard now defined an increase in social utility as a situation where everyone demonstrably gained in utility, a broader conception than he used in his Misesian monetary analysis where he linked an increase in social welfare to the overall supply of consumer products and services. Moreover, Rothbard's broadened social utility excludes "opinions about exchanges made by *others*" because these "opinions are not demonstrated through action."[16]

[13] Rothbard, "Welfare Economics," p. 6. Lionel Robbins, *An Essay on the Nature and Significance of Economic Science*, 1st ed. (Macmillan, 1932), pp. 120–26.

[14] Rothbard, "Welfare Economics," pp. 6, 8. John R. Hicks, "The Foundations of Welfare Economics," *Economic Journal* 49, no. 196 (1939): 696–712; Nicholas Kaldor, "Welfare Propositions of Economics and Interpersonal Comparisons of Utility," *Economic Journal* 49, no. 5 (1939): 549–52.

[15] Rothbard, "Welfare Economics," p. 9.

[16] Murray N. Rothbard, "Toward a Reconstruction of Utility and Welfare Economics," in *On Freedom and Free Enterprise*, ed. Mary Sennholz (D. Van Nostrand, 1956), pp. 225, 250.

He then delivered his striking conclusions. On the free market, "the very fact that an exchange takes place demonstrates that both parties benefit (or more strictly, *expect* to benefit) from the exchange." Therefore, "*the free market benefits all its participants* . . . [and] increases social utility." In contrast, when the state violently prohibits "A and B from making an exchange they are willing to make . . . some individuals have demonstrably gained, and some demonstrably lost in utility." Because utility is ordinal, the economist cannot say whether one individual's gain is greater than another's loss, and therefore "*no government interference with exchanges can ever increase social utility.*"[17]

Significantly, this paper had only analyzed ex ante utility, or the utility an individual expects to gain. In his treatise's chapter 13, Rothbard improves on his paper by discussing the vital concept of "utilities *ex post*," the ordinal ranking of a choice after an individual makes his decision. Although ex post utility cannot be demonstrated in action, it is still important because individuals want to know if "they actually benefit from the results of their decisions." For example, by choosing a turkey sandwich over a ham sandwich, an individual increases his utility ex ante, but only after consuming the sandwich and evaluating his decision does the person know whether he benefited or erred. Here, Rothbard stresses the importance of market tendencies and mechanisms that coordinate economic activity, an approach emphasized by the French economists who reasoned that voluntary exchanges "harmoniously conduced to the benefit of all."[18]

On the free market, "error is reduced to a minimum" because of the market mechanism. Specifically, businessmen on the market have a "fast-working, easily understandable test": profits or losses. Profits indicate that capitalist-entrepreneurs are allocating resources to the most urgent demands of consumers while losses signal that they are wasting resources. "Profits and losses," Rothbard stresses, "spur rapid adjustments to consumer demands." The smooth and accurate working of this profit-and-loss mechanism stems from the fact that consumers "have direct tests by which to acquire their knowledge" about whether products satisfy them. They buy a certain item

[17] Rothbard, "Toward a Reconstruction," pp. 250, 252.
[18] Rothbard, "Chapter XIII," pp. 24, 31.

and if it does not suit them, "they don't buy it again"; if the performance of another product pleases them, "they buy another one." In both cases they inform friends and acquaintances of their experience. Consumers can also consult "research organizations, which can warn or advise them in advance." Consumers' decisions to buy or abstain from buying any particular product is thus based on their own or others' direct experience. These decisions not only determine the distribution of profits and losses among capitalist-entrepreneurs but, in the long run, effect the allocation of resources that best promotes a convergence between ex ante and ex post utility.[19]

While the free market "contains a smooth, efficient mechanism for bringing anticipated, *ex ante* utility into the realization of *ex post* . . . in political action . . . there is no such mechanism." Unlike capitalist-entrepreneurs, government officials do not abide by the profit and loss mechanism. Instead, politicians and bureaucrats earn income "from a compulsory levy on the populace." They do not have to produce goods that the public consensually decides to purchase and "wholly lack the pecuniary incentive to *care* about serving the public properly and competently." Voting in democratic elections does not solve the problem, for the most successful politicians are those that are the "most adroit at making demagogic appeals to the voting public."

Overall, "the free market . . . maximizes social utility *ex ante*; it also tends to do so *ex post*, since it works for the rapid conversion of anticipations into realizations." On the other hand, under government intervention, "one group gains directly at the expense of another," and therefore the intervention cannot increase ex ante social utility. In fact, the lack of mechanisms to ensure efficiency will cause the majority of the public, and even many interveners, to "lose utility *ex post*."[20]

This welfare theory was a significant accomplishment and a marked improvement over the new welfare economics. Adhering to a strictly ordinal theory of utility that eschews interpersonal comparisons, Rothbard demonstrated that government policy always prevents the coerced from choosing their preferred action and individuals tend to regret the outcome because the government lacks the means to identify and minimize error. It

[19] Rothbard, "Chapter XIII," pp. 31–33.
[20] Rothbard, "Chapter XIII," pp. 37–38.

was a crucial defense of the free market and a necessary component of "a general treatise in the Austrian-libertarian tradition."[21] Rothbard could now proceed to investigate the "consequences of various types of governmental intervention," which would take up the "remainder of" his work.[22]

The Economics of Government Policy

In addition to outlining welfare economics, Rothbard wrote chapter 13 "to present the whole government intervention part in one logical organon."[23] He wanted to "evolve it step by step on the basis of analysis of the effect of different types of violent or fraudulent interference with the market."[24] He envisioned his task as "one of weaving the whole part, for the first time, into a logical structure, one which would give a comprehensive view of all possibilities of intervention." This was a daunting task because most neoclassical studies of intervention "have been confined to disconnected chapters on taxation, or inflation, or price controls, with no linking between them." "Even Mises' discussion of this material is sketchy and fragmented," in part because Mises never explicitly developed a welfare theory that could compare the effects on social utility of the market and the government. However, Rothbard had done so and could now fill the gap in his mentor's edifice.[25]

Rothbard's integrative theory distinguished between three types of interventions. Autistic intervention "occurs when the invader coerces a subject without receiving any good or service in return." Examples include murder, forced salutes, and religious prohibitions. This type of intervention is not very relevant for analyzing the effects of government policy on prices and production because "exchange is not involved."

The other two kinds of intervention do affect market activity and occupy the bulk of Rothbard's analysis. Binary intervention occurs when "the invader forces the subject to make an exchange or a unilateral 'gift' to the invader of some good or service." Examples are highway robbery,

[21] Murray N. Rothbard to Richard C. Cornuelle, "Textbook or Treatise?," p. 4, Rothbard Papers.
[22] Rothbard, "Chapter XIII," p. 38.
[23] Murray N. Rothbard to Richard C. Cornuelle, August 9, 1954, p. 2, Rothbard Papers.
[24] Murray N. Rothbard, "Progress Report, December 1, 1954 to April 1, 1955," p. 8, Rothbard Papers.
[25] Rothbard, "Progress Report, April 1, 1955 to October 1, 1955," pp. 4–5.

slavery, and taxation. Comparing taxation to forced labor and theft, let alone considering it an intervention, was extremely controversial because many economists did not consider it an "interference with the free market." But taxation does interfere with exchanges, for "taxes . . . are paid in money" and taking money away from someone changes their spending patterns.

Triangular intervention occurs when the invader prohibits "an exchange between a *pair* of subjects." Price controls are the typical example. Significantly, Rothbard did not limit himself to investigating price controls but also included many other interventions in this category, such as grants of monopolistic privilege.[26]

Rothbard recognized that, when "tracing the effects" of the three types of intervention, the economist must analyze "all of the consequences, direct and indirect."[27] In other words, the economist must investigate how a given intervention affects the utilities of the actors directly involved as well as its indirect consequences in altering prices, production, and income and wealth distribution. This was an important point because, without a comprehensive welfare theory, Mises had "dealt only with the indirect effects."[28]

Therefore, it was left to Rothbard to investigate both. In all three types, the intervention causes the coerced "subjects to lose in utility" ex ante. For example, in the case of taxation, a binary intervention, the taxed individuals lose in utility ex ante because they cannot allocate money to their most preferred choice. At the same time, the intervener gains in "utility *ex ante*" because he "gains in exchangeable goods at the expense of his subject." However, indirect effects are more complex because they depend on how a given intervention affects relative prices, incomes and production. "The remainder of this volume," Rothbard writes, "will largely consist of analysis of what we may call the 'indirect' consequences."[29]

Rothbard would now analyze binary and triangular interventions with his Austrian general equilibrium theory. In particular, he would show how: (1) certain triangular interventions lead to monopoly prices conceptually

[26] Rothbard, "Chapter XIII," pp. 15–17.
[27] Rothbard, "Chapter XIII," p. 18.
[28] Rothbard, "Progress Report, April 1, 1955 to October 1, 1955," p. 5.
[29] Rothbard, "Chapter XIII," pp. 20, 31.

distinct from free market prices; (2) the burden of a tax gets imputed back to the original factors of production; and (3) government spending introduces islands of calculational chaos into the economy.

Chapter 14, "Triangular Intervention," concerned price and product controls. Rothbard devoted the bulk of the chapter to product controls, especially "*grants of monopolistic privilege*." He applied this term to interventions such as licenses and quality standards because they eliminated some firms from the market by raising their costs or explicitly preventing them from competing. By recognizing that certain triangular interventions had this effect, Rothbard rehabilitated the original definition of monopoly as a grant of government privilege. In analyzing this coercive restriction, Rothbard concluded that "the theory of monopoly price . . . applies fully to the case of monopoly and quasi-monopoly grants."[30]

Previously, Rothbard had demolished the "spurious distinction between the 'competitive' and 'monopoly' or 'monopolistic price'" by demonstrating that all demand curves slope downward. But now there was "an identifiable distinction"—the price that may result from coercion and the voluntary free-market price. The monopoly privilege "renders the consumer demand curve less elastic, for the consumer is deprived of substitute products from other would-be competitors." If substitutes decrease so much that the demand curve becomes inelastic, the capitalist-entrepreneur can restrict production and institute "a monopoly price so as to maximize his revenue," thereby reaping a "*monopoly gain*." The higher, monopolistic price causes the ex ante utility of consumers and excluded competitors to decrease while benefiting the monopolizing firm. Consumers' utility is still lowered even if the monopolist is unsuccessful in charging a higher price, because consumers are forcibly "barred from buying from the most efficient and value-productive producers."[31]

Rothbard then applied Austrian general equilibrium theory to elucidate the indirect effects of a monopoly grant. "It is true," Rothbard conceded, that just as in the case of a firm restricting production on the free market,

[30] Murray N. Rothbard, "Chapter XIV: Triangular Intervention," n.d., pp. 39, 63–64, Rothbard Papers.

[31] Rothbard, "Chapter XIV," pp. 64–65, 68.

"nonspecific factors are again released for production elsewhere." However, the cutback is not due to voluntarily altered consumer spending patterns but government edict. Therefore, the monopoly grant distorts the overall economy through a "misallocation of production" by artificially keeping factors out of one sector while encouraging their less valuable uses in others, which "will satisfy consumers less than under free-market conditions." The effects of the monopoly grant thus radiate beyond the monopolized market.[32]

Rothbard finished his analysis by investigating how the monopoly gain is imputed throughout the overall structure of production. Unlike profits, which arbitrage among the capitalist-entrepreneurs "reduce to a uniform interest return," the monopoly gain "does not disappear in the long run." Instead, it is imputed to the factor of "the *right* to enter the industry" and exists "as long as the privilege remains and consumer valuations continue as they are." Another way of putting it is that the monopoly privilege leads to a type of income for the capitalist-entrepreneur that is conceptually different from profits or interest.[33]

Rothbard continued his investigations of indirect effects in chapter 15, on "Binary Intervention: Taxation," where he introduced his unique theory of backward incidence.[34] This was a wholly original contribution because "none of the Austrian economists applied their theory to the problem of shifting and incidence of taxation."[35] Even "Mises doesn't deal with it."[36]

Rothbard admitted to Richard C. Cornuelle that he "never took a course on the incidence of taxation, and [found] on surveying the literature that the situation is an unholy mess. Everyone disagrees with everyone else." Previously, "the 'old-fashioned' discussion of shifting and incidence was based on Marshallian assumptions."[37] He referred to the "old classical 'cost of production' theories of price" that involved a forward-sloping supply curve that shifted as costs of production changed. This supply curve

[32] Rothbard, "Chapter XIV," pp. 66, 68.
[33] Rothbard, "Chapter XIV," p. 67.
[34] Murray N. Rothbard, "Chapter XV: Binary Intervention: Taxation," n.d., p. 1, Rothbard Papers.
[35] Rothbard, "Progress Report, April 1, 1955 to October 1, 1955," pp. 6–7.
[36] Murray N. Rothbard to Richard C. Cornuelle, July 19, 1955, p. 6, Rothbard Papers.
[37] Rothbard to Cornuelle, July 19, 1955, p. 6.

implies that "certain taxes on business can be shifted to consumers through raising cost of production and therefore price."[38] More modern "'general equilibrium analysis'" correctly argued that the effect of a tax could not be investigated separately from government expenditures but downplayed analyzing individual taxes in isolation.[39] Both starkly contrast with the Böhm-Bawerkian vision of sequential adjustment through a reconfiguration of resources across the production structure. "Therefore it has been necessary," Rothbard explained, "for me to carve out a new theory of incidence." He used "Austrian subjective value theory" to demonstrate "that no tax can be shifted forward, but can only be shifted *backward*" onto the incomes of land and labor.[40] He was influenced by "some of the very latest stuff," such as an article by Harry Gunnison Brown, "which denies even that sales taxes can be shifted forward to the consumer."[41]

Rothbard proved this "law of incidence" by investigating a general sales tax on retail goods, concentrating on economic interrelations in the structure of production. Contrary to the thinking of "most people," given a constant supply of money, demand for money, and stocks of goods, "there is no possible way that a general price increase can be obtained." Consequently, capitalist-entrepreneurs pay the tax out of existing retail prices, which "lowers the gross revenue of firms by the amount of the tax." Their losses are reflected in "a decreased demand for the products of all the higher order firms." However, because all capitalist-entrepreneurs earn a uniform interest return in the long run, the incidence ripples backward throughout the production structure and falls entirely on land and labor. Original factors now "earn *less* than their DMVP's" by the amount of the sales tax paid to the government. These lower earnings "may push some workers into idleness," decreasing the stock of goods produced. Although "to this tenuous extent, prices *will* rise," it will not occur through the Marshallian

38 Rothbard, "Progress Report, April 1, 1955 to October 1, 1955," p. 7. Alfred Marshall, *Principles of Economics*, 8th ed. (Macmillan, 1920), pp. 413–39, 794–804; E. R. A. Seligman, *The Shifting and Incidence of Taxation*, 2nd ed. (New York, 1899), pp. 122–33.

39 Rothbard to Cornuelle, July 19, 1955, p. 6. Antonio De Viti De Marco, *First Principles of Public Finance* (Jonathan Cape, 1936), pp. 141–65.

40 Rothbard, "Progress Report, April 1, 1955 to October 1, 1955," p. 7.

41 Rothbard to Cornuelle, July 19, 1955, p. 6. Harry Gunnison Brown, "The Incidence of a General Output or a General Sales Tax," *Journal of Political Economy* 47, no. 2 (1939): 254–62.

framework where a sales tax raises prices by instantly shifting forward-sloping supply curves leftward.[42]

Rothbard completed his analysis by utilizing Austrian general equilibrium theory to spell out the indirect effects of the government's spending the "proceeds of taxation." First, the general sales tax reduces production through the increased idleness of workers and decreases the demand for and production of goods that the now poorer laborers and landowners have "been spending heavily on," such as clothing. Second, the government's expenditures stimulate output in various sectors—say, "armaments." This leads to lower demands for factors in clothing and higher demands in weapons manufacturing, increasing the "tendency for non-specific factors" to shift from the former to the latter. After profits and losses are wiped out through arbitrage, the sales tax and the government expenditures cause permanent changes in the constellation of factor prices. The prices of specific factors in clothing decline the most. In contrast, specific factors in armaments "may gain absolutely" if the government's increased demand for weapons offsets the decreased demand from the sales tax on weapons sales. As a result, there will not be a "proportional . . . fall in all original factor incomes."[43]

Overall, Rothbard showed how a government's sales tax and related expenditures affect production, prices, and incomes throughout the economy. After the government levies a sales tax on retail goods, retailers respond by decreasing demands for factors, lowering their prices and incomes. This decreases the relative demands and production of goods that original factors purchase. Total production also may decline if lower real wage rates induce laborers to choose more leisure. Concurrently, government disbursement of the tax revenues increases the demands for some goods, partially offsetting the decline in incomes of some specific factors and even increasing the incomes of others. In sum, the tax does not directly increase consumer prices; instead, it first affects exchanges in earlier stages, increasing overall prices only later if, in the face of declining wages, some laborers shift into idleness. Rothbard recognized the significance of adopting "a consistent

[42] Rothbard, "Chapter XV," pp. 162, 164, 166–67.
[43] Rothbard, "Chapter XV," pp. 167–68.

'Austrian' approach," which the "Austrian economists themselves never got around to." "This discussion," Rothbard concluded, "breaks new ground."[44]

In chapter 17, on "Binary Intervention: Government Expenditures," Rothbard further elaborated the lack of market mechanisms inherent in government spending, particularly regarding the "difference between government and private ownership [and] the Mises distinction between bureaucratic management and profit-and-loss management."[45] This was an especially crucial task given the rise of Keynesian macroeconomic thinking that advocated managing aggregate spending through fiscal policy. According to contemporary Keynesians, under certain conditions the government's job was to incur budget deficits via increased government spending, which, they claimed, was just as efficient as private sector spending.[46]

In refuting Keynesianism and likeminded thinking, Rothbard moved beyond Mises by applying the theory of the impossibility of economic calculation in a socialist society to situations his mentor had not fully analyzed. Rothbard demonstrated that a mixed economy and socialism actually exist along a spectrum, with every increase of government ownership and spending in a mixed economy "spreading calculational chaos" and pushing the economy closer to socialism.[47] This contrasted with Mises, who admitted that "publicly owned and operated enterprises are subject to the sovereignty of the market" and "must strive for profits, or, at least, to avoid losses." "Nothing," Mises reasons, that relates to a publicly owned enterprise in the market economy "is in the praxeological or economic sense to be called socialism."[48]

Subtly lumping his mentor in with orthodox theorists, Rothbard argued that "it is often stated that a single government enterprise, operating within the sphere of a private market . . . can price its services and

[44] Rothbard, "Chapter XV," p. 169.

[45] Rothbard, "Progress Report, April 1, 1955 to October 1, 1955," p. 14. Ludwig von Mises, *Bureaucracy* (Yale University Press, 1944), pp. 20–56; Murray N. Rothbard to Richard C. Cornuelle, March 17, 1956, p. 1, Rothbard Papers. For more on chapter 16, see pp. 117–29.

[46] Alvin H. Hansen, *Fiscal Policy and Business Cycles* (George Allen & Unwin, 1941), pp. 261–88; Paul A. Samuelson, *Economics: An Introductory Analysis* (McGraw-Hill, 1948), pp. 409–23.

[47] Murray N. Rothbard, "Chapter XVII: Binary Intervention: Government Expenditures," n.d., p. 337, Rothbard Papers.

[48] Mises, *Human Action*, pp. 259–60.

allocate its resources efficiently." But this view is wrong due to "*a fatal flaw* that permeates every conceivable scheme of government enterprise" that prevents it from ever operating on "a 'business' basis, no matter [its] intentions." Capitalist-entrepreneurs "can *only* get funds from consumers and investors" and direct "resources to their most value-productive uses" according to the free market's profit-and-loss mechanism. But the government, aside from the different incentive structure that its "bureaucratic managers and politicians" face, cannot function as a business. This results from the fact that a "coercive levy"—taxpayer funds—is an "arbitrary element . . . 'built in' to the very vitals of the enterprise," which distorts its operations. It cannot even appropriately pay factors, for taxpayer revenue causes them to have "*no* discernable value-product." In other words, a government enterprise's profit-and-loss accounting is qualitatively inferior to capitalist-entrepreneurs' estimations because part of the money it receives is exogenous to the marketplace.[49]

Rothbard extends his theory to other cases of government activity. Like the total vertical integration of "two or more stages [that] . . . would eliminate a whole segment of the market, . . . *each* governmental firm introduces its own island of chaos into the economy." This island "disrupts and distorts pricing, the allocation of factors, consumption/investment ratios, etc." These indirect effects are more pervasive in market economies than commonly realized, for government lending leads to the same effect. Rothbard recognizes that a government lender "is also an entrepreneur and part owner, regardless of his legal status," and therefore loans "create many centers of government ownership." His argument, then, applies to wholly state-owned and partially owned firms as well as those who receive subsidies. No form of government spending, Rothbard concludes, "can ever determine prices or costs or allocate factors or funds in a rational, welfare-maximizing manner." Instead, it introduces calculational chaos, pushing the economy farther along the spectrum to full-blown socialism.[50]

---

[49] Rothbard, "Chapter XVII," pp. 328–31, 334.
[50] Rothbard, "Chapter XVII," pp. 336–37, 346.

Rothbard's pioneering analysis leads to two important results that challenge the economic orthodoxy. First, in contrast to the "essential part of the Keynesian doctrine" that treats government spending as investment, expenditures by the state "must be considered *consumption* . . . whatever their intention or physical result." The inability to engage in economic calculation means that state officials can only be "*playing at* enterprise—no profit and loss test can or will apply, and therefore the whole activity becomes a consumption activity by government officialdom." This means that increases in spending must always increase the societal consumption-investment ratio.[51]

Second, "the Department of Commerce method" of estimating government's contribution to "National product statistics" according to what it spends must be revised. Rothbard argues that government activities actually "sap the national product" because they misallocate resources due to the lack of profit-and-loss accounting. Instead, the statistician must subtract various expenditures by the state to arrive at "gross private product," a concept originated by Rothbard that estimates production by the private sector. Rothbard's revision moves national income accounting closer to its originator, Simon Kuznets, who at least "evaluated government services as equal to the taxes paid" and excluded spending financed by deficits.[52]

Rothbard's exhaustive investigation of intervention did not focus only on regulations, taxes, and spending activities. He also analyzed monetary policy. In doing so, he would return full circle to the field of study with which he started when asked to write a Misesian textbook.

Austrian Business Cycle Theory

Rothbard's most important contribution to the praxeological analysis of government policy occurred in chapter 16, on "Binary Intervention:

[51] Rothbard, "Chapter XVII," p. 325.

[52] Rothbard, "Chapter XVII," pp. 371–73. Milton Gilbert et al., "Objective of National Income Measurement: A Reply to Professor Kuznets," *Review of Economics and Statistics* 30, no. 3 (1948): 179–85; Simon Kuznets, "National Income: A New Version," *Review of Economics and Statistics* 30, no. 3 (1948): 151–79; Simon Kuznets, *National Income and Its Composition*, vol. 1, *1919–1938* (National Bureau of Economic Research, 1941); Murray N. Rothbard to Ivan R. Bierly, February 27, 1959, pp. 1–2, Rothbard Papers.

Inflation."[53] As he stated in his progress report, he planned to improve the Mises–Hayek theory of the trade cycle, also known as Austrian business cycle theory (ABCT). He would do so by putting ABCT "squarely under the effects of intervention" by showing how only the government could cause the cycle and how "deflationary credit contraction" is the natural reaction to a previous credit expansion and "speeds recovery" during the depression.[54]

In an unpublished manuscript written around the time he penned chapter 16, Rothbard classified business cycle theories in a way "which is almost completely neglected in the economic literature." "The issue," Rothbard emphasized, "is this: *do business cycles emerge from the market economy itself, or are they imposed upon that economy by outside intervention?*" In more technical terms, "Are they 'endogenous' (coming from within the market economy), or are they 'exogenous' (coming from without)?" Most theories assert that business cycles "come from within the 'capitalist system.'" In contrast, Rothbard planned to show that business cycles result solely from government intervention.[55]

In the 1950s, two major endogenous theories existed. The first was the institutionalist approach of Wesley Clair Mitchell and the National Bureau of Economic Research with which Rothbard became well acquainted during his Columbia education.[56] This view of the business cycle asserted that it "is caused by processes deep within the capitalist system." The institutionalist "rarely tries to *explain* the causes of the cycle" but simply assumes that "business cycles are caused by the capitalist system itself, in some vague, unknown protean way." His method is a "naïve statistical-behaviorist view that the cycle must be traced, must be summarized, etc. in infinite

[53] Rothbard, "Progress Report, April 1, 1955 to October 1, 1955," p. 11. A copy of chapter 16 could not be found in the Rothbard Archives. Rothbard's outline of its subsections in his progress report is similar to his outlines in *America's Great Depression*, 5th ed. (Mises Institute, 2008), pp. vii, and *Man, Economy, and State with Power and Market*, 2nd scholar's ed. (Mises Institute, 2009), p. xv. Murray N. Rothbard to F. A. Harper, January 4, 1964, p. 1, F. A. Harper Papers, Hoover Institution.

[54] Rothbard, "Progress Report, April 1, 1955 to October 1, 1955," p. 12.

[55] Murray N. Rothbard, "The Problem of Cyclical Instability," n.d., p. 1, Rothbard Papers.

[56] Arthur F. Burns and Wesley Clair Mitchell, *Measuring Business Cycles* (National Bureau of Economic Research, 1946); Wesley Clair Mitchell, *Business Cycles* (University of California Press, 1913); Wesley Clair Mitchell, *Business Cycles: The Problem and Its Setting* (National Bureau of Economic Research, 1927).

and intricate detail, and perhaps then, some sort of theory might emerge." Although the cause of each phase of the cycle, such as an abundant crop harvest or banking crisis, depended on the unique historical data, the ultimate cause was always "processes deep within the capitalist system." For these institutionalists, the solution was monetary and fiscal intervention, especially micro-oriented "aid to particular depressed areas."[57]

The second and more dominant endogenous theory was the various branches of Keynesian theory, whose theoretical differences did not concern Rothbard.[58] For many Keynesians "do not necessarily accept the theoretical structure of [John Maynard] Keynes but do accept his main *conclusions*. . . . [The] economy is fundamentally and totally *unstable* in the aggregate" and is "perpetually in danger of falling into the abyss of depression and unemployment on the one hand, or of inflation on the other." According to the Keynesians, "the irrationality of the economy as a whole" pushes it into prolonged periods of unemployment or price increases, with the emphasis almost always on the former. Their solution was aggregative "*compensatory spending*: of government deficits during depressions, and of government surpluses during booms." Modern Keynesians scorn monetary policy "as being 'classical' and old-fashioned."[59]

Rothbard then discussed the third strand of endogenous theories that was gaining prominence in the 1950s. It was associated with the emerging Chicago School, which built on Irving Fisher's equation of exchange and business cycle theory. "Henry C. Simons, Frank Knight, Lloyd Mints, Milton Friedman, etc." were its main expositors.[60] Essentially, the Chicago School

[57] Rothbard, "Problem of Cyclical Instability," pp. 3–4, 7.

[58] Hansen, *Fiscal Policy and Business Cycles*; John Maynard Keynes, *The General Theory of Employment, Interest, and Money* (Cambridge University Press, 1936); Samuelson, *Economics*.

[59] Rothbard, "Problem of Cyclical Instability," pp. 5–7.

[60] Rothbard, "Problem of Cyclical Instability," p. 7. Irving Fisher, "The Business Cycle Largely a 'Dance of the Dollar,'" *Journal of the American Statistical Association* 18, no. 144 (1923): 1024–28; Milton Friedman, "Price, Income, and Monetary Changes in Three Wartime Periods," *American Economic Review* 42, no. 2 (1952): 612–25; Milton Friedman, "The Quantity Theory of Money," in *Studies in the Quantity Theory of Money*, ed. Milton Friedman (University of Chicago Press, 1956), pp. 3–24; Frank H. Knight, "The Business Cycle, Interest, and Money: A Methodological Approach," *Review of Economics and Statistics* 23, no. 2 (1941): 53–67; Lloyd W. Mints, *Monetary Policy for a Competitive Society* (McGraw-Hill, 1950); Henry C. Simons, *A Positive Program for Laissez Faire: Some Proposals for a Liberal Economic Policy* (University of Chicago Press, 1934).

argued that the business cycle is a "monetary-price level phenomenon," although the ultimate "*causes* of the cycle" are unknown. They advocated expansionary monetary policy during a depression, thereby "raising the price level and stimulating economic activity." During a boom, Chicagoans recommend restricting "the money supply . . . thereby checking the rise of the price level." The ultimate goal, therefore, is for monetary intervention to keep the "aggregate price level stable."

Crucially, Rothbard did not see "very much" of a difference between the "Chicago, and the moderate Keynesian, approach." Although Keynesians push for fiscal policy while the Chicagoans advocate "automatic formulas, formula rates of increase of the money supply, etc., which at least limit the discretion of the monetary authorities," they both agree fundamentally on the central point that the free market tends to generate business cycles and the government should adjust spending "fiscally and/or monetarily." Overall, the typical neoclassical economist will be "a blend of Mitchellianism and Keynesianism with perhaps a little Chicagoism thrown in for good measure." During a depression, he will counsel the government to support various interventions: to "increase bank reserves, lower interest rates, increase its spending and deficits, embark on public works programs, [and] raise unemployment insurance."[61]

In stark contrast to the above endogenous theories, Rothbard explained that the second type of explanation of the business cycle was the exogenous theory, "almost unknown among economists today." This tradition began with the "Bullionists and the Currency School in early nineteenth-century England and America." Notably, these economists integrated their business cycle theory "with [the] 'equilibrium' theory of prices and of price levels." They argued that in the absence of a disruption caused by government intervention, the "economy tends smoothly toward equilibrium and there is no reason for a cycle."

The Currency School's "classical monetary theory of the business cycle" explained how the central bank's expansion of "bank money and credit" beyond the supply of specie (gold and silver) increased domestic prices. This encouraged imports and discouraged exports, "leading to drains of specie

[61] Rothbard, "Problem of Cyclical Instability," pp. 7–9.

abroad" and a cessation of monetary expansion. The subsequent credit contraction "precipitated the crisis" and led to "bankruptcies and scrambles for credit." Once prices declined, the "drain was reversed." This price-specie flow mechanism encompassed all the features of the exogenous theory of business cycles: the boom resulted from "governmental disruptions," the depression was "the market's adjusting from the disruptions of the boom," and the solution was for the government to not expand the money supply "*in the first place*" or to "do nothing" during the crisis.

Breaking new ground, Mises integrated the Currency School's insights "with the new science of 'Austrian' economics, and on the insights of Knut Wicksell into the relation of bank credit to free-market interest rates." In doing so Mises "created another and magnificent 'exogenous' theory of business cycles."[62]

Rothbard then briefly described Mises's theory. The boom is ignited when the banking system, enabled by the central bank, expands money and credit and "distorts the market's interest rate structure," driving the loan rate below the natural rate. This interest-rate gap encourages "too many projects with a 'lengthy period of production' and not enough 'shorter period' projects"—that is, a disproportionately large and unprofitable investment of resources in capital goods compared to investment in consumer goods. The increased demand in the higher orders artificially lowers the price spread between the stages of production. As they are not based on the public's consumption-savings ratio, "these unprofitable investments . . . remain undetected, covered up by false, distorted values of the boom" and continued credit expansion. It is "only once the credit expansion stops [that] the free market begins to reassert" the true consumption-investment ratio and "liquidate[s] the wasteful investments." This raises the price spread and "readjust[s] the interest rate structure to what it would" have been on the free market.

Contrary to policy recommendations of the endogenous cycle theorists, the actual way to end the depression is laissez-faire and allowing the market to shift resources out of the malinvestments. This includes allowing

[62] Rothbard, "Problem of Cyclical Instability," pp. 12–14. Ludwig von Mises, *Theorie des Geldes und der Umlaufsmittel* [The theory of money and credit] (Duncker & Humblot, 1912); Knut Wicksell, *Geldzins and Güterpreise* [Interest and prices] (Jena, 1898).

prices and wages to fall to their new market clearing levels. Otherwise, "it is the institution of rigid wage rates downwards that causes chronic mass unemployment during depressions."[63]

Rothbard hailed Mises's theory as "a true integration of general economic theory with business cycle theory" and "a magnificent performance, one of the great achievements in the history of economic thought." The ABCT, as it came to be known, was elaborated upon in the 1930s by F. A. Hayek, whose structure-of-production analysis of the cycle "inaugurated a wave of Misesian influence among business-cycle students in England and America," including Lionel Robbins, Fritz Machlup, and Gottfried Haberler.[64] Unfortunately, the "advent of the Keynesian Revolution . . . completely swamped and drowned out the Mises–Hayek theory." The Misesians were "equipped to explode the Keynesian doctrines as soon as they appeared" but inexplicably chose not to. Hayek even "backtracked on many of his views, so that his business cycle writing in the later 1930s is inferior to his earlier product." Only "Ludwig von Mises himself remained true to his insight, and continued to develop a more elaborated version of his theory."[65]

"One problem," Rothbard explained, was that "the Misesians were not as 'exogenous' in their theory as Mises," and "even Mises himself is not 100% exogenous." In particular, Mises's followers believed that the theory's exogeneity was a weakness and "fell into the fallacy that bank credit expansion was not needed to initiate the boom, that it could be initiated by improving prospects for profit in the general economy." Instead of banks initiating the boom by expanding the supply of credit, they may merely accommodate increased credit demands of businesses seeking to profit from technological innovation. This made Hayek and the other Misesians "more prone to blame the market economy" for the business cycle, increasing their susceptibility

[63] Rothbard, "Problem of Cyclical Instability," pp. 13–14, 19–20.

[64] Rothbard, "Problem of Cyclical Instability," pp. 14–15. Gottfried Haberler, "Money and the Business Cycle," in *Gold and Monetary Stabilization*, ed. Quincy Wright (University of Chicago Press, 1932), pp. 43–74; F. A. Hayek, *Prices and Production*, 1st ed. (Routledge, 1931); F. A. Hayek, *Prices and Production*, 2nd ed. (Routledge & Kegan Paul, 1935); F. A. Hayek, *Profits, Interest, and Investment* (Routledge & Kegan Paul, 1939); Fritz Machlup, *The Stock Market, Credit, and Capital Formation* (William Hodge, 1940); Lionel Robbins, *The Great Depression* (Macmillan, 1934).

[65] Rothbard, "Problem of Cyclical Instability," pp. 16–17.

to the Keynesian revolution. While Mises did not share this perspective, he did fall victim to another error: he "concede[d] that even a free market" could "experience a (very mild) business cycle" from an inflow of gold that initially affects the loan rate of interest. Rothbard set out to correct both mistakes and thereby advance the Mises–Hayek theory.[66]

In a chapter 16 subsection titled "The Responsibility for the Cycle," Rothbard analyzed "the controversy between Mises and Hayek" on this question.[67] To Hayek and his students who argued that the boom could be caused if "banks refrain from altering the interest [rate]" when the demand for loans increased, Mises tersely responded, "These assertions are unwarranted."[68] Rothbard recognized that his remarks were only "brief comments" and wanted to strengthen Mises's position. The loan rate of interest does not increase "because of vague improvements in 'investment opportunities,'" Rothbard explained, but because "time preferences increase." Technological innovation per se does not increase the demand for loans because that demand is based on the "natural interest rate," which is the rate of price spread between the stages of production and is determined by the overall consumption-investment ratio. The error of Mises's followers stems from "their failure to adopt the pure time-preference theory of interest of Fetter and Mises, and their clinging to eclectic 'productivity' elements."[69]

Rothbard thus showed that a rise in interest rates can result only from an increase in the consumption-investment proportion and that credit expansion always drives interest rates below their free-market levels. This affirms the Misesian position: banks can "force market interest rates below free-market rates [only] by *expanding their credit*." Turning to Hayek, who "believes Mises's theory is somehow deficient because it is exogenous," Rothbard responded by defending the praxeological method: "the only test

[66] Rothbard, "Problem of Cyclical Instability," p. 17.

[67] Rothbard, "Progress Report, April 1, 1955 to October 1, 1955," p. 12.

[68] Mises, *Human Action*, p. 570. Gottfried Haberler, *Prosperity and Depression: A Theoretical Analysis of Cyclical Movements*, 3rd ed. (United Nations, 1941), pp. 64–67; F. A. Hayek, *Monetary Theory and the Trade Cycle* (Harcourt, Brace, 1933), pp. 144–48; Machlup, *Stock Market*, pp. 247–48; Mises, *Human Action*, p. 789.

[69] Rothbard, *America's Great Depression*, p. 32.

of any analysis is its truth, not whether it is exogenous or endogenous. If the process is *really* exogenous, then the analysis should reveal this fact."[70]

Rothbard further advanced ABCT in a separate subsection of chapter 16 titled "Can a 100% Specie Economy Experience a Business Cycle?"[71] On this issue, he was "reluctantly forced to part company with Mises."[72] In *Human Action*, Mises included his trade cycle theory "not in the theory of interventionism but in that of the pure market economy." This was because a boom could theoretically be initiated by "any increase in the supply of money proper as far as this additional supply reaches the loan market" before prices increase, thereby lowering the loan rate below the natural rate.[73] While the quantitative impact would be relatively minor, Rothbard still considered it an important theoretical issue.

In his critique, Rothbard argued that the expansion of credit by fractional-reserve banks and government-issued money "are acts of fraudulent intervention in the market, distorting voluntary preferences and the voluntarily determined pattern of income and wealth."[74] An increase in the supply of gold on the loan market, on the other hand, "*embodies changes* in the structure of voluntary time preferences" and decreases the public's consumption to investment ratio. "In the case noted by Mises," the increase in savings "will disappear once the effects of the new money on prices are completed." But this is like any other situation "in which time preferences will change suddenly on the free market, first falling, then increasing." Such "irregular *fluctuations*," while they "undoubtedly cause a 'crisis' and temporary readjustments to malinvestments," cannot be confused with "regular processes of the business cycle." Furthermore, entrepreneurs, "trained to estimate changes and avoid error . . . can handle irregular fluctuations." While "the normal forecasting ability of entrepreneurs is allowed full sway" in the case of gold flows, credit expansion "tamper[s] with all their moorings, distort[s] interest rates and calculations of capital." Credit expansion

70 Rothbard, *America's Great Depression*, pp. 32–33.
71 Rothbard, "Progress Report, April 1, 1955 to October 1, 1955," p. 12.
72 Rothbard, *America's Great Depression*, p. 34.
73 Mises, *Human Action*, p. 571.
74 Rothbard, *Man, Economy, and State*, p. 1022.

"hobble[s] the objective 'signals' of the market and mislead[s] the great bulk of entrepreneurs."[75]

In defending the exogenous nature of the business cycle, Rothbard presented a new definition of inflation. Before inflation meant an increase in prices, it denoted an increase in the money supply that caused higher prices. Mises had adopted various monetary definitions of inflation in his early writings but in *Human Action* argued that "the notions of inflation and deflation are not praxeological concepts" because they commonly referred to an arbitrarily defined change in the money supply and its purchasing power.[76]

In chapter 16, Rothbard defined inflation as "*the process of issuing money beyond any increase in the stock of specie*" and deflation "a contraction in the money supply outstanding over any period (aside from a possible net decrease in specie)." Rothbard "explicitly defined [inflation] to exclude increases in the stock of specie" because they "do not constitute an intervention in the free market . . . and do not lead to the processes of the business cycle." In other words, Rothbard defined inflation to directly link it with interventionism and the business cycle: a coerced expansion of the money supply that caused a boom and bust. Responding to Mises's statement, Rothbard concluded, "As here defined," inflation and deflation "*are* praxeological categories."[77]

Rothbard's definition caused controversy. Most notably, when asked to provide critical comments on his manuscript "Money, Free and Unfree," Mises considered Rothbard's definition "very unexpedient" because "it does not take into account the inflationary effect of considerable additions to the available supply of the money metal." However, he did believe that "for a popular description of contemporary monetary troubles such a definition may be less objectionable." Unfortunately, Mises's remarks do not touch on whether the definition is appropriate for business cycle analysis because Rothbard's pamphlet did not discuss Austrian business cycle theory or the problem of gold inflows. Despite Mises's strictures, Rothbard's definition

[75] Rothbard, *America's Great Depression*, pp. 35, 80.
[76] Mises, *Human Action*, p. 419.
[77] Rothbard, *Man, Economy, and State*, pp. 990, 1022.

fitted with his efforts to improve upon his mentor's theory by demonstrating its exogenous aspect.[78]

After explaining the exogenous nature of the boom, Rothbard shifted his scrutiny to the bust. One reason the Keynesian revolution was so successful during the Great Depression was because central banks had been unable to stymie the collapse in the money supply. Although Misesians had generally advocated a policy of noninterference, they split over the question of so-called secondary deflation, which referred to a market contraction of bank credit caused by, for example, the public's redemption of deposits for currency and eventually gold. In 1932 and 1934, respectively, Hayek and Mises argued that central banks should not expand credit or try to prevent credit contraction.[79] But by 1935, Hayek began advocating an interventionist policy that stabilized nominal spending (i.e., increasing the money supply when money demand rises), giving credence to his opponents' calls for countercyclical intervention.[80] And in *Human Action*, Mises considered "deflation and credit contraction no less than inflation and credit expansion [as] elements disarranging the smooth course of economic activities, and sources of disturbance."[81] Consequently, Rothbard believed that Mises "regard[ed] deflation as just as much of an evil as inflation." In contrast, Rothbard argued that it could be "shown that deflation has a great deal of merit," at last providing the Austrian response to interventionists' calls for monetary stimulus in the early 1930s.[82]

Rothbard exaggerated somewhat Mises's position regarding deflation and, in fact, built directly on his mentor's arguments. Mises actually considered deflation and credit contraction "less disastrous on account of their inherent effects" than inflation and credit expansion. For Mises, credit contraction could only raise the loan rate above the price spread. This causes long-term projects "which would have appeared profitable

[78] Ludwig von Mises to Miss Brown, October 21, 1957, p. 2, Rothbard Papers. Murray N. Rothbard, "Money, Free and Unfree," June 1957, pp. 1–85, Rothbard Papers.

[79] Hayek, *Monetary Theory*, pp. 19–22; Ludwig von Mises, *The Theory of Money and Credit*, English ed. (Jonathan Cape, 1934), p. 15.

[80] Hayek, *Prices and Production*, pp. xii–xiii, 122–24.

[81] Mises, *Human Action*, p. 564.

[82] Murray N. Rothbard, "Confidential Memorandum to William Volker Fund on Hans Sennholz' *A History of the Federal Reserve System*," April 3, 1960, p. 2, Rothbard Papers.

before appear so no longer, [which] . . . produces a temporary stagnation of business." The loan rate only adjusts back down after the decreased spending percolates throughout the economy, lowering prices in a step-by-step fashion. Importantly, Mises insists that, unlike inflation, the "contraction produces neither malinvestment nor overconsumption" because of the "drop in consumption" by individuals in the distressed industries.[83]

Rothbard used Mises's analysis and built upon it in two respects. First, he incorporated and elaborated on the reverse of Mises's inflation-induced capital consumption that he had briefly mentioned in his preliminary money chapter. Mises argued that a decrease in the purchasing power of money during the boom will lead to "apparent profits" because assets are traditionally recorded at historical cost. Using his bookkeeping entries as the benchmark, a capitalist-entrepreneur will only save enough to replace nonpermanent factors at their original prices and not at the unexpected higher levels. He will therefore unwittingly engage in capital consumption and increase his consumption-investment ratio, exacerbating the bust's necessary readjustment process. Mises never discussed the opposite scenario of deflation in detail. He only briefly stated that "the same is valid with the necessary changes with regard to the analogous consequences and effects of a deflationist or restrictionist movement."[84]

Recognizing the gap, Rothbard fleshed out his mentor's analysis. He utilized "an excellent article" by W. T. Baxter that demonstrated how use of "historic cost" by "orthodox accounting" "aggravates the business cycle. . . . Mises was one of the first to point out this factor."[85] Baxter argued that rising prices encouraged capital consumption while falling prices promoted the opposite. If a plant is bought "at a peak price . . . the accounting profit will in consequence always be less than corrected profit. . . . The firm sets aside more depreciation funds than will be needed for replacing the plant," thereby expanding "its real capital unwittingly."[86] Rothbard reasoned similarly to

[83] Mises, *Human Action*, pp. 564–65.

[84] Mises, *Human Action*, pp. 546–47.

[85] Murray N. Rothbard, "Readings in Economics and Political Economy—1955," n.d., p. 4, Rothbard Papers.

[86] W. T. Baxter, "The Accountant's Contribution to the Trade Cycle," *Economica* 22, no. 86 (1955): 102.

Baxter's "interesting discussion," emphasizing that under credit contraction "the accounting error of inflation" is reversed and businesses "will save more than they would have with correct accounting." This "increased saving will speed adjustment" by expanding the pool of voluntary savings available and thereby obviating the need to liquidate a part of the investments initiated by credit expansion.[87]

Second, Rothbard used Mises's analysis of credit contraction to show that it does not always raise the loan rate above the price spread but can cause the two to converge. Unlike credit expansion that "distorts the free market by lowering price differentials," credit contraction acts in the reverse direction. The decrease in loans "reduces the demand for factors in the higher stages, lowers factor prices and incomes, and increases price differentials and the interest rate." This "*spurs* the shift of factors, . . . speeds the market's adjustment process, [and] . . . returns the economy to free-market proportions much sooner" than what would have occurred in absence of the deflation.[88]

Rothbard then addresses Mises's position that credit contraction may "overshoot the free-market equilibrium point and raise price differentials and the interest rate above it." Invoking Austrian capital theory, Rothbard points out that any "increased investment *must* be made in the higher-order goods." Since all investment therefore lengthens the production structure, credit contraction does not cause excess investment in lower orders but "simply a shorter structure than would otherwise be the case." Furthermore, the market "will correct the error rapidly" because "owners of original factors, receiving lower incomes" in longer-term production projects, decrease their consumption spending and thereby restore "the free-market consumption-investment ratios." He then reaches his mentor's conclusion: "contraction, unlike expansion, does not create positive malinvestments."[89]

Thus, contrary to Keynesian and Chicago School analysis, Rothbard's Austrian analysis of accounting errors induced by deflation and of credit

[87] Rothbard, *Man, Economy, and State*, pp. 994, 1006. Murray N. Rothbard, "Money and Banking on the Unhampered Market," 1950, pp. 64–65, Rothbard Papers.

[88] Rothbard, *America's Great Depression*, p. 18.

[89] Rothbard, *Man, Economy, and State*, p. 1006.

contraction's positive impact on the recession-adjustment process leads to the realization that "the government should encourage, rather than interfere with, a credit contraction" during the bust. Deflation actually speeds up the depression-adjustment process.[90]

Rothbard's systematic analysis of violent intervention into the market thus culminated in notable advances in Austrian business cycle theory. He demonstrated that the business cycle is the inevitable outcome of and can only be caused by intervention into the banking system via credit expansion initiated by the central bank or other government policies. He also established—in direct opposition to Keynesians and Chicagoans—that credit contraction actually hastens economic recovery. Rothbard had written the definitive and long-overdue response to endogenous business-cycle theorists and proponents of "reflationist" monetary policy. In doing so, Rothbard fully integrated the theory of the business cycle into the structure of general economic theory that he had built up previously in his treatise.

To summarize: Rothbard's overall contribution to the analysis of government action was to demonstrate for each type of intervention into the market economy the full set of consequences, "deducing everything step by step." His comprehensive framework from chapters 12 to 17 contrasted with Mises's "isolated chapters, [which had] . . . no systematic integration between them or logical deductions of one from the other." "It had always been my hope," Rothbard divulged, "to find the logical integration for the praxeology of intervention." "Now," he triumphantly concluded, "I believe I have found it."[91]

Ending the Treatise

By the beginning of 1956, Rothbard had wrapped up the rough draft of his treatise. He settled on the title "Man, the Economy, and the State: A Treatise on Economic Principles."[92] This soon became "Man, Economy, and

[90] Rothbard, *America's Great Depression*, p. 21.
[91] Rothbard to Cornuelle, July 19, 1955, p. 4.
[92] Murray N. Rothbard to Richard C. Cornuelle, November 25, 1955, p. 1, Rothbard Papers.

State: A Treatise on Economic Principles."[93] He began "proofreading the previously-typed chapters" and writing chapter 18 on "Anti-Market Ethics: A Praxeological Critique." This chapter had little to do with economics per se and instead served as "an expansion of value-free praxeology into the ethical field." Rothbard's goal was to use his body of deduced economic theorems to "show the logical inconsistencies and conceptual meaninglessness of all left-wing ethics, and of all ethical criticisms of the market economy." For example, he criticized the possibility of "equality as an ethical goal" because of the self-evident fact that humans differ in terms of their knowledge, skills, aptitude, location, and so on.[94]

Rothbard followed this discussion with chapter 19, titled "Conclusion: The Economist and Public Policy," which dealt with the role of the economist as advisor to governments and businesses.[95] Despite its brevity, Rothbard considered chapter 19 essential because it clarified the distinction between positive and normative economics. Though he did not say it explicitly, Rothbard strongly disagreed with Mises on this issue. Mises "believes that it *is* legitimate for an economist to say that price controls are 'bad', simply because, as a utilitarian, he thinks that the advocates of price controls would have to agree that price controls are bad, and therefore he too can say so." While Rothbard certainly agreed with Mises's positive analysis of price controls, he argued that a bureaucrat "can be for controls for their own sake . . . and therefore could *still* say that price controls are good, even after learning of their economic consequences," because they want to maintain their power. Therefore, to advocate public policy, economists must engage in normative reasoning by articulating "a coherent ethical system, a coherent political philosophy," such as one grounded in natural rights.[96]

But expounding this libertarian political economy would have to wait for another time. Instead, Rothbard finished *Man, Economy, and State* by summarizing "our economic knowledge of the market and of government

[93] Murray N. Rothbard to Rae C. Heiple III, June 2, 1957, p. 1, Rothbard Papers.
[94] Rothbard to Cornuelle, March 17, 1956, p. 1.
[95] Rothbard, "Progress Report, April 1, 1955 to October 1, 1955," p. 15.
[96] Murray N. Rothbard to Ivan R. Bierly, January 17, 1960, pp. 1–2, Rothbard Papers.

intervention."[97] He reemphasized that praxeology proves markets result in "maximized social utility, . . . economic calculation, . . . and [an] advance in living standards" while government creates "exploitation, . . . calculational chaos, . . . and [a] regression of living standards."[98]

In July, Rothbard informed Harold Luhnow, the president of the Volker Fund, that he had completed his treatise. His work totaled "1900 typewritten pages" and was being "finally typed, proofread, and [having the] charts drawn."[99] When he had previously corresponded with Luhnow, Rothbard defended the time it took to write the book and its length because it "broke new ground and required a difficult search for answers to the many theoretical problems that arose."[100] Now, he "expressed [his] really deep gratitude" to the Volker Fund for its institutional "support and encouragement over the years" because it allowed him to learn "an enormous amount of economics."[101]

His major treatise completed, at thirty years old, Rothbard was hardly finished. In the next phase of his career, he would obtain his long-delayed academic credentials and begin to apply his hard-earned knowledge and praxeological perspective to evaluating the current state of mainstream economic theory. In this endeavor, he clearly showed that he deserved a place among the front rank of contemporary economic theorists.

[97] Rothbard, "Progress Report, April 1, 1955 to October 1, 1955, p. 15.

[98] Rothbard, *Man, Economy, and State*, p. 1365.

[99] Murray N. Rothbard to Harold W. Luhnow, July 29, 1956, p. 1, Rothbard Papers.

[100] Murray N. Rothbard to Harold W. Luhnow, December 6, 1955, p. 1, quoted in Joseph Stromberg, introduction to *Man, Economy, and State with Power and Market*, scholar's ed., by Murray N. Rothbard (Mises Institute, 2004), p. lx.

[101] Rothbard to Luhnow, July 29, 1956, p. 1.

Part V
Applying the Treatise, 1956–1962

The completion of the first draft of *Man, Economy, and State* enabled Murray Rothbard to move on to other activities and projects. He earned his doctorate in 1956 and reviewed papers and books for the Volker Fund, evaluating contemporary research using the body of economic theorems he had deduced. Focusing on the Chicago School, Rothbard criticized Israel Kirzner's attempt to fuse Austrian insights with neo-Marshallian production theory as well as Milton Friedman and others' neo-Fisherian monetary economics. Rothbard not only criticized new publications; he also continued to edit his treatise, adding new references and making other changes. In 1962, despite professional and institutional obstacles, *Man, Economy, and State* was finally published.[1] With it, Rothbard greatly advanced the Austrian tradition and firmly positioned himself as Mises's heir.

Academic Credentials and Job Prospects

As 1956 dawned, Rothbard's career reached a crossroads. He had finished the rough draft of his treatise, a crucial component of the interdisciplinary science of liberty, but Rothbard had made little progress toward establishing an institute for libertarian scholarship. Moreover, he still lacked a doctoral degree. To make matters worse, his research grant from the Volker Fund—the income that he lived on while writing *Man, Economy, and State*—was set to expire in June. If Rothbard was going to become a professional economist,

[1] Murray N. Rothbard, *Man, Economy, and State: A Treatise on Economic Principles*, 2 vols. (D. Van Nostrand, 1962).

he needed Arthur Burns to depart from his dissertation committee and a new source of income. Fortunately, several pieces fell into place.

Most importantly, in 1953 Burns left the Columbia economics department to serve as the chairman of President Dwight D. Eisenhower's Council of Economic Advisers. The major roadblock that prevented Rothbard from attaining his degree was gone, and he "was able to get through with the degree before [Burns] got back." Rothbard defended his dissertation on the Panic of 1819 in May 1956. He thought that the timing was "fortuitous" because Burns returned to Columbia "just after" he defended.[2] Rothbard reported to the Volker Fund that Joseph Dorfman and other professors "loved the darn thing," though he himself had "been hating [it] roundly for years [because] . . . the thing was diluted to the point of neutral pallor." The only resistance came from the noted economic historian Carter Goodrich, who detected "a strong undercurrent of 'sound-money doctrine.'" Rothbard heard him "mutter something about 'Mises' at one point." But aside from this minor difficulty, Rothbard "breezed through" the final oral.[3] By June he wrote to Harold Luhnow thanking him for the "kind congratulations" and support.[4] Rothbard had finally received his PhD, no thanks to Burns. Surprisingly, he harbored no ill will toward his former family friend. In a report on policy lectures by Burns the following year, Rothbard wrote that despite former difficulties he maintained "a warm personal regard for him and for the quality of his reasoning power."[5]

Traditionally, when graduate students earn their PhD they enter the next phase of their career: teaching students and continuing to research. With a PhD from one of the top universities, Rothbard should have had many options at elite institutions available. Instead, his peculiar graduate career (a ten-year gap existed between his master's degree and dissertation defense), free-market proclivities, and desire to stay in the Northeast constrained

[2] Walter Block and Walter Grinder, "Rothbard Tells All: Interview with Murray Rothbard," December 1972, p. 13, Rothbard Papers. Justin Raimondo, *An Enemy of the State: The Life of Murray N. Rothbard* (Prometheus Books, 2000), p. 44.

[3] Murray N. Rothbard to Richard C. Cornuelle, May 30, 1956, p. 1, Rothbard Papers.

[4] Murray N. Rothbard to Harold W. Luhnow, June 17, 1956, p. 1, Rothbard Papers.

[5] Murray N. Rothbard, "Memorandum to the Earhart Foundation: Report on the A. F. Burns lectures," November 1957, p. 1, Rothbard Papers.

him. Previously, Rothbard had surveyed the job options that realistically lay before him. "Usually," Rothbard wrote, Austrians and libertarians "cannot get teaching posts in universities. This almost always shuts them out from the leisure time necessary to do research and write in their fields," which severely limits their influence. To make matters worse, the teaching posts that are available are "almost always in a small college, isolated from the main influential centers of academe." Even in this dismal setting, Austrians are "discriminated against, harassed, etc. by the administration and by the faculty." Rothbard did not find this alternative worthwhile or fulfilling.[6]

Above all, Rothbard wanted to read and write full-time. In such a job, he could devote all his energy to staying up to date on current publications and publishing in economics and other disciplines in the science of liberty. Pressing tasks in Rothbard's envisioned political economy included the need "to reestablish the 'science' of *ethics*" and write history, "another crucial area in which almost no libertarian work has been done." He emphasized to his colleagues the "urgent necessity for research itself," against the popular misconception among libertarians "that all knowledge has already been accumulated, and that therefore the necessity for further research is negligible."[7]

With this goal in mind, he contacted the Volker Fund to inquire about potential sources of income after his research grant expired. Since "the present set up is the ideal type of arrangement," he asked Richard Cornuelle if he could continue "on a full-time grant basis from the Fund." If this were not possible, his alternatives in order of preference were "a part-time grant plus regular part-time work for the Fund, . . . teach at NYU, . . . work at the FEE," or go into the private sector as a ghostwriter.[8]

To Rothbard's dismay, the Volker Fund did not continue the full-time research grant. Instead, they hired him part-time to evaluate books and papers to be potentially promoted by the National Book Foundation, a

[6] Murray N. Rothbard to Richard C. Cornuelle, "Suggestions for a General Research Program for the Volker Fund," April 3, 1954, p. 6, Rothbard Papers.

[7] Murray N. Rothbard to F. A. Harper, January 3, 1961, pp. 1, 2, 5, Rothbard Papers.

[8] Murray N. Rothbard to Richard C. Cornuelle, January 8, 1956, p. 1, Rothbard Papers.

subsidiary that distributed conservative books to libraries.[9] This was most likely the case because the Volker Fund wanted its highly valued asset to find an academic job. Short of that, the Volker Fund thought Rothbard could secure grant assistance from other agencies. Rothbard pursued the latter: several weeks after contacting Cornuelle, the two discussed a project on the 1929 depression that the affiliated Earhart Foundation would fund. With a letter of recommendation from Mises, Rothbard received a one-year grant from June 1956 to June 1957 to "devote full time to complete a study of the causes of the 1929 American depression."[10] He plunged into the project, building on a Great Depression piece he had written for FEE. This caused him to turn down a job offer from Milton Friedman, who had suggested that Rothbard "apply for a Post Doctoral Fellowship at the University of Chicago."[11] Rothbard's decision to not work at a university, while understandable, significantly hurt his long-run chances on the academic job market.

Mises's letter of recommendation displays his enormous confidence in and respect for a man who just turned thirty years old. He described Rothbard as "an extraordinarily talented young man, a keen thinker and an indefatigable worker" and was "fully convinced that he will one day be counted among the foremost economists. . . . I fully endorse what he says about these matters and I want merely to add that in my opinion nobody is better qualified to perform this job than Rothbard."[12]

The remarks made by the demanding Mises must be placed in proper context. That Mises was not simply writing a routine letter of recommendation can be seen by comparing it with the letters Mises wrote a year later for his own doctoral student Israel M. Kirzner. Kirzner had applied for an Earhart fellowship to turn his doctoral dissertation into a publishable book.

---

[9] Michael McVicar, "Aggressive Philanthropy: Progressivism, Conservatism, and the William Volker Charities Fund," *Missouri Historical Review* 105, no. 4 (2011): 198–99.

[10] James A. Kennedy to Murray N. Rothbard, April 20, 1956, p. 1, Rothbard Papers. Murray N. Rothbard to Richard C. Cornuelle, January 31, 1956, p. 4, Rothbard Papers; Murray N. Rothbard, "Application to the Earhart Foundation," early 1956, pp. 1–10, Rothbard Papers; Murray N. Rothbard to Leonard E. Read, February 4, 1956, p. 1, Rothbard Papers.

[11] Murray N. Rothbard to Milton Friedman, February 18, 1956, p. 1, Rothbard Papers.

[12] Ludwig von Mises to James A. Kennedy, April 5, 1956, p. 1, Ludwig von Mises Collection, Grove City College. Murray N. Rothbard to Ludwig von Mises, April 2, 1956, p. 1, Rothbard Papers.

Mises believed the dissertation showed that Kirzner "has a perfect familiarity with the fundamental problems of economic theory" and "promises to become a highly competent teacher and author." While his recommendation of Kirzner was highly favorable, Mises clearly considered Rothbard his brightest and most promising disciple.[13]

As was the case with his treatise, because he had to devote time to other projects Rothbard spent several years longer than anticipated on his 1929 depression book—he finished the rough draft in January 1958 and the final draft three years later.[14] In early 1957, he wrote to Ludwig M. Lachmann that he was "as busy as a beaver lately, juggling what amounts to four jobs." He thoroughly enjoyed the work, despite finding the constant rotation of part-time jobs stressful. In addition to writing on the Great Depression, he wrote "a pamphlet for [FEE] on money." At the same time, Rothbard edited other manuscripts, particularly his "huge Principles tome, [and] . . . wonder[ed] what to do with [his] PhD thesis." On top of this, he kept himself busy with "reading and reviewing for the Volker Fund, and . . . some part-time research and consulting for a new organization called the Princeton Panel."[15] The latter was a new outfit established by the pollster Claude Robinson as an organization "to disseminate economic education among businessmen."[16] Although the panel collapsed later in the year after Robinson fell ill, Rothbard continued to do research for Robinson's book project and wrote hundreds of pages of memos on economics, public policy, and history.[17]

The Princeton Panel memos, while demonstrating Rothbard's prodigious productivity, were geared toward the noneconomist. The part-time

[13] Ludwig von Mises to Richard A. Ware, January 28, 1957, p. 1, Rothbard Papers; Ludwig von Mises to Richard A. Ware, February 7, 1957, p. 1, Ludwig von Mises Collection, Grove City College.

[14] Murray N. Rothbard to Henry Hazlitt, January 20, 1958, p. 1, Rothbard Papers; Murray N. Rothbard to Richard A. Ware, January 30, 1961, p. 1, Rothbard Papers.

[15] Murray N. Rothbard to Ludwig M. Lachmann, February 14, 1957, pp. 1–3, Rothbard Papers. Murray N. Rothbard, "Money, Free and Unfree," June 1957, pp. 1–85, Rothbard Papers.

[16] Murray N. Rothbard to Lawrence W. Fertig, October 9, 1957, p. 1, Rothbard Papers.

[17] Claude Robinson, *Understanding Profits* (D. Van Nostrand, 1961); Rothbard to Fertig, October 9, 1957, p. 1. For an example of a memo, see Murray N. Rothbard, "Competition and the Economists," May 1961, in *Strictly Confidential: The Private Volker Fund Memos of Murray N. Rothbard*, ed. David Gordon (Mises Institute, 2010), pp. 307–20.

Volker Fund job better suited Rothbard's talents and aspirations. Over the next several years, it enabled him to read voraciously and evaluate the latest research on economics, history, and political philosophy. In terms of economics and related empirical studies, Rothbard scoured books and journals to identify research that employed the praxeological method. Of course, he was thrilled to discover the rare author who explicitly identified with the Austrian tradition, but he was particularly on the lookout for contributions from mainstream economists who applied or advanced the praxeological theoretical system in specific areas. He hailed the authors of these contributions and incorporated references to their works into his treatise. But if the research he was evaluating promoted fallacious theoretical doctrines that he had so deftly exposed in his treatise manuscript, Rothbard trenchantly criticized it, regardless of the free-market orientation of its author. It was excellent experience for someone who aspired to correct the errors of the prevailing neoclassical synthesis.

Against Chicagoan Methodology and Production Theory

Rothbard devoted a significant number of his scholarly evaluations to the rising "new" Chicago School led by George J. Stigler and Milton Friedman. It was an auspicious time to do so: in 1958, after Rothbard started his part-time work for the Volker Fund and turned down the postdoctoral fellowship, Stigler left Columbia to join Milton Friedman in the economics department at the University of Chicago.[18]

Although the Chicago School continued to promote free-market economics and a few of its members appreciated some Austrian insights, it was not enough to garner Rothbard's approval. For the most part, he remained an unabashed critic. In a review of *Prices, Income, and Public Policy*, a textbook written by the Chicagoans Clark Lee Allen, James M. Buchanan, and Marshall R. Colberg, Rothbard stated he was increasingly "less . . . impressed" the more he "read the general, all-around works of the 'Chicago School' of economics."[19] Chicago School economics was grounded

[18] George J. Stigler, *Memoirs of an Unregulated Economist* (Basic Books, 1988), pp. 148–57.

[19] Murray N. Rothbard, "Untitled Letter Critical of Chicago School Economics," February 3, 1960, in *Strictly Confidential*, ed. David Gordon, p. 295. James M. Buchanan et al., *Prices, Income, and Public Policy*, 2nd ed. (McGraw-Hill, 1959).

in far too many methodological and theoretical fallacies to mount an effective attack on the neoclassical synthesis. Rothbard had previously tried to utilize the Marshallian partial-equilibrium apparatus during the writing of *Man, Economy, and State* and realized it led to multiple errors. Combining Friedmanite positivism and neo-Fisherian macroeconomics with Stigler's Marshallian price theory would only compound the problems he had encountered.

At the root of Rothbard's disagreement with the new Chicago School was its methodological perspective, a variant of positivism that enthusiastically promoted the use of unrealistic assumptions so long as they improved the predictive power of the theory. This position was best articulated by Milton Friedman in his 1953 paper "The Methodology of Positive Economics."[20] It sharply broke with the method of the older Chicago School of Frank Knight, which adhered to a position akin to Robbins's *An Essay on the Nature and Significance of Economic Science*.[21] In his essay, Friedman implicitly acknowledged this schism: he did not mention Knight at all but thanked Burns and Stigler for their "helpful comments and criticism."[22] While Rothbard considered Knight "highly overrated as [an] economist and philosopher," he thought him "much better, methodologically, than the younger Chicago School who are all positivists." His paper "'What is Truth' in Economics?" articulated criticisms "from what is essentially a praxeological point of view" despite Knight not sufficiently adhering to this method in his own theorizing. But the new Chicago School replaced Knight's methodological doctrines with those of Friedman, which were "very 'big' now among economists."[23]

Rothbard expanded his criticism of Friedman's methodology in a review for the Volker Fund of *Essays in Positive Economics*.[24] "Few things would be as disastrous for economic theory as the widespread adoption of

[20] Milton Friedman, "The Methodology of Positive Economics," in *Essays in Positive Economics* (University of Chicago Press, 1953), pp. 3–43.

[21] Frank H. Knight, "'What is Truth' in Economics?," *Journal of Political Economy* 48, no. 1 (1940): 1–32; Lionel Robbins, *An Essay on the Nature and Significance of Economic Science*, 2nd ed. (Macmillan, 1935).

[22] Friedman, "The Methodology of Positive Economics," p. 3.

[23] Murray N. Rothbard to William F. Campbell, April 2, 1961, p. 3, Rothbard Papers.

[24] Milton Friedman, *Essays in Positive Economics* (University of Chicago Press, 1953).

the Friedman methodology," Rothbard warned. On top of advocating "all the predictable nonsense of the positivists," including comparing economics with physics and engineering, Friedman is "actually advocating theories with *false* assumptions, provided their so-called 'predictive power' be empirically useful." This clearly contrasted with the praxeological method Rothbard had deftly used when writing his treatise and auxiliary papers. Here, the "assumptions and postulates [are] *true* and derived from reality," and the praxeologist only uses unrealistic assumptions initially before discarding them in later logical chains of reasoning. Rothbard's criticism that Friedman committed the "most pernicious (in the light of current trends), methodological fallacy in economic thought today" was shared by F. A. Hayek.[25] Late in his life, Hayek considered "Milton's *Positive Economics* . . . in a way . . . as dangerous a book" as John Maynard Keynes's *The General Theory of Employment, Interest, and Money*.[26]

Friedman's methodology influenced the second edition of Stigler's *The Theory of Price*, a canonical text of the Chicago School.[27] Rothbard had commented on the first edition in 1953 when he was in the middle of revising his projected textbook.[28] When the Volker Fund asked him to review the second edition in 1960, he possessed the experience of several years of sedulously deducing the theoretical apparatus of his treatise. The mature Rothbard noted that the new edition "is considerably changed to show more of an influence by the 'young' Chicago School headed by Milton Friedman." He criticized Stigler's decision to replace the first chapter on methodology, "one of the best chapters . . . which was patterned on Knight and Robbins." Instead, the revised edition "follows the empiricist mode in scorning questions of methodology." Along these lines, Stigler injected "a great deal of empirical and institutional data into the book in order to 'test' the theory; this reflects Friedman's positivist empiricism as contrasted to

[25] Murray N. Rothbard to George Resch, October 4, 1961, pp. 1–2, Rothbard Papers.

[26] F. A. Hayek, *Hayek on Hayek: An Autobiographical Dialogue*, ed. Stephen Kresge and Leif Wenar (University of Chicago Press, 1994), p. 145. John Maynard Keynes, *The General Theory of Employment, Interest, and Money* (Cambridge University Press, 1936).

[27] George J. Stigler, *The Theory of Price*, 2nd ed. (Macmillan, 1952).

[28] Murray N. Rothbard to Richard C. Cornuelle, December 25, 1953, pp. 1–2, Rothbard Papers; George J. Stigler, *The Theory of Price* (Macmillan, 1946).

Knight's deductive theoretical view." This data "weakens the force of the theory," such as his "stress on the single firm . . . instead of the Austrian insight into the *interrelations* of firms." Despite Stigler's viewing of advertising in a more favorable light and making other marginal improvements, Rothbard considered the new edition "a work of very little value."[29]

Friedmanite positivism also permeated the textbook written by Buchanan, Allen, and Colberg, which Rothbard considered "at the root of almost all the troubles of the book." As an example of how the "positivist epistemology pervades the technical economic analysis," Rothbard singled out how "the authors said that a fixed, vertical demand curve is illustrated by the government's demand for soldiers." Rothbard reasoned that even if the economist assumes conscription can be illustrated by a demand curve, the authors' "analysis is nonsense" because if the government's vertical demand curve is greater than the amount of men who "can possibly be hired or drafted," then the two curves "never intersect. On the authors' own premises, then, *no one* would be in the army, which is clearly absurd."[30] When Rothbard wrote to Buchanan asking him to clear up this point, Buchanan conceded that "the solution to which the fixed-demand tends to lead under your assumptions is absurd . . . [because] if the fixed demand is greater than the fixed supply, price should be infinite." Such unrealism, Buchanan goes on to say, "is really the same in all of those cases in which we make rather extreme assumptions." Buchanan argued that what ultimately matters is "the models themselves are useful for predictive purposes."[31] Rothbard immediately recognized the Friedmanite positivism in Buchanan's response and how it was antithetical to the praxeological method. "No theory of lasting merit," Rothbard concluded, "can emerge from this sort of cauldron."[32]

Rothbard's criticisms extended beyond the Chicago School's methodology. While reviewing for the Volker Fund, he frequently pointed out the

[29] Murray N. Rothbard to Ivan R. Bierly, November 4, 1960, pp. 1–2, Rothbard Papers.

[30] Rothbard, "Untitled Letter Critical of Chicago School Economics," pp. 298–300.

[31] James M. Buchanan to Murray N. Rothbard, January 28, 1960, p. 1, Rothbard Papers. Murray N. Rothbard to James M. Buchanan, January 25, 1960, p. 1, Rothbard Papers.

[32] Rothbard, "Untitled Letter Critical of Chicago School Economics," p. 300. Joseph T. Salerno, "The Problem with James Buchanan's Positivist Economics," *Mises Wire*, May 2, 2014, https://mises.org/mises-wire/problem-james-buchanans-positivist-economics.

flaws in its recent writings on production theory. For example, he considered Armen A. Alchian and Reuben A. Kessel's "'Competition, Monopoly, and the Pursuit of Pecuniary Gain' . . . highly confused on the important question of defining monopoly." Alchian and Kessel properly define one case of monopoly "as [a] grant of governmental privilege; but then they spoil this by adding another case where 'the number of competitors is small.'" "As I will show in my principles book," Rothbard wrote, this definition "is an entirely unjustified use of the term 'monopoly.'"[33] He considered Alchian's article "'Private Property and the Relative Cost of Tenure' . . . a great deal better" precisely because "there is not here any discussion of the competition vs. monopoly question."[34]

However, Rothbard's most substantive criticism of Chicagoan production theory focused on a work written by an Austrian, Kirzner, who taught at New York University after receiving his PhD in 1957. Rothbard thought extremely highly of Kirzner, praising him in a letter to Lachmann as a "very fine Misesian student."[35] He considered Kirzner's dissertation "a fine work and certainly deserving of publication," notwithstanding his sharp criticism of Kirzner's analysis of the relationship between Robbins's means-ends framework and Mises's praxeology.[36] "By far and away," Rothbard concluded, of all Mises's students, Kirzner was the "most competent and scholarly, and, indeed, the only one who shows signs of becoming an important economist in his own right."[37] The Volker Fund recognized Rothbard's relationship with Kirzner, considering his evaluation of Kirzner's dissertation as "a *masterful* job."[38] Consequently, the foundation requested Rothbard to review Kirzner's

[33] Murray N. Rothbard to Kenneth S. Templeton, January 25, 1959, p. 6, Rothbard Papers. Armen A. Alchian and Reuben A. Kessel, "Competition, Monopoly, and the Pursuit of Pecuniary Gain," in *Aspects of Labor Economics*, ed. National Bureau of Economic Research (Princeton University Press, 1962), pp. 157–83.

[34] Murray N. Rothbard to Ivan R. Bierly, July 13, 1959, p. 12, Rothbard Papers. Armen A. Alchian, "Private Property and the Relative Cost of Tenure," in *The Public Stake in Union Power*, ed. Philip Bradley (University of Virginia Press, 1959), pp. 350–71.

[35] Rothbard to Lachmann, February 14, 1957, p. 8.

[36] Murray N. Rothbard, "Report on Israel Kirzner, 'The Economic Point of View,'" August 1959, p. 1, Rothbard Papers. Murray N. Rothbard to Ervin K. Zingler, April 19, 1961, p. 1, Rothbard Papers.

[37] Murray N. Rothbard to Kenneth S. Templeton, March 17, 1962, p. 1, Rothbard Papers.

[38] Ivan R. Bierly to Murray N. Rothbard, August 5, 1959, p. 1, Rothbard Papers.

textbook manuscript, which sought to combine Austrian reasoning with Chicago price theory.

Rothbard reacted very negatively to Kirzner's textbook and most of his review "was totally out of sympathy with the entire analysis." In Rothbard's view, Kirzner committed an error akin to the one he himself had made in the original chapter 5 of his treatise: Kirzner tried to delicately balance Austrian and neoclassical economics, to "carry water on both shoulders" and fuse "excellent expressions of what may be called the 'Austrian' position" with the "'Chicago' analysis, as typified . . . by Stigler's *Theory of Price*." But Kirzner did not even succeed in giving equal amounts of water to both schools of thought, because aside from the first five chapters on method and utility, he abandoned the Austrian approach "except for a few ritualistic qualifications and sentences."[39]

Thus, the book suffers from a fundamental flaw: "the artificial and even disastrous isolation of price theory from . . . time (and) capital phenomena." Time and the production structure formed the bedrock of Rothbard's production theory. He had constructed this edifice by demonstrating how these concepts followed as the logical implications of human action. Time, capital, and interest are fundamental to market activity and "must be *infused* into the price analysis." The abstention from the treatment of capital and interest could not simply "be remedied by an appendix that Kirzner promises us on time," because it would still leave the basic problems in Marshallian production theory unresolved.[40]

When discussing specific issues with Kirzner's production theory, Rothbard drew upon what he learned from writing his own treatise. Kirzner lapses into the standard Marshallian "orthodoxy to concentrate on *the firm*, in his analysis, instead of the interrelations between firms." This causes him to neglect the significance of capitalist-entrepreneurs' "readily shift[ing] their capital back and forth to wildly different areas of production." This narrow focus leads to "all the crucial errors of the cost-curve analysis,"

[39] Murray N. Rothbard, "Comments on Israel Kirzner's MS," December 1961, p. 1, Rothbard Papers. Joseph T. Salerno, "Varieties of Austrian Price Theory: Rothbard Reviews Kirzner," *Libertarian Papers* 3 (2011): e25.

[40] Rothbard, "Comments on Israel Kirzner's MS," p. 1.

especially the fallacy that a "firm will invest funds in production up to the point where 'marginal revenue' equals 'marginal cost.'"[41]

Kirzner failed to achieve the same insight that Rothbard did when writing his treatise: an entrepreneur may "invest the same $100 . . . elsewhere" at a higher return than what would be earned by continuing to invest in the firm until marginal revenue is equal to marginal cost. "Once we bring investment interest return, into the picture," Rothbard stresses, "we see that the whole elaborate cost-curve structure is totally faulty." Furthermore, focusing on the firm causes Kirzner to consider the manager as the entrepreneur when in fact this uncertainty-bearing function falls upon the men financing the firm, the "capitalist-entrepreneurs." By supplying "present goods in exchange for future goods," whether through loans or equity investments, the capitalist-entrepreneurs always "reap an interest return." In other words, entrepreneurs are always capitalists.[42]

Kirzner falls into other errors that Rothbard once committed. Despite Kirzner's "welcome repudiation of the 'pure competition theory,'" he invokes the price-taking assumption, "granting that a competitor will face an infinitely elastic demand curve." This fallaciously implies that a firm will exert zero influence on the price of its product. In general, Kirzner's analysis omits any recognition "of imputation from consumer demand down to determining prices." He falls into the same trap as Stigler, considering prices as "always *there*, given, when they are supposed to be explained, and determined." In fact, Kirzner's analysis is inferior to Stigler's in some respects, particularly his "really grievous neglect of the pricing of factors of production." Kirzner omits any discussion of "marginal productivity determination of factor prices; there is no discussion of the consequent demand curves." This mistake, Rothbard emphasized, is "the biggest single omission of the work" and reflects the overall inadequacy of Kirzner's production theory. As Rothbard realized when writing his own treatise, the theorist cannot simply assume given output and input prices if he wants to properly analyze economic interrelations.[43]

[41] Rothbard, "Comments on Israel Kirzner's MS," pp. 1, 10–11.
[42] Rothbard, "Comments on Israel Kirzner's MS," pp. 1–3.
[43] Rothbard, "Comments on Israel Kirzner's MS," pp. 2, 7–8.

Ultimately, Rothbard was "highly critical of his forthcoming textbook." Kirzner's work did not teach sound economic reasoning to students and perpetuated many of the fallacies Rothbard had refuted. But testament to the lamentable state of the economics profession, "despite its grave defects, this textbook will be the best in the field (admittedly a bad lot)."[44] The book, *Market Theory and the Price System*, was published in 1963, three years after the publication of Kirzner's dissertation, *The Economic Point of View*.[45] One critic labeled *Market Theory* as a "Bible" teaching students to "hold the market system in high esteem."[46] It received little traction from the Chicago School and sank without a trace.

It is worth noting that Kirzner appears to have made few changes to his manuscript after receiving Rothbard's criticism. However, Rothbard's strong objection to the complete absence of capital theory in his manuscript may have had an impact on Kirzner. In early 1962, Kirzner submitted a grant application to the Volker Fund proposing "a comprehensive treatise together with a complete bibliography" which would systematically investigate "the development of the *theory of capital* since Böhm-Bawerk's *Capital and Interest*." The goal was quite ambitious: to "do for the literature on capital theory of the past seventy years, what Böhm-Bawerk's first volume did for the literature that preceded his own contribution."[47] In reviewing Kirzner's proposal, Rothbard praised it as "a massive and monumentally important project, because . . . a volume which promises, as Kirzner does, to carry forward a point of view similar to Bohm-Bawerk [*sic*] and the Austrians, is of enormous importance to economic thought."[48] Rothbard left no doubt that he believed the applicant was capable of accomplishing such an undertaking. It is unknown if Kirzner ever received the grant, but the project was never completed. Kirzner did publish a shorter and less

[44] Rothbard to Templeton, March 17, 1962, p. 1.

[45] Israel M. Kirzner, *The Economic Point of View* (D. Van Nostrand, 1960); Israel M. Kirzner, *Market Theory and the Price System* (D. Van Nostrand, 1963).

[46] C. E. Ayres, review of *Market Theory and the Price System*, by Israel M. Kirzner, *American Economic Review* 53, no. 4 (1963): 756.

[47] Israel Kirzner, "Entire Project," n.d., p. 1, Rothbard Papers. Eugen von Böhm-Bawerk, *Capital and Interest: A Critical History of Economical Theory* (London, 1890).

[48] Rothbard to Templeton, March 17, 1962, p. 1.

ambitious monograph on the topic, *An Essay on Capital*, which indicated his knowledge of the literature.[49]

In his review of the price theory manuscript, Rothbard had briefly criticized Kirzner's isolation of "price theory from monetary" phenomena, for Kirzner, in Chicagoan fashion, neglected to discuss demand curves for goods in terms of money. The "abstention from money," though a serious error, was "unfortunate but not fatal" in contrast to the abstraction from time and the structure of production.[50] But it was still an enormous area of disagreement between Rothbard and the Chicago School because the latter separated price theory from money, unlike Rothbard, who successfully integrated the marginal utility of money into his construction of demand curves. After criticizing Chicagoan production theory, Rothbard soon turned to its monetary analysis, particularly as exemplified in the work of Friedman.

Criticizing Chicagoan Monetary Theory

The Chicago School gained prominence in the late 1950s for its increased emphasis on the importance of money and monetary policy. Milton Friedman led the charge, working on numerous theoretical and empirical studies that dealt with how changes in the money supply affect prices and output. Among others, Friedman edited *Studies in the Quantity Theory of Money*, authored *A Theory of the Consumption Function*, and wrote *A Program for Monetary Stability*, all the while immersed in a massive project on the monetary history of the United States with Anna Schwartz.[51] Rothbard, concurrently editing his treatise and writing a monetary history of his own, did not believe that Friedman's neo-Fisherian quantity theory effectively attacked the reigning neoclassical synthesis. To Rothbard, the Chicago School simply did not understand how money and credit expansion worked. Mises shared Rothbard's perspective: according to New York University seminar participant Bettina Bien Greaves, Mises considered Friedman one

[49] Israel M. Kirzner, *An Essay on Capital* (Augustus M. Kelley, 1966).

[50] Rothbard, "Comments on Israel Kirzner's MS," p. 1.

[51] Milton Friedman, *A Program for Monetary Stability* (Fordham University Press, 1959); Milton Friedman, *A Theory of the Consumption Function* (Princeton University Press, 1957); Milton Friedman and Anna Schwartz, *A Monetary History of the United States, 1867–1960* (Princeton University Press, 1963); Milton Friedman, ed., *Studies in the Quantity Theory of Money* (University of Chicago Press, 1956).

of the two most dangerous men in America (the other was Paul Samuelson). Mises insisted that Friedman's aggregative analysis ignored relative prices and was simply a recrudescence of Fisher's work that he had refuted in the 1910s and 1920s.[52]

When asked to review Friedman's research, Rothbard informed the Volker Fund that he considered Friedman a man with a "brilliant, clear, and logical mind . . . even though fundamentally and basically mistaken" on money.[53] At the core, Friedman's "positivist-empiricist methodology" failed to vindicate the quantity theory of money. Friedman inappropriately utilized the method of the natural sciences and tried to "measure the unmeasurable, to present large arrays of highly refined (and therefore arbitrary) statistics, bolstered by mathematical formulae, [and] to try to 'test' hypotheses." Not only did this approach fail to depict the nonneutral operation of the monetary transmission mechanism; more profoundly, it was inappropriate for "the sciences of human action" due to human volition and changing economic data.[54] Friedman's *A Theory of the Consumption Function* fared no better. It exemplified the errors of the "positivist methodology," and Friedman's search for "statistical constants" led him "down a fruitless path." Rothbard considered the work disappointing because for "fallacious Keynesian attempts at finding quantitative constants in the economic world, Friedman substitutes his own fallacious set."[55]

Other Chicago School works suffered from the same methodological deficiencies. Karl Brunner's proposed research project "Monetary Analysis and Monetary Policy" was "a most commendable one" for bringing "the money supply back into the economics of inflation" but was extremely flawed. Brunner's "positivist and behaviorist" approach seeks "quantitative equations [to] . . . *explain* Federal Reserve policy." Modeling decisions by central bank officials as a function of a "change in [the] demand for money, or a change in reserve requirements," completely neglects "the *ideas* motivating Fed[eral] Reserve officials." Humans are not robotic; they use their

[52] Brian Doherty, *Radicals for Capitalism: A Freewheeling History of the Modern American Libertarian Movement* (PublicAffairs, 2007), p. 467.

[53] Murray N. Rothbard to Ivan R. Bierly, October 31, 1960, pp. 1–2, Rothbard Papers.

[54] Murray N. Rothbard to George C. Resch, January 31, 1962, p. 1, Rothbard Papers.

[55] Murray N. Rothbard to Kenneth S. Templeton, November 3, 1957, p. 1, Rothbard Papers.

free will to make decisions. The historian must read private correspondence and other documents to understand why government officials acted in a certain way.[56] In contrast to Brunner, Rothbard utilized this approach when studying the monetary policy of the 1920s.[57]

Alchian and Kessel's "Real Wages in the North During the Civil War: Mitchell's Data Reinterpreted" served as "a striking example of the epistemological deficiencies of the Chicago School." Alchian and Kessel continued the "holistic Chicago tradition in the field of money" by focusing on a "vague, general 'index of real wages'" instead of tracing "what happened to different kinds of workers in different industries." In contrast, the "Austrian-Misesian cycle theory and monetary theory stresses the crucial importance of the differences *between* various groups . . . in how they fare during an inflation," such as early and late receivers of new money or workers in higher- and lower-order stages of production. Furthermore, Alchian and Kessel assume "that the extent of depreciation of the greenback exchange rate equaled precisely the depreciation of purchasing power." But this simply assumes the equilibrium end point: exchange rates "cannot be assumed as being already there, especially when violent short-run changes are occurring, as in the Civil War." Thus, Rothbard concluded, "the supposedly 'empirical' Chicago School" produces work "much more poorly than [what] a Misesian—supposedly purely abstract and deductive—would have done."[58]

Rothbard did not consider flawed methodology the only factor weakening the Chicago School's monetary research: Friedman and others committed grave errors in their theoretical analyses. Notably, Friedman argued "that the key effect of inflation" is a "'tax on holding money'" because rising prices reduce the real value of non-interest-earning assets. While this statement is true as far as it goes, it completely ignores the nonneutrality of money and the uneven changes in real income it causes. For "those who receive money before their buying prices rise," their income increases more than the rise in prices. Consequently, the early receivers' real income goes up and they

[56] Murray N. Rothbard to Richard C. Cornuelle, August 21, 1956, p. 2, Rothbard Papers.

[57] Murray N. Rothbard, *America's Great Depression*, 5th ed. (Mises Institute, 2008), pp. 85–181.

[58] Murray N. Rothbard to Ivan R. Bierly, March 23, 1960, pp. 3–4, Rothbard Papers. Armen A. Alchian and Reuben A. Kessel, "Real Wages in the North During the Civil War: Mitchell's Data Reinterpreted," *Journal of Law and Economics* 2, no. 1 (1959): 95–113.

pay "no 'tax'" for holding money. Once again, the Chicago School's focus on aggregates obscures the underlying adjustment mechanisms. Furthermore, Friedman misunderstands the opportunity cost of money and "in fallacious Keynesian fashion" identifies it "with an interest rate." But, as Rothbard explains, individuals do not only decide between maintaining a cash balance and investing in interest-earning assets; "consumption foregone is also an important 'cost' of holding money."[59]

Rothbard sharply criticized the Chicago School's analysis of monetary policy and the business cycle. Adverting to Austrian business cycle theory, Rothbard pointed out that Friedman and others failed to understand how "monetary inflation creates maladjustments in the economy" by artificially lowering interest rates. These malinvestments cannot be maintained and "require a subsequent recession" to remove. In contrast to the Austrians, whose counsel was "to keep its hands off and to avoid any further inflation," the Chicago School advocated "pumping money in and out of the economy" to eliminate business cycles.[60] Friedman preferred "automaticity over Fed[eral] Res[erve] management of the economy," particularly a "rule for [a] 4% annual increase of the money supply." Rothbard did not think this solution was that much better than discretionary central bank policy. Instead of a free-market gold standard, a Friedmanite rule would result in "guaranteed, fixed, [and] automatic inflation." One could not even trust the monetary authorities with such a rule and the policy would "lead inexorably to a runaway inflation."[61]

These disagreements naturally resulted in diametrically opposed interpretations of the Great Depression. Rothbard argued that the Federal Reserve practiced expansionary monetary policy in the 1920s, thereby creating an unsustainable boom. Moreover, the Fed failed to utilize contractionary monetary policy in the early 1930s and continued its easy money policy. Friedman, according to Rothbard, argued the opposite and blamed the "1929 depression on the tight money policy of the late 1920s, and the deflation of the early 1930s, and *not at all* on the real genesis: the easy money policy of

[59] Rothbard to Resch, January 31, 1962, p. 1.

[60] Murray N. Rothbard, review of *Business Cycles and Their Causes*, by Wesley Clair Mitchell, and *American Business Cycles, 1865–1897*, by Rendigs Fels, *Freeman* 9, no. 12 (1959): 54.

[61] Rothbard to Bierly, October 31, 1960, p. 2.

the Fed in the earlier 1920s." Thus did Rothbard expose the yawning chasm between Austrian and Chicagoan monetary analysis.[62]

Rothbard soon voiced his criticisms directly to members and fellow travelers of the Chicago School. In the fall of 1960, along with Clark Warburton, James M. Buchanan, Milton Friedman, and Jacob Viner, Rothbard participated in a lecture series at the Thomas Jefferson Center at the University of Virginia, a center for which the Volker Fund had provided foundational grant money.[63] Unlike the other participants, who advocated various government controlled monetary standards, Rothbard's "The Case for a 100 Per Cent Gold Dollar" championed a return to free-market money and a suspension of fractional-reserve banking. While some members of the Chicago School did advocate 100 percent reserves, they only viewed it "as a useful, efficient tool for government manipulation of the money supply," unhindered by the money multiplier or excess reserves. Instead, Rothbard wanted to establish 100 percent reserves on the grounds of "the free market and property rights," for in his view any credit expansion was tantamount to fraud. In sharp contrast to the Chicago School, Rothbard wanted to "completely expunge government intervention from the monetary system," desiring to change the law so bank notes and deposits were treated "as what they are in economic and social fact": always redeemable on demand at a fixed rate.[64]

After the conference, Leland B. Yeager, a recent Chicago PhD graduate (1952) whom Rothbard had immense respect for as a quasi-Austrian methodologist, wrote to Rothbard congratulating him on the paper.[65]

[62] Rothbard to Bierly, October 31, 1960, p. 2. Murray N. Rothbard to Clark Warburton, April 23, 1961, p. 1, Rothbard Papers; Clark Warburton to Murray N. Rothbard, June 9, 1961, p. 1, Rothbard Papers.

[63] David M. Levy and Sandra J. Peart, *Toward an Economics of Natural Equals: A Documentary History of the Early Virginia School* (Cambridge University Press, 2020), pp. 195, 201.

[64] Murray N. Rothbard, "The Case for a 100 Per Cent Gold Dollar," in *In Search of a Monetary Constitution*, ed. Leland B. Yeager (Harvard University Press, 1962), pp. 94, 113–14, 116.

[65] Murray N. Rothbard to Richard C. Cornuelle, April 25, 1954, p. 1, Rothbard Papers; Murray N. Rothbard to Richard C. Cornuelle, May 1, 1954, p. 1, Rothbard Papers; Murray N. Rothbard to Leland B. Yeager, October 11, 1960, p. 1, Rothbard Papers; Leland B. Yeager, *The Fluttering Veil: Essays on Monetary Disequilibrium*, ed. George Selgin (Liberty Fund, 1997), p. xxi; Leland B. Yeager, "The Methodology of Henry George and Carl Menger," *American Journal of Economics and Sociology* 13, no. 3 (1954): 233–38; Leland B. Yeager, "Some Questions About Growth Economics," *American Economic Review* 44, no. 1 (1954): 53–63.

Yeager believed it "will prove more stimulating and thought-provoking, at least for us members and fellow-travelers of the Chicago School, than any other paper in the entire series."[66] The Volker Fund also "spoke in glowing terms" about Rothbard's work. All indications were that he was a rising star who would only advance further with the publication of his treatise.[67]

Finalizing the Treatise

Rothbard's extensive criticism of the Chicago School does not mean that he disapproved of all their work. On the contrary, while reviewing for the Volker Fund, he was editing *Man, Economy, and State* and adding favorable references to new research produced by the Chicago School and others. Indeed, Rothbard welcomed and eagerly incorporated any new research that strengthened the praxeological tradition.

In early 1957, Rothbard wrote to Ludwig M. Lachmann on the status of his treatise. He had a high opinion of Lachmann, describing him to Herbert C. Cornuelle as "looking better . . . all the time." He particularly praised Lachmann's "amplification" of "the Austrian theory of the business cycle" for showing that "if businessmen became sound Austrian economists, they will not yield to the temptations to expand and malinvest."[68] "The temptation" regarding his treatise, Rothbard confided to Lachmann, was "to keep adding footnotes, etc. as more good articles come out."[69]

Rothbard did not exaggerate; he added a flurry of references to new research articles and books. Unsurprisingly, one notable book Rothbard singled out was Lachmann's *Capital and Its Structure*, considering it "an excellent work" and agreeing "with practically all of it." A major contribution was its "linking up of asset structure on the capital market with the real-goods capital structure" and demonstrating how financial markets facilitated investment in the network of heterogeneous producer goods. This contrasted with mainstream economists who "shove the stock market

[66] Leland B. Yeager to Murray N. Rothbard, September 29, 1960, p. 1, Rothbard Papers.
[67] Richard A. Ware to Murray N. Rothbard, January 6, 1961, p. 1, Rothbard Papers.
[68] Murray N. Rothbard to Herbert C. Cornuelle, August 19, 1953, p. 1, Rothbard Papers. Ludwig M. Lachmann, "The Role of Expectations in Economics as a Social Science," *Economica* 10, no. 37 (1943): 12–23.
[69] Rothbard to Lachmann, February 14, 1957, p. 3.

into the background as a mere gambling casino."[70] Rothbard edited his manuscript to mention Lachmann's book and his recent paper on capital as a sign "of a revival of 'Austrian' production theory."[71] In the same reference, he also happily noted "a groping attempt by a leading mathematical economist to return to the Austrian road," Robert Dorfman, as well as "an incisive critique" of Dorfman's attempt.[72] Later in the treatise Rothbard acknowledged that he was "deeply indebted" to Lachmann and his "Honours Seminar in Economics at the University of Witwatersrand, South Africa" for stimulating questions regarding his utility and welfare theory.[73]

Rothbard recognized other advances in economic theory. On method, he cited numerous new articles that pointed out the limitations of econometrics and mathematical economics.[74] In terms of production theory, Rothbard lauded "a brilliant but neglected article" that examined the "difference between" the theories of the firm "in 'Austrian' vs. 'neo-classical' thought," recognizing the article mirrored his own critique of the marginal revenue–marginal cost condition.[75] Regarding the cost-curve literature, Rothbard praised an article by Alchian for criticizing "orthodox 'cost-curve' analysis, its neglect of time, [and] its artificial separation between short

[70] Rothbard to Lachmann, February 14, 1957, p. 6. Ludwig M. Lachmann, *Capital and Its Structure* (London School of Economics, 1956).

[71] Rothbard, *Man, Economy, and State*, p. 627. Ludwig M. Lachmann, "Mrs. Robinson on the Accumulation of Capital," *South African Journal of Economics* 26, no. 2 (1958): 87–100.

[72] Rothbard, *Man, Economy, and State*, p. 627. Robert Dorfman, "Waiting and the Period of Production," *Quarterly Journal of Economics* 73, no. 3 (1959): 351–72; Robert Dorfman, "A Graphical Exposition of Böhm-Bawerk's Interest Theory," *Review of Economic Studies* 26, no. 2 (1959): 153–58; Egon Neuberger, "Waiting and the Period of Production: Comment," *Quarterly Journal of Economics* 74, no. 1 (1960): 150–53.

[73] Rothbard, *Man, Economy, and State*, p. 884. L. D. Goldblatt to Murray N. Rothbard, December 17, 1957, pp. 1–4, Rothbard Papers.

[74] Rothbard, *Man, Economy, and State*, pp. 75, 326. Boris Ischbolden, "A Critique of Econometrics," *Review of Social Economy* 18, no. 2 (1960): 110–27; Vladimir Niksa, "The Role of Quantitative Thinking in Modern Economic Theory," *Review of Social Economy* 17, no. 2 (1959): 151–73; Paul Painleve, "The Place of Mathematical Reasoning in Economics," in *Essays in European Economic Thought*, ed. Louise Sommer (D. Van Nostrand, 1960), pp. 120–32.

[75] Rothbard, *Man, Economy, and State*, pp. 354, 736, 1124. André Gabor and I. F. Pearce, "The Place of Money Capital in the Theory of Production," *Quarterly Journal of Economics* 72, no. 4 (1958): 537–57.

and long runs."[76] He also welcomed Reuben A. Kessel's article on multi-form pricing in medicine as "truly excellent."[77] Lawrence Abbott's *Quality and Competition* Rothbard deemed one of "the best economics works [he had] read in many a year." This "masterpiece . . . follows [F. A.] Hayek and J.M. Clark in stressing competition as a dynamic process" instead of an equilibrium condition. Abbott's "quality competition" and description of "quality variations within the same want . . . is consonant with the Austrian tradition and is an innovation within it."[78]

Advances in monetary and business cycle theory also received Rothbard's approval. He singled out Friedman's *A Program for Monetary Stability* for recognizing "the feasibility of private coinage under a commodity standard."[79] Rothbard "endorsed enthusiastically" F. A. Hayek's "Unions, Inflation, and Profits" because it explained how "the Keynesian 'money illusion' is now leading to disastrous monetary inflation."[80] *The Failure of the "New Economics,"* Henry Hazlitt's exhaustive criticism of Keynes's *General Theory*, was "the best and most thorough exercise in economic demolition since [Eugen von] Böhm-Bawerk . . . exploded Marx's labor theory of value."[81] Accordingly, in his treatise manuscript, Rothbard included references to it and a later volume of essays edited by Hazlitt, *The Critics of Keynesian Economics*.[82]

[76] Murray N. Rothbard to Kenneth S. Templeton, October 20, 1959, p. 1, Rothbard Papers. Rothbard, *Man, Economy, and State*, p. 592; Armen A. Alchian "Costs and Outputs," in *The Allocation of Economic Resources: Essays in Honor of Bernard Francis Haley*, by Moses Abramovitz et al. (Stanford University Press, 1959), pp. 23–40.

[77] Murray N. Rothbard to Ivan R. Bierly, March 16, 1959, p. 1, Rothbard Papers. Reuben A. Kessel, "Price Discrimination in Medicine," *Journal of Law and Economics* 1, no. 1 (1958): 20–53; Rothbard, *Man, Economy, and State*, p. 744.

[78] Murray N. Rothbard, review of *Quality and Competition: An Essay in Economic Theory*, by Lawrence Abbott, and *Natural Resources: The Economics of Conservation*, by Anthony Scott, July 21, 1958, in *Strictly Confidential*, ed. David Gordon, pp. 257–58. Lawrence Abbott, *Quality and Competition: An Essay in Economic Theory* (Columbia University Press, 1955).

[79] Rothbard, *Man, Economy, and State*, p. 800.

[80] Rothbard to Bierly, July 13, 1959, p. 3. F. A. Hayek, "Unions, Inflation, and Profits," in *The Public Stake in Union Power*, ed. Philip Bradley, pp. 46–62; Rothbard, *Man, Economy, and State*, p. 592.

[81] Murray N. Rothbard, review of *The Failure of the "New Economics"*, *National Review*, August 15, 1959, p. 279. Henry Hazlitt, *The Failure of the "New Economics"* (Princeton University Press, 1959). Rothbard, *Man, Economy and State*, p. 784.

[82] Henry Hazlitt, ed., *The Critics of Keynesian Economics* (D. Van Nostrand, 1960); Rothbard, *Man, Economy, and State*, pp. 776, 780, 784, 788, 868.

At the same time, Rothbard incorporated recent advances made by others into his Great Depression manuscript. In private correspondence, the attorney Rae C. Heiple III, who was affiliated with FEE, suggested to Rothbard in 1956 that if "government expenditures were eliminated," then "the time preference ratio" would fall.[83] Rothbard thanked Heiple for his "excellent" suggestion which "no one has pointed . . . out before." Rothbard added that he was "really indebted" to him "for making this point" and intended "to make considerable use of it in my book on the 1929 depression," where he would indeed argue that cutting government expenditures, by decreasing consumption, lowers time preferences and hastens recovery in a recession.[84]

Rothbard also investigated the question of "the proper definition of money," formulating it as either the general medium of exchange or something which is exchangeable at any time at par with the general medium, such as a demand deposit. Savings deposits must also be included because they are "redeemable at par" for demand deposits or currency. Rothbard realized that if savings deposits belong in the money supply, then so do "*any* assets . . . redeemable at par." He considered Gordon W. McKinley's articles excellent for arguing "persuasively for the inclusion of savings deposits and savings-and-loan shares" but went even further by provocatively adding "the cash-surrender values of life insurance." McKinley's and Burns's writings inspired him to include this in the money supply.[85] He submitted a paper on this topic to the *Journal of Finance* in 1959. Like his other recent journal submissions, it was rejected.[86] Nevertheless, Rothbard subsequently felt vindicated because "in his latest exposition of the subject, McKinley

[83] Rae C. Heiple III to Murray N. Rothbard, August 10, 1956, p. 1, Rothbard Papers.

[84] Murray N. Rothbard to Rae C. Heiple III, September 1956, p. 1, Rothbard Papers. Rothbard, *America's Great Depression*, p. 22.

[85] Murray N. Rothbard, "On the Definition of Money," April 1959, in *Strictly Confidential*, ed. David Gordon, pp. 259–60, 262. Arthur F. Burns, *Prosperity Without Inflation* (Fordham University Press, 1957), p. 50; Gordon W. McKinley, "Effects of Federal Reserve Policy on Nonmonetary Financial Institutions," in *The Federal Reserve System*, ed. Herbert V. Prochnow (Harper and Brothers, 1960), pp. 204–25; Gordon W. McKinley, "The Federal Home Loan Bank System and the Control of Credit," *Journal of Finance* 12, no. 3 (1957): 319–32.

[86] Not found in Rothbard Papers. Joel Segall to Murray N. Rothbard, April 16, 1959, p. 1, Rothbard Papers.

approaches recognition" that cash surrender values of life insurance policies belong in the money supply.[87]

Ironically, Rothbard's most substantial change in *Man, Economy, and State* was to occur after he thought he had finished the book in the spring of 1959. His "mammoth book" totaled 1,900 pages.[88] He searched for an academic publisher, such as the University of Chicago Press, but could not find any institution willing to publish his book. Fortunately, it found a home in the William Volker Fund Series in the Humane Studies, a newly established collection of free-market and Austrian books published by the Van Nostrand Company that included volumes by Kirzner and Mises.[89] Due to its length, the Volker Fund wanted someone who possessed the "editorial knowhow to maybe cut it." The institution chose one of its consultants, the conservative-libertarian writer Frank Meyer.[90]

"Unequivocally," Meyer stated in his review, Rothbard's "book is one of the two or three most important discussions of economics to be written this century. It is in the direct line of [Carl] Menger, Böhm-Bawerk, and Mises." Meyer exclaimed that Rothbard's treatise had "certain positive qualities beyond . . . anything that Mises has written." Specifically, "it is an exhaustive *treatise* on economics, considering all aspects of the subject and simultaneously . . . refuting the most powerful contemporary economists (e.g., . . . the Keynesians)." "No economist since [Frank] Taussig and [Frank] Fetter has produced anything in the nature of a true treatise on economics as a whole," including Joseph Schumpeter, John Maynard Keynes, and F. A. Hayek. *Human Action* is Mises's "closest approach to a general

87 Rothbard, *America's Great Depression*, p. 91.

88 Murray N. Rothbard to George B. DeHuszar, November 14, 1959, p. 1, Rothbard Papers.

89 Kirzner, *The Economic Point of View*; Kirzner, *Market Theory and the Price System*; McVicar, "Aggressive Philanthropy," p. 199; Ludwig von Mises, *Epistemological Problems of Economics* (D. Van Nostrand, 1960); Ludwig von Mises, *The Ultimate Foundations of Economic Science* (D. Van Nostrand, 1962); Rothbard to DeHuszar, November 14, 1959, p. 1; Murray N. Rothbard to George B. DeHuszar, February 7, 1960, p. 1, Rothbard Papers. Joseph Stromberg, introduction to *Man, Economy, and State with Power and Market*, scholar's ed., by Murray N. Rothbard (Mises Institute, 2004), pp. lxiii–lxv.

90 Murray N. Rothbard to Ralph Raico, November 25, 1959, p. 3, Rothbard Papers.

treatise, though it is . . . at some points too generalized to enter effectively the contemporary scene of battle."[91]

Meyer then stated his major editorial suggestion: "Chapters 12 through 19 should be removed and replaced by a single chapter summarizing the economic theories." Meyer thought that on top of the book's length, the later chapters expressed "an uncompromising anarchism" that denied the legitimacy of any government activities whatsoever. This extreme stance "could very well prevent a hearing for his profound and exhaustive economics," especially among conservative audiences.[92] Due to the Volker Fund's "great deal of respect for Frank's editorial sense," the institution informed Rothbard in January 1960 that he needed to cut his treatise in accord with Meyer's recommendations so it could come "out in such a form as to be the greatest possible credit to [his] remarkable talents." Van Nostrand would publish his treatise in "two volumes" with consideration given to a "potential 'third volume.'"[93]

Rothbard, who had learned of Meyer's review the prior November, believed it "obvious that the whole plot is to knife [the third volume] by shelving it, and thus derricking the anarchism."[94] In his response to the Volker Fund, though, he was "highly encouraged that Frank thought as well of the book as he did" and agreed that if "the book must be cut, it is best to proceed as he suggests . . . rather than try to cut each chapter internally." He did, however, strongly protest Meyer's characterization of the chapters on government intervention as "'dogmatic' and 'political.'"[95]

Nonetheless, Rothbard wrote a new chapter 12 summarizing his economic analysis of government intervention. He severely cut down his welfare theory, typology of intervention, and analysis of various government policies. He added nothing new except for a section based on a suggestion of Meyer's, where he discussed new research on the economics of

[91] Frank Meyer, "On Murray Rothbard's Manuscript," n.d., p. 1, Rothbard Papers. Frank A. Fetter, *Economic Principles* (Century, 1915); Frank W. Taussig, *Principles of Economics* (Macmillan, 1911).

[92] Meyer, "On Murray Rothbard's Manuscript," pp. 1–2.

[93] Ivan R. Bierly to Murray N. Rothbard, January 7, 1960, p. 1, Rothbard Papers.

[94] Rothbard to Raico, November 25, 1959, p. 3.

[95] Murray N. Rothbard to Ivan R. Bierly, January 17, 1960, p. 1, Rothbard Papers.

developing countries as well as recent critics of capitalism. Emphasizing the importance of savings and private property, Rothbard cited Lachmann's book on capital, P. T. Bauer's recent research on the subject, and Mises's new book on the appropriate method in history.[96]

While writing the revised chapter 12 in 1960, Rothbard split up *Man, Economy, and State* into two volumes to prepare it for publication by Van Nostrand. Volume 1 contained chapters 1 to 7 and analyzed "the economics of the isolated individual, barter, and indirect exchange." He put chapters 8 to 12 in volume 2, which focused on the "'dynamic' problems of a changing economy, particular types of factors, money and its value, and monopoly and competition" along with "in necessarily more summary fashion, the consequences of violent intervention in the free market."[97] By January 1961, Rothbard had completed revising his manuscript, which now totaled "about 1470 pages of pica type (with footnotes single-spaced)."[98] At long last, Rothbard had finished his project, the result of years of painstaking effort and dedication. He eagerly looked forward to the work's publication.

The Publication of the Treatise

In 1960 and 1961, several momentous events occurred that greatly impacted Rothbard's future as a professional economist. In February 1960, Rothbard sent a flurry of letters inquiring about prospective employment opportunities to several prestigious universities, including Princeton, Columbia, and Yale, and promptly received in return letters indicating that there were no job openings at present.[99] These responses most likely put the final nail in the coffin of Rothbard's goal to communicate his findings to the economics

[96] Rothbard, *Man, Economy, and State*, pp. 962–88. P. T. Bauer, *Economic Analysis and Policy in Underdeveloped Countries* (Duke University Press, 1957); P. T. Bauer, "The Political Economy of Non-Development," in *Foreign Aid Reexamined: A Critical Appraisal*, ed. James W. Wiggins and Helmut Schoeck (Public Affairs Press, 1958), pp. 129–38; P. T. Bauer, *United States Aid and Indian Economic Development* (American Enterprise Association, 1959); Lachmann, *Capital and Its Structure*; Ludwig von Mises, *Theory and History* (Yale University Press, 1957).

[97] Rothbard, *Man, Economy, and State*, p. 500.

[98] Arthur Goddard to Norman Hood, January 13, 1961, p. 1, Rothbard Papers. Ivan R. Bierly to Norman Hood, January 24, 1961, p. 1, Rothbard Papers.

[99] Harold Barger to Murray N. Rothbard, February 24, 1960, p. 1, Rothbard Papers; Lester V. Chandler to Murray N. Rothbard, February 16, 1960, p. 1, Rothbard Papers; Richard Ruggles to Murray N. Rothbard, February 25, 1960, p. 1, Rothbard Papers.

profession. Despite earlier optimism, he realized the academic community would not pay attention to his treatise. At this point, Rothbard began to seriously promote his proposed research institution and exulted when he learned that the Volker Fund was also interested in such an organization.

By the late 1950s, F. A. Harper, a former economist at Cornell University who had worked at FEE before settling down at the Volker Fund, started to seriously inquire about developing a libertarian research center. When the idea picked up steam in 1961, Rothbard wrote a flurry of letters to Harper and provided a range of advice and ideas. With respect to advancing the various branches of knowledge in the "science of liberty" that the institute would promote, he argued that "economics is in least need of further development," an understandable statement given the completion of *Man, Economy, and State*.[100] In fact, Rothbard later wrote to another Volker Fund colleague that "with the books published especially with *Man, Economy, and State*, I believe I have said whatever I had to say about economics, and am now eager to move on."[101]

Rothbard believed the institute's most important task was not to directly communicate with academia but to advance "the 'hard core' of libertarian thought and libertarian thinkers."[102] In particular, Rothbard proposed that the institute publish a "scholarly, interdisciplinary journal" that focused on "economics, history, government, philosophy [and] even science if need be." This would prevent "libertarian scholars" at various colleges from being "completely isolated amidst largely hostile, or, at best, indifferent colleagues and publics." Instead, they could "meet, exchange ideas, cross-fertilize, publish their views, and, in general, exercise a 'multiplier' or leverage effect, on the advancement of libertarian ideas." The institute would focus on research and not the "too grandiose, too impractical" goal of becoming a "graduate school granting degrees." His institute "would be simpler, cheaper, and far more suitable and effective." "So enthusiastic" was Rothbard about this undertaking that he offered to work "full time" to bring

---

[100] Rothbard to Harper, January 3, 1961, pp. 1, 5.

[101] Murray N. Rothbard to Kenneth S. Templeton, November 19, 1962, p. 1, Rothbard Papers. Doherty, *Radicals for Capitalism*, pp. 168–69, 287.

[102] Murray N. Rothbard to F. A. Harper and George Resch, "What Is to Be Done?," July 1961, p. 2, Rothbard Papers.

it to fruition. Clearly, Rothbard pinned his hopes for future employment on the proposed institute, which would promote his treatise and provide him with the time and resources to engage in further research.[103]

Rothbard was thrilled to learn that Harper's proposal greatly interested Harold Luhnow and the Volker Fund. In fact, by late 1961 the Volker Fund decided to transfer $17 million to endow Harper's new organization, the Institute for Humane Studies (IHS), and Luhnow organized an inaugural meeting in February 1962.[104] The good news kept coming in. First, the Volker Fund approved a two-year research grant for Rothbard to write about the political philosophy of liberty and initiated the process for him to receive a similar grant for an American history project.[105] Second, the Volker Fund paid for the printing costs necessary for Columbia University to publish Rothbard's long-dormant dissertation on the Panic of 1819.[106] Third, the Volker Fund agreed to publish Rothbard's book on the Great Depression, which it considered "an enormously important one."[107] This rounded out Rothbard's publications, save for his pamphlet on money, which, thanks to a small libertarian publishing house, would also see the light of day.[108] Fourth, and most important, the Volker Fund prepared to engage in "rather extensive promotional plans" for *Man, Economy, and State*. It anticipated

[103] Murray N. Rothbard to F. A. Harper, July 16, 1961, pp. 1–4; F. A. Harper Papers, Hoover Institution.

[104] Doherty, *Radicals for Capitalism*, pp. 291–92, 671; Murray N. Rothbard, "A Conversation with Murray N. Rothbard," in *The Rothbard Reader*, ed. Joseph T. Salerno and Matthew McCaffrey (Mises Institute, 2016), p. 33.

[105] Murray N. Rothbard to Ivan R. Bierly, August 21, 1961, pp. 1–2, Rothbard Papers; Ivan R. Bierly to Murray N. Rothbard, August 31, 1961, p. 1, Rothbard Papers; Murray N. Rothbard to Kenneth S. Templeton, August 13, 1961, p. 1, Rothbard Papers.

[106] Murray N. Rothbard to Ivan R. Bierly, November 14, 1959, p. 1, Rothbard Papers; Rothbard to Raico, November 25, 1959, p. 4; Murray N. Rothbard, *The Panic of 1819: Reactions and Policies* (Columbia University Press, 1962).

[107] Ivan R. Bierly to Murray N. Rothbard, October 31, 1961, p. 1, Rothbard Papers. Murray N. Rothbard, *America's Great Depression* (D. Van Nostrand, 1963).

[108] Murray N. Rothbard, *What Has Government Done to Our Money?* (Pine Tree Press, 1963). F. A. Harper to James L. Doenges, October 21, 1963, p. 1, F. A. Harper Papers, Hoover Institution; Patrick Newman, foreword to *What Has Government Done to Our Money?*, 6th ed., by Murray N. Rothbard (Mises Institute, 2024), pp. 9–13.

that "a good many thoughtful people are going to get to know Murray Rothbard's ideas rapidly and fully in the near future."[109]

Therefore, by February 1962, Rothbard—who was only thirty-six years old—must have felt an enormous sense of accomplishment. *Man, Economy, and State* would arrive on the shelves later in the year. In addition, the Volker Fund clearly valued his research and encouraged Rothbard to develop his systematic science of liberty. On top of that, the Volker Fund planned to provide millions to establish the Institute for Humane Studies. This organization would promote and disseminate *Man, Economy, and State*, and there was a very strong chance that it would employ Rothbard as a full-time researcher. In a little over ten years, Rothbard had come a long way from the Columbia graduate student whom Mises had requested to write a textbook-style version of *Human Action*. Now, Rothbard's treatise was nearing release, and the creation of an institute designed to advance his own writings and those of other free-market authors seemed imminent. The future of Austrian economics and libertarianism looked very bright indeed.

But then it all came crashing down. At the end of 1961, the Volker Fund sent Rothbard a book to review by the Christian fundamentalist R. J. Rushdoony, whom Luhnow "was a follower of." After Rothbard "blasted" the work in a scathing review, Luhnow quickly became convinced "he was surrounded by an atheist, anarchist, pacifist conspiracy to destroy Christianity."[110] He started to vacillate in his support of IHS, arguing that all necessary knowledge had been accumulated and more emphasis needed to be placed on influencing college campuses and political elections. In March, less than two months after the inaugural meeting of IHS, Luhnow suddenly terminated the Volker Fund. The consequences were seismic: IHS would get no seed money and the William Volker Fund book series would soon be discontinued, which severely curtailed the impact of Rothbard's publications. Not even Mises was safe—the Volker Fund stopped covering his salary at NYU in 1964. Luhnow's abrupt decision devastated Rothbard, who considered it "an outburst of nihilism and irrationality," which was

[109] Bierly to Rothbard, October 31, 1961, p. 1. Murray N. Rothbard, *Man, Economy, and State: A Treatise on Economic Principles*, 2 vols. (D. Van Nostrand, 1962).
[110] Rothbard, "A Conversation with Murray N. Rothbard," pp. 32–33.

"symbolic of" the growing split between libertarianism and conservatism on foreign policy matters. He now only had his research grants and his job reviewing books for the Volker Fund to live on. His long-cherished goal to work full time developing the science of liberty had suffered an enormous setback.[111]

Given the sudden change of events and the lack of extensive Volker Fund promotion, Man, Economy, and State languished upon its release. Van Nostrand reportedly "fouled everything up royally" when it sent the book to reviewers, "sending Volume I out in advance, and then forgetting to send Volume II."[112] The limited reviews in professional journals were negative and failed to seriously grapple with Rothbard's theoretical arguments. They considered the praxeological method and its welfare conclusions concerning the free-market dogmatic. For example, while Lewis E. Hill in the *Southern Economic Journal* thought the volumes were "refreshing in their originality, . . . challenging in the boldness of their approach, [and] . . . probably the most accurate and detailed praxeological analysis of the economy which has yet been written," he could not recommend it because Rothbard did not empirically test his assumptions and failed to consider the power of corporate monopoly.[113] D. N. Winch, reviewing for the *Economic Journal*, called the work "nostalgic and tendentious" and closer to "systematic theology than economics."[114] Looking back on the publication, Rothbard lamented how only a few individuals "were even interested, except the Mises-seminar people and FEE people. . . . Most were non-economists or friends and admirers of Mises." It was a dismal reception for such an important work.[115]

While it is true that *Man, Economy, and State* only interested Austrians and fellow travelers, their opinion of it was highly enthusiastic. Fritz Machlup

---

[111] Murray N. Rothbard to F. A. Harper, March 22, 1962, p. 1, Rothbard Papers; Doherty, *Radicals for Capitalism*, pp. 293–94, 671; Murray N. Rothbard, *Betrayal of the American Right*, pp. 178–79; Murray N. Rothbard to George Resch, November 16, 1961, pp. 1–5, Rothbard Papers.

[112] Murray N. Rothbard to Frank S. Meyer, June 13, 1962, p. 1, Frank S. Meyer Papers; private collection in the possession of Daniel J. Flynn.

[113] Lewis E. Hill, review of *Man, Economy, and State: A Treatise on Economic Principles*, by Murray N. Rothbard, *Southern Economic Journal* 29, no. 3 (1963): 253.

[114] D. N. Winch, review of *Man, Economy, and State: A Treatise on Economic Principles*, by Murray N. Rothbard, *Economic Journal* 74, no. 294 (1964): 480–82.

[115] Rothbard, "A Conversation with Murray N. Rothbard," p. 30.

wrote to Rothbard that he was "delighted to have" the book.[116] Despite disagreeing with Rothbard's legal and political analysis, Henry Hazlitt recognized *Man, Economy, and State* as "the most important general treatise on economic principles since Ludwig von Mises' *Human Action* in 1949."[117] A memo from the fledgling Institute for Humane Studies, most likely written by Harper in the mid-1960s, considered it "a monumental work that seems to be assured of becoming a classic in the literature of human liberty, economics, and political science." The IHS memo continued its lavish praise of the treatise: "many of the best minds have asserted that it surpasses the 'masters' like the works of Ludwig von Mises, F.A. von Hayek, Wilhelm Roepke, and others of fame." Harper and IHS clearly thought very highly of Rothbard's talents.[118]

Indeed, these free-market commentators, not the mainstream economists writing in professional journals, were right on the mark: *Man, Economy, and State* is a classic that follows in the footsteps of *Human Action*. Rothbard refined many of Mises's insights and made his own important contributions to the praxeological tradition. This is best seen in Mises's own review of the treatise, which recognized Rothbard's enormous achievement.

The Mises–Rothbard Paradigm

Despite the unforeseen setbacks during the publication of *Man, Economy, and State*, Rothbard still scored a victory when Ludwig von Mises reviewed his treatise. He had kept Mises informed during the final phase of his treatise's completion. When Rothbard thought he had finished the book before learning of Frank Meyer's editorial remarks, he wrote to Mises in May 1959: "At last, after more than several years, I have finally finished the General Principles book." Mises's disciple stressed that he could "never adequately thank [him] for the inspiration, both scientific and personal,"

[116] Fritz Machlup to Murray N. Rothbard, June 24, 1962, p. 1, Rothbard Papers.
[117] Henry Hazlitt, "The Economics of Freedom," *National Review*, September 25, 1962, p. 232.
[118] Institute for Humane Studies, "Nomination: *Man, Economy, and State*," n.d., p. 1, Rothbard Papers.

that he received from him.[119] In a fitting tribute, Rothbard dedicated the book to his mentor.[120]

Now, in the early 1960s, Rothbard must have felt great trepidation after he learned that Mises had received his book and was writing a review for the *New Individualist Review*, a conservative-libertarian periodical published by students at the University of Chicago.[121] After all, Mises was dismissive of most economists' contributions, writing in *Human Action* that "there never lived at the same time more than a score of men whose work contributed anything essential to economics."[122] Mises could have viewed *Man, Economy, and State* as one of the many works that failed to add anything important to the discipline. Rothbard need not have worried: Mises extravagantly praised the work and considered it a major leap forward in economic theory.

Mises started his review with a scathing indictment of the economics profession he considered beyond redemption. "In the writings and teaching of those who nowadays call themselves economists," there is "no longer any comprehension of the operation of the economic system as such," because these writers fail to understand "the interdependence and mutuality of the various individuals' and groups' activities." Instead, the current orthodoxy analyzes "the different economic spheres" as "isolated domains," thereby fragmenting the science into separate fields, "such as [the] economics of labor, of agriculture, of insurance, of foreign trade, of domestic trade, and so on." Moreover, many of these so-called economists seek refuge in the compilation of "a vast array of statistical and other historical data" without any theoretical understanding of the underlying causal relationships. Overall, recent economics writings provide "a pitiful story of progressing deterioration and degradation," and the good contributions that are published get "smeared as old-fashioned and reactionary by the government

119 Murray N. Rothbard to Ludwig von Mises, May 5, 1959, p. 1, Rothbard Papers.

120 Rothbard, *Man, Economy, and State*, p. iii.

121 Rothbard, *Betrayal of the American Right*, pp. 176–78.

122 Ludwig von Mises, *Human Action: A Treatise on Economics*, scholar's ed. (Mises Institute, 2008), p. 869.

economists, boycotted by the universities, the academic magazines, and the newspapers."[123]

This was the intellectual environment Rothbard was immersed in when he started his graduate studies at Columbia. Rothbard showed enormous promise at one of the top universities in the country, but his studies failed to furnish him with a systematic understanding of all economic activity. He recognized weaknesses in the prevailing institutionalist and Keynesian approaches but had not yet grasped the deficiencies in the positivist and Marshallian framework he had absorbed. This, of course, rapidly changed when he met Mises and experienced a veritable epiphany by reading *Human Action*, the inspiration for his own decade-long journey in advancing the praxeological tradition. At first, Rothbard thought he could directly and persuasively communicate his new insights and breakthroughs to the economics profession before realizing, much like his mentor, that he could not change the prevailing disposition of economists.

While the result of Rothbard's sedulous efforts—*Man, Economy, and State*—did not impact the profession, it definitely impressed his mentor. "Dr. Rothbard," Mises wrote, "already well known as the author of several excellent monographs . . . joins the ranks of the eminent economists by publishing . . . a voluminous work, a systematic treatise on economics." Mises recognized that his protégé's original contributions grew out of his deep engagement with the history of economic thought, writing that "in every chapter of his treatise," Rothbard, "adopting the best of the teachings of his predecessors, and adding to them highly important observations . . . develops the correct theory." For example, Mises praised Rothbard's Böhm-Bawerkian general interdependence approach to production theory, particularly the careful use of "equilibrium and the evenly rotating economy" and applications involving the "discounted marginal value product" of factors. Mises also approved Rothbard's demolition of the core of mathematical economics "in a few brilliant lines" and his identification of Keynesian economics' "missing link . . . the wage rate."[124]

---

[123] Ludwig von Mises, "A New Treatise on Economics," *New Individualist Review* 2, no. 3 (1962): 39–40.

[124] Mises, "A New Treatise on Economics," pp. 40–41.

Despite disagreeing with Rothbard on "the philosophy of law and some problems of the penal code," Mises recognized Rothbard's prodigious talents and the enormous contribution he had made to economic science. He considered *Man, Economy, and State* "an epochal contribution to the general science of human action" and insisted that all future economists would "have to take full account of the theories and criticisms expounded by Dr. Rothbard." Clearly, Mises's review demonstrates his enormous admiration for Rothbard as an economist and that *Man, Economy, and State* represented an important elaboration of the economic theory expounded in *Human Action*.[125] Indeed, after all these years, Rothbard had finally written the "great book" Mises had encouraged him to write in 1950.[126] Upon receiving the latest copy of the *New Individualist Review*, Rothbard thanked his mentor for his "very fine review" and hoped it would "spread the knowledge and influence of the book in intellectual circles."[127]

That he considered Rothbard's work in economic theory as an updating and advancement of his own work, Mises left no doubt in private correspondence to learned laypeople and academics as well as in classroom comments. In a letter late in 1962 to the noted philosopher Louis Rougier, Mises referred him to "the systematic exposition of the whole doctrine of praxeology in my book *Human Action* and nowadays in the brilliant book of a younger man, Murray N. Rothbard, *Man, State and Economy* [*sic*]." After recommending to Rougier a new edition of his book on the methodology of economics, *Epistemological Problems of Economics*, Mises closed the letter with an entreaty to Rougier: "But, please, first of all read the book of Rothbard. It is very interesting also from the epistemological point of view."[128] Two months later, in 1963, a businessman wrote to Mises asking if he knew of "a college economics textbook on the market today that could be regarded as advancing your ideas on the subject?"[129] Mises

[125] Mises, "A New Treatise on Economics," p. 41.

[126] Ludwig von Mises to Murray N. Rothbard, May 29, 1950, p. 1, Rothbard Papers.

[127] Murray N. Rothbard to Ludwig von Mises, December 12, 1962, p. 1, Rothbard Papers.

[128] Ludwig von Mises to Louis Rougier, December 6, 1962, p. 3, Rothbard Papers. Mises, *Epistemological Problems of Economics*.

[129] Warren B. Jones to Ludwig von Mises, February 24, 1963, p. 1, Ludwig von Mises Collection, Grove City College.

responded: While he was unable to "name an American textbook that could be considered as fully satisfactory," Rothbard's *Man, Economy, and State* "is a systematic analysis of the whole economic process. I think you will be interested in reading this excellent treatise."[130]

In his own New York University seminar from November 1962 to May 1963, Mises periodically commented on Rothbard's work. Notes from Bettina Bien Greaves reveal that though Mises quibbled with Rothbard's "terminology," he thought that Alfred Marshall's long run was "very well criticized" by Rothbard.[131] Marshall was "well criticized by Murray re[garding] long run and short run, the equilibrium. For Marshall, short run of no significance. A good chapter of Murray Rothbard."[132] Mises did disagree with Rothbard's discussion of monopolies and monopoly pricing: "Rothbard says it is always the government that makes monopoly price. I say there could be some monopoly prices and monopoly gain without the government—although it is a very small part of the market."[133]

In private remarks, Mises praised Rothbard's analysis of monopoly price and insisted that there was little difference between their views. Thus, as reported by his wife, Margit, Mises responded to a question about his differences with Rothbard on monopoly theory by stating, "I would subscribe to every word Rothbard has written in his study."[134] In a second account of the incident, Margit reported Mises as having replied, "Whatever Rothbard has written in this work is of the greatest importance."[135] In response to a letter written by David Gordon, Mises wrote, "the difference between mine and Mr. Rothbard's treatment of the monopoly price problem is of minor

[130] Ludwig von Mises to Warren B. Jones, March 7, 1963, p. 1, Ludwig von Mises Collection, Grove City College.

[131] Bettina Bien Greaves, "Notes," November 29, 1962, p. 6, Bettina Bien Greaves Papers, Mises Institute.

[132] Greaves, "Notes," November 29, 1962, p. 2.

[133] Bettina Bien Greaves, "Notes," May 9, 1963, p. 1, Bettina Bien Greaves Papers, Mises Institute.

[134] Margit von Mises, *My Years with Ludwig von Mises* (Arlington House Publishers, 1976), p. 158.

[135] Margit von Mises, "Testimonial," in *Man, Economy, and Liberty: Essays in Honor of Murray N. Rothbard*, ed. Walter Block and Llewellyn H. Rockwell Jr. (Mises Institute, 1988), p. 401. Jesús Huerta de Soto, "The Spanish Roots of the Austrian School: An Interview with Jesús Huerta de Soto," *Austrian Economics Newsletter*, Summer 1997, p. 1.

importance" because in practice all present-day monopoly prices "owe their existence to the absence of market-freedom," though Mises still believed that theoretically it was possible for a monopoly price to arise on the free market.[136] These remarks show that Mises valued Rothbard's analysis, though he still did not completely accept Rothbard's point that there was no way to conceptually distinguish between competitive and monopoly prices on the free market.

Furthermore, in an article titled "On the International Monetary Problem" Mises referred to *Man, Economy, and State* for "a brilliant critique of the balance of payments theory of foreign exchange."[137] Most importantly, Mises updated *Human Action* in 1963 to highlight Rothbard's contributions, the highest praise one could earn from a fellow economist. According to seminar participant Hans Sennholz, "everyone knew that this addition [*sic*] aimed at Murray Rothbard," particularly his "anarchism."[138] Greaves agreed, writing that "the principal changes in the second (1963) and later editions of *Human Action*—those respecting monopoly and corruption in government—were introduced primarily because of differences Mises had with Murray."[139] But Mises did not confine his revisions to merely defending his views on the necessity of government. As stated earlier, he incorporated Rothbard's analysis on indifference into his value theory, and, while not directly citing *Man, Economy, and State*, he did include a reference to *America's Great Depression* in a footnote in his chapter on business cycles.[140] Fittingly, when Rothbard asked Mises to sign his copy of the third edition

[136] Ludwig von Mises to David Gordon, June 22, 1966, p. 1, Ludwig von Mises Collection, Grove City College.

[137] Ludwig von Mises, "On the International Monetary Problem," *American Opinion* 10, no. 2 (1967): 23.

[138] Hans F. Sennholz to Lew Rockwell, February 2, 1998, p. 1, Sennholz Papers, Mises Institute.

[139] Bettina Bien Greaves to Llewellyn H. Rockwell, April 23, 1998, p. 2, Bettina Bien Greaves Papers, Mises Institute. Bettina Bien Greaves to Llewellyn H. Rockwell, August 28, 2000, p. 1, Bettina Bien Greaves Papers, Mises Institute.

[140] Ludwig von Mises, *Human Action: A Treatise on Economics*, 2nd ed. (Yale University Press, 1963), pp. 279–89, 354, 561.

of *Human Action*, Mises inscribed it, "To Murray N. Rothbard, pioneer of praxeological analysis."[141]

Man, Economy, and State is a groundbreaking work, standing alongside *Human Action* as one of the two most significant books in the Austrian tradition. At every step of the way, Rothbard clarified, refined, and improved his mentor's edifice. Using the work of Böhm-Bawerk, Hayek, and others, Rothbard filled in various gaps in Mises's theories and expounded new economic truths that strengthened the Austrian paradigm. In this sense, he is the most important successor to Mises.

Man, Economy, and State's advances in economic theory beyond *Human Action* are numerous and significant. First, Rothbard used the praxeological method to flesh out Mises's utility and price theory, explaining each step-by-step deduction. He elaborated on Mises's ordinalist conception of marginal and total utility, explaining how individuals' marginal utility rankings on their value scales lead to downward-sloping demand curves. Furthermore, he described how prices form in real world markets of uncertainty and speculative adjustment by entrepreneurs. Rothbard then constructed a new production theory that synthesized the disparate strands of interest and capital theory in Böhm-Bawerk and his followers' analysis. Rothbard's Austrian general equilibrium approach showed the economic interrelations in the production structure and the overriding importance of the capitalist-entrepreneur for allocating scarce resources and pricing consumer and producer goods. He also made crucial innovations in the areas of monopoly and competition by revising Mises's theory and building upon Hayek and other thinkers.

Finally, Rothbard deduced a systematic theory of intervention that explained the full consequences of government policies on pricing and production. Notably, he outlined the workings of a purely free-market economy with private defense agencies and no government whatsoever. In addition to innovative welfare theories and analyses of the effects of taxation and government spending on the structure of production, Rothbard refined

[141] Joseph T. Salerno, "Murray Rothbard: Pioneer of Praxeological Analysis," LewRockwell.com, July 12, 2019, https://www.lewrockwell.com/2019/07/joseph-salerno/murray-rothbard-pioneer-of-praxeological-analysis/.

the Mises–Hayek theory of the business cycle. In each chapter, Rothbard referenced contemporary works, highlighting contributions to economic science or showing how it contributed to the retrogression of the discipline. Rothbard's "systematic exposition of the whole doctrine of praxeology," to use Mises's words, is a magnificent accomplishment that stands in stark contrast with the neoclassical synthesis.[142]

Rothbard went on to write many other books on subjects concerning economics and other aspects of political economy. But *Man, Economy, and State* is undoubtedly the pinnacle of his career. This magnum opus cements Rothbard's legacy as an indispensable contributor to Austrian economics and the most important heir of Mises.

[142] Mises to Rougier, December 6, 1962, p. 3.

BIBLIOGRAPHY

Primary Sources

Arthur F. Burns Papers. David M. Rubenstein Rare Book and Manuscript Library. Duke University. Durham, NC.

Bettina Bien Greaves Papers. Mises Institute. Auburn, AL.

F. A. Harper Papers. Hoover Institution Library and Archives. Stanford, CA.

Frank S. Meyer Papers. Private collection in the possession of Daniel J. Flynn.

Hans F. Sennholz Papers. Mises Institute. Auburn, AL.

Ludwig von Mises Collection. Grove City College. Grove City, PA.

Murray N. Rothbard Papers. Mises Institute. Auburn, AL.

Secondary Sources

Abbott, Lawrence. *Quality and Competition: An Essay in Economic Theory.* Columbia University Press, 1955.

Alchian, Armen A. “Costs and Outputs.” In *The Allocation of Economic Resources: Essays in Honor of Bernard Francis Haley*, by Moses Abramovitz, Armen Alchian, Kenneth J. Arrow, Paul A. Baran, Philip W. Cartwright, Hollis B. Chenery, George W. Hilton, H. S. Houthakker, Charles E. Lindblom, Melvin W. Reder, Tibor Scitovsky, E. S. Shaw, and Lorie Tarshis. Stanford University Press, 1959.

Alchian, Armen A. “Private Property and the Relative Cost of Tenure.” In Bradley, ed., *The Public Stake in Union Power.*

Alchian, Armen A., and Reuben A. Kessel. “Competition, Monopoly, and the Pursuit of Pecuniary Gain.” In *Aspects of Labor Economics*, edited by the National Bureau of Economic Research. Princeton University Press, 1962.

Alchian, Armen A., and Reuben A. Kessel. “Real Wages in the North During the Civil War: Mitchell’s Data Reinterpreted.” *Journal of Law and Economics* 2, no. 1 (1959): 95–113.

Allen, Clark Lee, James M. Buchanan, and Marshall R. Colberg. *Prices, Income, and Public Policy.* 2nd ed. McGraw-Hill, 1959.

Ayres, C. E. Review of *Market Theory and the Price System*, by Israel M. Kirzner. *American Economic Review* 53, no. 4 (1963): 755–56.

Bauer, P. T. *Economic Analysis and Policy in Underdeveloped Countries*. Duke University Press, 1957.

Bauer, P. T. "The Political Economy of Non-Development." In *Foreign Aid Reexamined: A Critical Appraisal*, edited by James W. Wiggins and Helmut Schoeck. Public Affairs Press, 1958.

Bauer, P. T. *United States Aid and Indian Economic Development*. American Enterprise Association, 1959.

Baumol, William J. "Economic Theory and the Political Scientist." Review of *Politics, Economics, and Welfare*, by Robert A. Dahl and Charles E. Lindblom. *World Politics* 6, no. 2 (1954): 266–77.

Baumol, William J. *Welfare Economics and the Theory of the State*. Harvard University Press, 1952.

Baxter, W. T. "The Accountant's Contribution to the Trade Cycle." *Economica* 22, no. 86 (1955): 99–114.

Bergson, Abram. "Socialist Economics." In vol. 1 of *A Survey of Contemporary Economics*, edited by H. S. Ellis. Richard D. Irwin, 1948.

Bernardelli, Harro F. "The End of the Marginal Utility Theory?" *Economica* 5, no. 18 (1938): 192–212.

Bernardelli, Harro F. "A Rehabilitation of the Classical Theory of Marginal Utility." *Economica* 19, no. 75 (1952): 254–68.

Bernardelli, Harro F. "A Reply to Mr. Samuelson's Note." *Economica* 6, no. 21 (1939): 88–89.

Bilo, Simon. "Mises and His Money." *Review of Austrian Economics* 33, no. 1 (2020): 121–37.

Boettke, Peter J., and Christopher J. Coyne. "The Forgotten Contribution: Murray Rothbard on Socialism in Theory and in Practice." *Quarterly Journal of Austrian Economics* 7, no. 2 (2004): 71–89.

Böhm-Bawerk, Eugen von. *Capital and Interest: A Critical History of Economical Theory*. London, 1890.

Böhm-Bawerk, Eugen von. *Kapital und Kapitalzins* [Capital and interest]. 4th ed. Gustav Fischer, 1921.

Böhm-Bawerk, Eugen von. *The Positive Theory of Capital*. Translated by William Smart. London, 1891.

Boulding, Kenneth E. *Economic Analysis*. Harper & Bros., 1941.

Bowley, Marian. *Nassau Senior and Classical Economics*. George Allen & Unwin, 1937.

Bowman, Mary Jean, and George Leland Bach. *Economic Analysis and Public Policy*. 2nd ed. Prentice-Hall, 1949.

Bradley, Philip D., ed. *The Public Stake in Union Power*. University of Virginia Press, 1959.

Brown, Harry Gunnison. "The Incidence of a General Output or a General Sales Tax." *Journal of Political Economy* 47, no. 2 (1939): 254–62.

Burns, Arthur F. *Prosperity Without Inflation*. Fordham University Press, 1957.

Burns, Arthur F., and Wesley Clair Mitchell. *Measuring Business Cycles*. National Bureau of Economic Research, 1946.

Chamberlin, Edward H. "Product Heterogeneity and Public Policy." *American Economic Review* 40, no. 2 (1950): 85–92.

Chamberlin, Edward H. *The Theory of Monopolistic Competition: A Re-Orientation of the Theory of Value*. Harvard University Press, 1933.

Chodorov, Frank. *Taxation Is Robbery*. Human Events Associates, 1947.

Coase, R. H. "The Nature of the Firm." *Economica* 4, no. 16 (1937): 386–405.

Conkin, Paul K. *Prophets of Prosperity: America's First Political Economists*. Indiana University Press, 1980.

De Viti De Marco, Antonio. *First Principles of Public Finance*. Jonathan Cape, 1936.

Doherty, Brian. *Radicals for Capitalism: A Freewheeling History of the Modern American Libertarian Movement*. PublicAffairs, 2007.

Dorfman, Joseph. "The Department of Economics." In *A History of the Faculty of Political Science, Columbia University*, by R. Gordon Hoxie, Sally Falk Moore, Joseph Dorfman, et al. Columbia University Press, 1955.

Dorfman, Joseph. *The Economic Mind in American Civilization*. 5 vols. Viking Press, 1946–59.

Dorfman, Robert. "A Graphical Exposition of Böhm-Bawerk's Interest Theory." *Review of Economic Studies* 26, no. 2 (1959): 153–58.

Dorfman, Robert. "Waiting and the Period of Production." *Quarterly Journal of Economics* 73, no. 3 (1959): 351–72.

Ebenstein, Lanny. "Hayek's Divorce and Move to Chicago." *Econ Journal Watch* 15, no. 3 (2018): 301–21.

Ekelund, Robert B., Jr., and Robert F. Hébert. *A History of Economic Theory and Method*. 6th ed. Waveland Press, 2014.

Fetter, Frank A. "Capitalization Versus Productivity: Rejoinder." *American Economic Review* 4, no. 4 (1914): 856–59.

Fetter, Frank A. "Davenport's Competitive Economics." *Journal of Political Economy* 22, no. 6 (1914): 550–65.

Fetter, Frank A. *Economic Principles*. Century, 1915.

Fetter, Frank A. “Interest Theories Old and New.” *American Economic Review* 4, no. 1 (1914): 68–92.

Fetter, Frank A. “The ‘Roundabout Process’ in the Interest Theory.” *Quarterly Journal of Economics* 17, no. 1 (1902): 163–80.

Fisher, Irving. “The Business Cycle Largely a ‘Dance of the Dollar.’” *Journal of the American Statistical Association* 18, no. 144 (1923): 1024–28.

Fisher, Irving. *The Purchasing Power of Money: Its Determination and Relation to Credit Interest and Crises*. Macmillan, 1911.

Fisher, Irving. *The Theory of Interest: As Determined by Impatience to Spend Income and Opportunity to Invest It*. Macmillan, 1930.

Friedman, Milton. *Essays in Positive Economics*. University of Chicago Press, 1953.

Friedman, Milton. “The Methodology of Positive Economics.” In Friedman, *Essays in Positive Economics*.

Friedman, Milton. “Price, Income, and Monetary Changes in Three Wartime Periods.” *American Economic Review* 42, no. 2 (1952): 612–25.

Friedman, Milton. *A Program for Monetary Stability*. Fordham University Press, 1959.

Friedman, Milton. “The Quantity Theory of Money.” In Friedman, ed., *Studies in the Quantity Theory of Money*.

Friedman, Milton, ed. *Studies in the Quantity Theory of Money*. University of Chicago Press, 1956.

Friedman, Milton. *A Theory of the Consumption Function*. Princeton University Press, 1957.

Friedman, Milton, and Rose Friedman. *Two Lucky People: Memoirs*. University of Chicago Press, 1998.

Friedman, Milton, and Anna Schwartz. *A Monetary History of the United States, 1867–1960*. Princeton University Press, 1963.

Friedman, Milton, and George J. Stigler. *Roofs or Ceilings? The Current Housing Problem*. Foundation for Economic Education, 1946.

Froman, Lewis A. “Graduate Students in Economics, 1904–1940.” *American Economic Review* 32, no. 4 (1942): 817–26.

Gabor, André, and I. F. Pearce. “The Place of Money Capital in the Theory of Production.” *Quarterly Journal of Economics* 72, no. 4 (1958): 537–57.

Gilbert, Milton, George Jaszi, Edward F. Denison, and Charles F. Schwartz. “Objective of National Income Measurement: A Reply to Professor Kuznets.” *Review of Economics and Statistics* 30, no. 3 (1948): 151–95.

Gordon, David. *The Essential Rothbard*. Mises Institute, 2007.

Gordon, David. Introduction to Gordon, ed., *Strictly Confidential*.

Gordon, David, ed. *Strictly Confidential: The Private Volker Fund Memos of Murray N. Rothbard*. Mises Institute, 2010.

Haberler, Gottfried. "Money and the Business Cycle." In *Gold and Monetary Stabilization*, edited by Quincy Wright. University of Chicago Press, 1932.

Haberler, Gottfried. *Prosperity and Depression: A Theoretical Analysis of Cyclical Movements*. 3rd ed. United Nations, 1941.

Hammond, J. Daniel. "Early Drafts of Friedman's Methodology Essay." In *The Methodology of Positive Economics: Reflections on the Milton Friedman Legacy*, edited by Uskali Mäki. Cambridge University Press, 2009.

Hammond, J. Daniel, and Claire H. Hammond, eds., *Making Chicago Price Theory: Friedman–Stigler Correspondence 1945–1957*. Routledge, 2006.

Hansen, Alvin H. *Fiscal Policy and Business Cycles*. George Allen & Unwin, 1941.

Hayek, F. A., ed. *Collectivist Economic Planning*. George Routledge & Sons, 1935.

Hayek, F. A. *Hayek on Hayek: An Autobiographical Dialogue*. Edited by Stephen Kresge and Leif Wenar. University of Chicago Press, 1994.

Hayek, F. A. "The Meaning of Competition." In *Individualism and Economic Order*. University of Chicago Press, 1948.

Hayek, F. A. *Monetary Theory and the Trade Cycle*. Harcourt, Brace, 1933.

Hayek, F. A. "The 'Paradox' of Saving." *Economica*, no. 32 (1931): 125–69.

Hayek, F. A. *Prices and Production*. 1st ed. Routledge, 1931.

Hayek, F. A. *Prices and Production*. 2nd ed. Routledge & Kegan Paul, 1935.

Hayek, F. A. *Profits, Interest, and Investment*. Routledge & Kegan Paul, 1939.

Hayek, F. A. *The Pure Theory of Capital*. University of Chicago Press, 1941.

Hayek, F. A. Review of *Nationalökonomie: Theorie des Handelns und Wirtschaftens*, by Ludwig von Mises. *Economic Journal* 51, no. 201 (1941): 124–27.

Hayek, F. A. "Unions, Inflation, and Profits." In Bradley, ed., *The Public Stake in Union Power*.

Hazlitt, Henry, ed. *The Critics of Keynesian Economics*. D. Van Nostrand, 1960.

Hazlitt, Henry. *The Failure of the "New Economics."* Princeton University Press, 1959.

Herbener, Jeffrey M., Hans-Hermann Hoppe, and Joseph T. Salerno. Introduction to the scholar's edition. In Mises, *Human Action*, scholar's ed.

Hicks, John R. "The Foundations of Welfare Economics." *Economic Journal* 49, no. 196 (1939): 696–712.

Hicks, John R. *A Revision of Demand Theory*. Clarendon Press, 1956.

Hicks, John R. *Value and Capital: An Inquiry into Some Fundamental Principles of Economic Theory*. 2nd ed. Oxford University Press, 1946.

Hicks, John R., and R. G. D. Allen. "A Reconsideration of the Theory of Value, Part 1." *Economica* 1, no. 1 (1934): 52–76.

Hicks, John R., and R. G. D. Allen. "A Reconsideration of the Theory of Value, Part 2." *Economica* 1, no. 2 (1934): 196–219.

Hill, Lewis E. Review of *Man, Economy, and State: A Treatise on Economic Principles*, by Murray N. Rothbard. *Southern Economic Journal* 29, no. 3 (1963): 252–54.

Hoff, Trygve J. B. *Economic Calculation in the Socialist Society.* William Hodge, 1949.

Hülsmann, Jörg Guido. *Mises: The Last Knight of Liberalism*. Mises Institute, 2007.

Hutchison, T. W. "Professor Machlup on Verification in Economics." *Southern Economic Journal* 22, no. 4 (1956): 476–83.

Hutt, William H. "The Concept of Consumers' Sovereignty." *Economic Journal* 50, no. 197 (1940): 66–77.

Ischbolden, Boris. "A Critique of Econometrics." *Review of Social Economy* 18, no. 2 (1960): 110–27.

Jevons, William Stanley. *Money and the Mechanism of Exchange*. 16th ed. Kegan Paul, Trench, Trübner, 1907.

Jevons, William Stanley. *The Theory of Political Economy*. London, 1871.

Kaldor, Nicholas. "Welfare Propositions of Economics and Interpersonal Comparisons of Utility." *Economic Journal* 49, no. 5 (1939): 549–52.

Kauder, Emil. "Genesis of the Marginal Utility Theory: From Aristotle to the End of the Eighteenth Century." *Economic Journal* 63, no. 251 (1953): 638–50.

Kauder, Emil. *A History of Marginal Utility Theory.* Princeton University Press, 1965.

Kauder, Emil. "The Retarded Acceptance of the Marginal Utility Theory." *Quarterly Journal of Economics* 67, no. 4 (1953): 564–75.

Kessel, Reuben A. "Price Discrimination in Medicine." *Journal of Law and Economics* 1, no. 1 (1958): 20–53.

Keynes, John Maynard. *The General Theory of Employment, Interest, and Money.* Cambridge University Press, 1936.

Kirzner, Israel M. *The Economic Point of View*. D. Van Nostrand, 1960.

Kirzner, Israel M. *An Essay on Capital*. Augustus M. Kelley, 1966.

Kirzner, Israel M. *Market Theory and the Price System*. D. Van Nostrand, 1963.

Kirzner, Israel M. "Reflections on the Misesian Legacy in Economics." *Review of Austrian Economics* 9, no. 2 (1996): 143–54.

Knight, Frank H. "The Business Cycle, Interest, and Money: A Methodological Approach." *Review of Economics and Statistics* 23, no. 2 (1941): 53–67.

Knight, Frank H. "Professor Hayek and the Theory of Investment." *Economic Journal* 45, no. 177 (1935): 77–94.

Knight, Frank H. "'What is Truth' in Economics?" *Journal of Political Economy* 48, no. 1 (1940): 1–32.

Kuznets, Simon. "National Income: A New Version." *Review of Economics and Statistics* 30, no. 3 (1948): 151–79.

Kuznets, Simon. *National Income and Its Composition*. Vol. 1, *1919–1938*. National Bureau of Economic Research, 1941.

Lachmann, Ludwig M. *Capital and Its Structure*. London School of Economics, 1956.

Lachmann, Ludwig M. "Mrs. Robinson on the Accumulation of Capital." *South African Journal of Economics* 26, no. 2 (1958): 87–100.

Lachmann, Ludwig M. "The Role of Expectations in Economics as a Social Science." *Economica* 10, no. 37 (1943): 12–23.

Levy, David M., and Sandra J. Peart. *Toward an Economics of Natural Equals: A Documentary History of the Early Virginia School*. Cambridge University Press, 2020.

Locke, John. *An Essay Concerning Humane Understanding*. Bk. 2, *Of Ideas*. London, 1690.

Machlup, Fritz. "The Problem of Verification in Economics." *Southern Economic Journal* 22, no. 1 (1955): 1–21.

Machlup, Fritz. "Rejoinder to a Reluctant Ultra-Empiricist." *Southern Economic Journal* 22, no. 4 (1956): 483–93.

Machlup, Fritz. *The Stock Market, Credit, and Capital Formation*. William Hodge, 1940.

Marshall, Alfred. *Principles of Economics*. 1st ed. London, 1890.

Marshall, Alfred. *Principles of Economics*. 8th ed. Macmillan, 1920.

McCulloch, J. R. *The Principles of Political Economy*. Edinburgh, 1825.

McKinley, Gordon W. "Effects of Federal Reserve Policy on Nonmonetary Financial Institutions." In *The Federal Reserve System*, edited by Herbert V. Prochnow. Harper and Brothers, 1960.

McKinley, Gordon W. "The Federal Home Loan Bank System and the Control of Credit." *Journal of Finance* 12, no. 3 (1957): 319–32.

McVicar, Michael J. "Aggressive Philanthropy: Progressivism, Conservatism, and the William Volker Charities Fund." *Missouri Historical Review* 105, no. 4 (2011): 191–212.

Menger, Carl. *Grundsätze der Volkswirtschaftslehre* [Principles of economics]. Vienna, 1871.

Menger, Carl. *Principles of Economics*. Free Press, 1950.

Mill, John Stuart. *Essays on Some Unsettled Questions in Political Economy*. London, 1844.

Mints, Lloyd W. *Monetary Policy for a Competitive Society*. McGraw-Hill, 1950.

Mises, Ludwig von. “*Capital and Interest*: Eugen von Böhm-Bawerk and the Discriminating Reader.” *Freeman* 9, no. 8 (1959): 52–54.

Mises, Ludwig von. *Die Gemeinwirtschaft: Untersuchungen über den Sozialismus* [Socialism: An economic and sociological analysis]. Gustav Fischer, 1922.

Mises, Ludwig von. “Die Wirtschaftsrechnung im sozialistischen Gemeinwesen” [Economic calculation in the socialist commonwealth]. *Archiv für Sozialwissenschaften* 47 (1920): 86–121.

Mises, Ludwig von. *Epistemological Problems of Economics*. D. Van Nostrand, 1960.

Mises, Ludwig von. *Human Action: A Treatise on Economics*. Yale University Press, 1949.

Mises, Ludwig von. *Human Action: A Treatise on Economics*. 2nd ed. Yale University Press, 1963.

Mises, Ludwig von. *Human Action: A Treatise on Economics*. Scholar’s ed. Mises Institute, 2008.

Mises, Ludwig von. *Nationalökonomie: Theorie des Handelns und Wirtschaftens* [Economics: Theory of action and exchange]. Editions Union, 1940.

Mises, Ludwig von. “A New Treatise on Economics.” *New Individualist Review* 2, no. 3 (1962): 39–42.

Mises, Ludwig von. “On the International Monetary Problem.” *American Opinion* 10, no. 2 (1967): 23–28.

Mises, Ludwig von. *Theory and History*. Yale University Press, 1957.

Mises, Ludwig von. *The Theory of Money and Credit*. English ed. Jonathan Cape, 1934.

Mises, Ludwig von. *The Theory of Money and Credit*. US ed. Harcourt, Brace, 1935.

Mises, Ludwig von. *The Theory of Money and Credit*. New ed. Yale University Press, 1953.

Mises, Ludwig von. *The Theory of Money and Credit*. 2009 ed. Mises Institute, 2009.

Mises, Ludwig von. *Theorie des Geldes und der Umlaufsmittel* [The theory of money and credit]. Duncker & Humblot, 1912.

Mises, Ludwig von. *The Ultimate Foundations of Economic Science*. D. Van Nostrand, 1962.

Mises, Margit von. *My Years with Ludwig von Mises*. Arlington House Publishers, 1976.

Mises, Margit von. “Testimonial.” In *Man, Economy, and Liberty: Essays in Honor of Murray N. Rothbard*, edited by Walter Block and Llewellyn H. Rockwell Jr. Mises Institute, 1988.

Mitchell, Wesley Clair. *Business Cycles*. University of California Press, 1913.

Mitchell, Wesley Clair. *Business Cycles: The Problem and Its Setting*. National Bureau of Economic Research, 1927.

Mitchell, Wesley Clair. "Quantitative Analysis in Economic Theory." *American Economic Review* 15, no. 1 (1925): 1–12.

Modugno, Roberta A., ed. *Rothbard vs. the Philosophers: Unpublished Writings on Hayek, Mises, Strauss, and Polanyi*. Mises Institute, 2009.

Myrdal, Gunnar. *Monetary Equilibrium*. William Hodge, 1939.

Nagel, Ernest. *The Structure of Science: Problems in the Logic of Scientific Explanation*. Harcourt, Brace & World, 1961.

National Bureau of Economic Research. *Input-Output Analysis: An Appraisal*. Princeton University Press, 1955.

Neuberger, Egon. "Waiting and the Period of Production: Comment." *Quarterly Journal of Economics* 74, no. 1 (1960): 150–53.

Newman, Patrick. Foreword to *What Has Government Done to Our Money?*, 6th ed., by Murray N. Rothbard. Mises Institute, 2024.

New York University. "A Brief History of New York University." In *Faculty Handbook*. New York University, 2024.

Niksa, Vladimir. "The Role of Quantitative Thinking in Modern Economic Theory." *Review of Social Economy* 17, no. 2 (1959): 151–73.

O'Brien, D. P. *Lionel Robbins*. St. Martin's Press, 1988.

Painleve, Paul. "The Place of Mathematical Reasoning in Economics." In *Essays in European Economic Thought*, edited by Louise Sommer. D. Van Nostrand, 1960.

Penrose, Edith. *The Theory of the Growth of the Firm*. John Wiley, 1959.

Pigou, Arthur C. *The Economics of Welfare*. Macmillan, 1920.

Pigou, Arthur C. *Wealth and Welfare*. Macmillan, 1912.

Raffaelli, Tiziano. "Keynes's Apprenticeship with Marshall in 1905." *History of Economic Ideas* 8, no. 2 (2000): 121–52.

Raimondo, Justin. *An Enemy of the State: The Life of Murray N. Rothbard*. Prometheus Books, 2000.

Ricardo, David. *On the Principles of Political Economy and Taxation*. London, 1817.

Robbins, Lionel. *An Essay on the Nature and Significance of Economic Science*. 1st ed. Macmillan, 1932.

Robbins, Lionel. *An Essay on the Nature and Significance of Economic Science*. 2nd ed. Macmillan, 1935.

Robbins, Lionel. *The Great Depression*. Macmillan, 1934.

Robbins, Lionel. "Robertson on Utility and Scope." *Economica* 20, no. 78 (1953): 99–111.

Robertson, D. H. *Utility and All That*. George Allen and Unwin, 1952.

Robinson, Claude. *Understanding Profits*. D. Van Nostrand, 1961.

Robinson, Joan. *The Economics of Imperfect Competition*. Macmillan, 1933.

Rolph, Earl. "The Discounted Marginal Productivity Doctrine." *Journal of Political Economy* 47, no. 4 (1939): 542–56.

Rothbard, Murray N. *America's Great Depression*. D. Van Nostrand, 1963.

Rothbard, Murray N. *America's Great Depression*. 5th ed. Mises Institute, 2008.

Rothbard, Murray N. *An Austrian Perspective on the History of Economic Thought*. Vol 1., *Economic Thought Before Adam Smith*. Mises Institute, 2006.

Rothbard, Murray N. *The Betrayal of the American Right*. Mises Institute, 2007.

Rothbard, Murray N. "Breaking Out of the Walrasian Box: Schumpeter and Hansen." In *Economic Controversies*. Mises Institute, 2011.

Rothbard, Murray N. "The Case for a 100 Per Cent Gold Dollar." In *In Search of a Monetary Constitution*, edited by Leland B. Yeager. Harvard University Press, 1962.

Rothbard, Murray N. "Competition and the Economists," May 1961. In Gordon, ed., *Strictly Confidential*.

Rothbard, Murray N. "Confidential Memo to the Volker Fund on F.A. Hayek's *Constitution of Liberty*," January 21, 1958. In Modugno, ed., *Rothbard vs. the Philosophers*.

Rothbard, Murray N. "A Conversation with Murray N. Rothbard." In *The Rothbard Reader*, edited by Joseph T. Salerno and Matthew McCaffrey. Mises Institute, 2016.

Rothbard, Murray N. "In Defense of 'Extreme Apriorism.'" *Southern Economic Journal* 23, no. 3 (1957): 314–20.

Rothbard, Murray N. "The End of Socialism and the Calculation Debate Revisited." In *Economic Controversies*. Mises Institute, 2011.

Rothbard, Murray N. *The Essential von Mises*. Mises Institute, 2009.

Rothbard, Murray N. Introduction to the first edition. In "*Egalitarianism as a Revolt Against Nature" and Other Essays*. 2nd ed. Mises Institute, 2000.

Rothbard, Murray N. *Man, Economy, and State: A Treatise on Economic Principles*. 2 vols. D. Van Nostrand, 1962.

Rothbard, Murray N. "*Man, Economy and State*, Original Chapter 5: Producers' Activity." Edited by Patrick Newman. *Quarterly Journal of Austrian Economics* 18, no. 4 (2015): 487–561.

Rothbard, Murray N. *Man, Economy, and State with Power and Market*. 2nd scholar's ed. Mises Institute, 2009.

Rothbard, Murray N. "Mises' *Human Action*: Comment." *American Economic Review* 41, no. 1 (1951): 181–85.

Rothbard, Murray N. "The National Bureau and Business Cycles." In *Making Economic Sense*. 2nd ed. Mises Institute, 2006.

Rothbard, Murray N. "On the Definition of Money," April 1959. In Gordon, ed., *Strictly Confidential*.

Rothbard, Murray N. "On *Freedom and the Law*." *New Individualist Review* 1, no. 4 (1962): 37–40.

Rothbard, Murray N. *The Panic of 1819: Reactions and Policies*. Columbia University Press, 1962.

Rothbard, Murray N. *Power and Market: Government and the Economy*. Institute for Humane Studies, 1970.

Rothbard, Murray N. "Praxeology: Reply to Mr. Schuller." *American Economic Review* 41, no. 5 (1951): 943–46.

Rothbard, Murray N. Review of *Business Cycles and Their Causes*, by Wesley Clair Mitchell, and *American Business Cycles, 1865–1897*, by Rendigs Fels. *Freeman* 9, no. 12 (1959): 52–54.

Rothbard, Murray N. Review of *Human Action: A Treatise on Economics*, by Ludwig von Mises. *analysis* (May 1950): 4.

Rothbard, Murray N. Review of *Quality and Competition: An Essay in Economic Theory*, by Lawrence Abbott, and *Natural Resources: The Economics of Conservation*, by Anthony Scott, July 21, 1958. In Gordon, ed., *Strictly Confidential*.

Rothbard, Murray N. "Spotlight on Keynesian Economics," October 20, 1947. In Gordon, ed, *Strictly Confidential*.

Rothbard, Murray N. "Statistics: Destroyed from Within?" In *Making Economic Sense*. 2nd ed. Mises Institute, 2006.

Rothbard, Murray N. "The Symposium on Relativism: A Critique," n.d. In Modugno, ed., *Rothbard vs. the Philosophers*.

Rothbard, Murray N. "Toward a Reconstruction of Utility and Welfare Economics." In *On Freedom and Free Enterprise: Essays in Honor of Ludwig von Mises*, edited by Mary Sennholz. D. Van Nostrand, 1956.

Rothbard, Murray N. "Untitled Letter Critical of Chicago School Economics," February 3, 1960. In Gordon, ed., *Strictly Confidential*.

Rothbard, Murray N. *What Has Government Done to Our Money?* Pine Tree Press, 1963.

Rutherford, Malcolm. *The Institutionalist Movement in American Economics, 1918–1947: Science and Social Control*. Cambridge University Press, 2011.

Salerno, Joseph T. Introduction to *Man, Economy, and State with Power and Market*, 2nd scholar's ed., by Murray N. Rothbard. Mises Institute, 2009.

Salerno, Joseph T. "The Place of Mises's *Human Action* in the Development of Modern Economic Thought." *Quarterly Journal of Austrian Economics* 2, no. 1 (1999): 35–65.

Salerno, Joseph T. "Varieties of Austrian Price Theory: Rothbard Reviews Kirzner." *Libertarian Papers* 3 (2011): e25.

Samuelson, Paul A. “Bertil Ohlin (1899–1979).” *Scandinavian Journal of Economics* 83, no. 1 (1981): 355–71.

Samuelson, Paul A. *Economics: An Introductory Analysis*. McGraw-Hill, 1948.

Samuelson, Paul A. *Economics: An Introductory Analysis*. 3rd ed. McGraw-Hill, 1955.

Samuelson, Paul A. “The End of Marginal Utility: A Note on Dr. Bernardelli’s Article.” *Economica* 6, no. 21 (1939): 86–87.

Samuelson, Paul A. *Foundations of Economic Analysis*. Harvard University Press, 1947.

Schuller, George J. “Mises’ *Human Action*: Rejoinder.” *American Economic Review* 41, no. 1 (1951): 185–90.

Schuller, George J. Review of *Human Action: A Treatise on Economics*, by Ludwig von Mises. *American Economic Review* 40, no. 3 (1950): 418–22.

Schumpeter, Elizabeth. Introduction to Schumpeter, *History of Economic Analysis*.

Schumpeter, Joseph A. *Capitalism, Socialism, and Democracy*. Harper & Bros., 1942.

Schumpeter, Joseph A. *History of Economic Analysis*. Oxford University Press, 1954.

Seligman, E. R. A. *The Shifting and Incidence of Taxation*. 2nd ed. New York, 1899.

Simons, Henry C. *A Positive Program for Laissez Faire: Some Proposals for a Liberal Economic Policy*. University of Chicago Press, 1934.

Skousen, Mark. *The Structure of Production*. New rev. ed. New York University Press, 2007.

Smith, Adam. *An Inquiry into the Nature and Causes of the Wealth of Nations*. London, 1776.

Stigler, George J. *Memoirs of an Unregulated Economist*. Basic Books, 1988.

Stigler, George J. *Production and Distribution Theories*. Macmillan, 1941.

Stigler, George J. *The Theory of Price*. Macmillan, 1946.

Stigler, George J. *The Theory of Price*. 2nd ed. Macmillan, 1952.

Stromberg, Joseph. Introduction to *Man, Economy, and State with Power and Market*, scholar’s ed., by Murray N. Rothbard. Mises Institute, 2004.

Taussig, Frank W. *Principles of Economics*. Macmillan, 1911.

Tintner, Gerhard. “Econometrics.” *Scientia* 47, no. 88 (1953): 250–57.

Triffin, Robert. *Monopolistic Competition and General Equilibrium Theory*. Harvard University Press, 1940.

Vaughn, Karen I. *Austrian Economics in America: The Migration of a Tradition*. Cambridge University Press, 1994.

Walras, Léon. *Éléments d’économie politique pure* [Elements of pure economics]. Lausanne, Swtz., 1874.

Wapshott, Nicholas. *Keynes–Hayek: The Clash That Defined Modern Economics*. W. W. Norton, 2011.

Weiler, E. T. *The Economic System: An Analysis of the Flow of Economic Life*. Macmillan, 1952.

White, Lawrence H. Introduction to *The Pure Theory of Capital*, by F. A. Hayek. Edited by Lawrence H. White. University of Chicago Press, 2007.

Wicksell, Knut. *Geldzins and Güterpreise* [Interest and prices]. Jena, 1898.

Wicksell, Knut. *Lectures on Political Economy*. Vol. 1, *General Theory*. Routledge & Sons, 1934.

Wicksteed, Philip H. *The Common Sense of Political Economy*. Macmillan, 1910.

Wieser, Friedrich von. *Social Economics*. George Allen & Unwin, 1927.

Winch, D. N. Review of *Man, Economy, and State: A Treatise on Economic Principles*, by Murray N. Rothbard. *Economic Journal* 74, no. 294 (1964): 480–82.

Yeager, Leland B. *The Fluttering Veil: Essays on Monetary Disequilibrium*. Edited by George Selgin. Liberty Fund, 1997.

Yeager, Leland B. “Some Questions About Growth Economics.” *American Economic Review* 44, no. 1 (1954): 53–63.

Yeager, Leland B. “The Methodology of Henry George and Carl Menger.” *American Journal of Economics and Sociology* 13, no. 3 (1954): 233–38.

INDEX

Compiled by Roger E. Bissell