The Midway and Beyond: Recent Work on Economics at Chicago

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Since its founding in 1892, the University of Chicago has been home to some of the world's leading economists.[1] Many of its faculty members have been an intellectual force in the economics profession and some have played a prominent role in public policy debates over the past half-century.[2] Because of their impact on the profession and influence in policy

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1. To take a crude measure, nearly a dozen economists who spent most of their career at Chicago have won the Nobel Prize, or, more accurately, the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel. The list includes Milton Friedman (1976), Theodore W. Schultz (1979), George J. Stigler (1982), Merton H. Miller (1990), Ronald H. Coase (1991), Gary S. Becker (1992), Robert W. Fogel (1993), Robert E. Lucas, Jr. (1995), James J. Heckman (2000), Eugene F. Fama and Lars Peter Hansen (2013), and Richard H. Thaler (2017). This list excludes Friedrich Hayek, who did his prize work at the London School of Economics and only spent a dozen years at Chicago. His relationship to Chicago is discussed below. Of course, the prize has been criticized by Avner Offer and Gabriel Sŏderberg (2016), who argue that the Swedish central bank created it to use the "halo of the Nobel brand to enhance central bank authority and the prestige of market-friendly economics."

2. The University of Chicago has given rise to several "schools" in different disciplines, such as political science and sociology, over the decades. Regarding political science, for example, see Heaney and Hansen (2006) on the Chicago school of political science that arose in the 1920s and 1930s. For a recent history of the University of Chicago, see Boyer 2015.

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discussions, economists at Chicago have long attracted interest from historians of economics.

For much of its history, the type of economics practiced at the University of Chicago, as well as many of the policy recommendations that have come from its faculty, has been viewed as distinctive, as standing apart from the professional mainstream, at least on some dimension. This distinctiveness has been characterized as a "Chicago style of economics" ("strongly policy oriented and address[ing] real world questions, as opposed to being merely an abstract thought process," according to Fleury 2015), or a "Chicago Tradition" (as in Patinkin 1980), or the "Chicago School of Economics" (Emmett 2010b). In its usual usage, the *Chicago school* refers to a subset of the faculty who, in the 1950s through the 1980s, advanced controversial positions on issues such as monetary policy, antitrust policy, education policy, taxation and the welfare state, and the role of the market in general. Milton Friedman and George Stigler are the individuals most closely identified with such a school, which is often said to have roots going back to the 1930s.

Chicago first made a name for itself in economics with J. Laurence Laughlin and Thorsten Veblen in the early 1900s, along with the founding of the *Journal of Political Economy* in 1892. Yet this period has not been the focus of much work by historians of economics. Instead, interest in Chicago usually begins in the 1930s, when the faculty included Frank Knight, Jacob Viner, Henry Simons, Paul Douglas, and others. They had a lasting influence on many graduate students of the period, particularly Milton Friedman, George Stigler, and Aaron Director, all of whom later returned to Chicago as faculty members. This group is sometimes said to have formed a "second" (or new) Chicago school in the 1950s. Some continuity between the two generations is evident in the shared belief in the importance of price theory as a way of understanding market forces, the value of economic freedom in itself, and the emphasis on monetary theory and skepticism about Keynesian economics. At the same time, there were sharp differences across the two generations: the first generation was largely indifferent to empirical research, whereas the second was firmly committed to it.

In a perceptive 1983 article, "Chicago Economics: Permanence and Change," Melvin Reder examined the distinctive features of economics at Chicago and identified points of continuity and change. However, Reder's article was published prior to the period in which many of the ideas coming from Chicago, such as using monetary policy to control inflation and

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supporting deregulation to reduce government interference in markets, had a global impact. Chicago is widely seen as having contributed to the rise of "neoliberal" economic policies under Margaret Thatcher in Britain and Ronald Reagan in the United States in the 1980s and throughout the world, especially in Latin America and Eastern Europe, in the 1990s. These policies have elicited strong reactions among those who sympathize with the policy approach and especially among those who vilify it.

Consequently, a steady stream of recent scholarship has attempted to understand and account for the influence of Chicago economists in the late twentieth century. Books such as Johan Van Overtvelt's *The Chicago School: How the University of Chicago Assembled the Thinkers Who Revolutionized Economics and Business* (2007), Ross Emmett's *The Elgar Companion to the Chicago School of Economics* (2010), Robert Van Horn, Philip Mirowski, and Thomas A. Stapleford's collection *Building Chicago Economics: New Perspectives on the History of America's Most Powerful Economics Program* (2011), and Lanny Ebenstein's *Chicagonomics: The Evolution of Chicago Free Market Economics* (2015) all provide overviews of different facets of economics at Chicago. In addition, a weighty collection of essays on Milton Friedman has been published (forty chapters and nearly 800 pages, edited by Robert Cord and J. Daniel Hammond in 2016), and a similar volume on George Stigler is planned. And if that is not enough, there is a two-volume, 1,100-page book on Friedman's influence as a teacher (Hammond 1999b) and a three-volume collection on Chicago price theory that comes to a massive 2,500 pages (Hammond, Medema, and Singleton 2013).

Another reason for the outpouring of work on Chicago is that many of its leading figures have passed away: George Stigler in 1991, Theodore W. Schultz in 1998, Milton Friedman in 2006, Ronald Coase in 2013, and Gary Becker in 2014. As a result, archival materials, such as the personal papers and correspondence of these scholars, have become available to researchers. The use of correspondence, unpublished manuscripts, and other primary source material has shed important new light on how economics at Chicago developed, providing a much needed addition to the secondary literature that simply provides commentary on (or interpretation of) the writings of Chicago economists.[3] For example, archival sources are the basis for many of the essays in Van Horn, Mirowski, and Stapleford

3. There have also been several oral histories of Chicago, such as Kitch (1983), Baird (1997), and Freedman (2010), the first two of which deal mainly with law and economics. Milton Friedman also gave many interviews over the course of his career; see, for example, Hammond (1991).

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2011 and a study of the intellectual revival of economic liberalism after World War II by Burgin (2012).

This article provides a very selective overview of the recent books and articles on economics at Chicago. This literature has become so large and wide-ranging that it would not be feasible to cover all aspects of it.[4] The article begins by examining the emergence of a distinctive Chicago approach in the 1930s in which price theory was a centerpiece of the graduate curriculum. The supposed formation of a "Chicago school" under Frank Knight during this period will also be examined. Perhaps the biggest interpretive change that has emerged from the new research is a downgrading of the importance of Frank Knight as a "leader" of any Chicago school and more intensive focus on the return of Milton Friedman and Aaron Director to Chicago in 1946 as a key moment in its emergence as a center of strong policy views.

Then we will turn to Chicago in the 1950s and 1960s, particularly focusing on Friedman and his influential work on monetary policy that helped overturn the Keynesian consensus of the day. Building upon the monetary economics that he learned at Chicago and blending it with the empirical approach of Wesley C. Mitchell and Arthur Burns of the National Bureau of Economic Research, Friedman produced influential research that changed the shape of modern economics, particularly his book, *A Monetary History of the United States,* coauthored with Anna Schwartz. For various reasons, to be explored, other figures, such as George Stigler, have not been the focus of nearly as much scholarly attention.

Finally, we examine the relationship between Chicago economists and the "neoliberalism" project supposedly launched by Friedrich Hayek at the first meeting of the Mont Pelerin Society in 1947. While Friedman's efforts to spread free-market thinking to policymakers and the general public are well known, and the impact of his work continues to be explored, the role of Aaron Director has been the focus of recent investigation. Director, whose short list of publications belies his profound influ-

4. For example, the role of Gary Becker and his contributions will not be examined, although he is certain to be the focus of future work. See Teixeira 2014 on Becker and early human capital theory and White 2017 for a contrast between Becker and his contemporaries; Fleury (2012) examines the origin and impact of Becker's *Economics of Discrimination*. We will also not consider the new classical macroeconomics of the 1970s associated with Robert E. Lucas, whose papers are now open to researchers at Duke and have been used in such papers as Ramalho de Silva 2017. Finally, we will bypass the voluminous legal scholarship on Chicago's influence on antitrust policy and the law and economics movement more generally, where much work has been done by economists Steven Medema and Robert Van Horn and legal scholars such as Herbert Hovenkamp (2009).

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ence, remains an elusive figure whose importance had been underappreciated even though he had a significant role in the rise of the law and economics movement that produced a major rethinking of antitrust policy.

At the outset, an important qualification to the terms *Chicago economics* and *Chicago school of economics* must be offered. To the extent that these terms imply that there was some conformity of beliefs at Chicago, they fail to do justice to the intellectual diversity on the faculty. Not all economists at Chicago practiced "Chicago economics" and only a small minority of economists there, at any given point in time, could ever be considered "members" of the Chicago school in terms of holding certain policy positions.[5] At the same time, a group of economists that shared many common principles did exist, even if they would argue and debate among themselves, and they certainly influenced outside perception of the economics community at Chicago.

Old Chicago

In the 1930s, the Department of Economics at the University of Chicago emerged as a powerhouse of talent. The leading figures were Jacob Viner and Frank Knight, but other important faculty members were there as well. Paul H. Douglas was respected for his work in labor economics and became known for the Cobb-Douglas production function.[6] Henry Schultz was undertaking the path breaking estimation of statistical demand relationships. Oskar Lange had a solid reputation as a careful theorist and was a leading participant in the socialist calculation debate.

Of course, Chicago was not alone in having a strong department at the time, so why is 1930s era Chicago remembered as a special place? One reason is that an unusually large number of students who studied at Chicago went on to have distinguished careers in economics. This list includes Milton Friedman, George Stigler, Paul Samuelson, Kenneth Boulding, Martin Bronfenbrenner, and Herbert Stein in the 1930s and James Buchanan, Don Patinkin, and Hyman Minsky in the 1940s. All of them became eminent economists who wrote warm reminiscences about their graduate studies and the deep impression their teachers had on them. Without a distinguished cohort of students writing about their Chicago

5. For example, Friedman and Stigler seemed to disagree about whether there was a Chicago School. Friedman (1974) embraced it, whereas Stigler (1988) spoke of "the hypothetical kingdom" of the Chicago school. It is ironic that Medema (2015) finds that Stigler was the first person (in 1949) to use the term in print!

6. Biddle (2011, 2012) examines the origins of the Cobb-Douglas production function. Tavlas (1977) makes the case for considering Douglas as an important monetary thinker at the time.

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experience, the department of that period might have ended up being forgotten. Of course, Chicago was not alone in this regard. The Great Depression made the decade of the 1930s one of intense intellectual ferment. There are similar reminiscences about Keynes's Cambridge Circus and the Robbins Circle at the London School of Economics in the early 1930s, as well as Alvin Hansen and his famous fiscal policy seminar at Harvard University in the late 1930s.[7]

Most historians of economics do not believe there was a "Chicago school" at this time. The economics faculty was marked by an intellectual diversity in methods, fields, and political orientation. From the socialist Oskar Lange to the modern liberal Democrat Paul Douglas to the conservative (or classical liberal) Frank Knight, students were exposed to a wide range of views and perspectives. That said, there is something to the idea that there was a cluster of influential faculty who valued economic freedom, emphasized the rigorous use of price theory, and remained somewhat classical or orthodox in their orientation at a time when those views had fallen into disrepute. Furthermore, as Tavlas (2017) has discussed, several members of the department joined together and collaborated in working on memoranda and policy proposals for fiscal and monetary stimulus early in the Depression. A smaller group of Chicago economists, usually thought to be led by Knight, also gained a reputation for resisting new theoretical developments that arose in the 1930s, specifically the theory of aggregate demand proposed by John Maynard Keynes and the theory of monopolistic competition developed by Edward Chamberlin.

In a fascinating paper, Medema (2016) seeks to discover when the term "Chicago school" came into use and how it was used. While there are reports of the term being mentioned in the late 1930s or the early 1940s, Medema finds that George Stigler himself was the first to use the term in print, in 1949, referring specifically to Frank Knight, Jacob Viner, and Henry Simons. Ever since, the three have been sometimes identified, somewhat misleadingly, as constituting the "first" Chicago school. The three were certainly united in their devotion to Marshallian price theory as a tool for understanding the market economy.[8] The three were also united in their criticism of Keynes's *General Theory*, for which they all wrote separate reviews, Knight's and Simons's being particularly caustic.

7. See Kahn 1984 on Keynes, Coats 1982 on Robbins, and Salant 1976 on Hansen.

8. Viner's famous Economics 301 class in price theory was renowned for rigor (Irwin and Medema 2013). Although much less Marshallian, Knight's *The Economic Organization* became a foundational text in the Chicago price theory tradition (Emmett 2010a). And Simons's famous syllabus for Economics 201 has remained in circulation (Tullock 1983).

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Beyond this shared belief in the power of price theory and skepticism of Keynesian economics, however, the differences between them stand out as much as the similarities. They each had their own distinct research agenda and different approaches to economics, as well as different tastes regarding economic policy. Knight was the philosophical skeptic who was against government economic planning, Keynesian economics, and the theory of monopolistic competition. Viner was the erudite scholar of international trade and a consultant to the Treasury Department during the Roosevelt administration. Simons focused on tax policy and public finance and, along with Lloyd Mints, stressed the importance of money and credit in affecting aggregate economic fluctuations.

Of the three, Knight has traditionally been viewed as the leader of the Chicago school.[9] There was a "Knight group" in the 1930s that included Simons and Aaron Director that stood apart from Douglas and others in the department. Even into the 1940s, Mitch (2016) finds that there was a Knight-centered voting bloc on departmental appointments, a bloc that included Simons, Mints, and H. Gregg Lewis, presumably based on a shared outlook. But historians of economics largely reject the notion that Knight "founded" any particular school of thought. Knight was as much a philosopher as an economist, and while he had strongly anticollectivist views, he generally refrained from making pronouncements on public policy and was often critical of those that did. By contrast, Simons was willing to take strong positions on policy and often took the lead in organizing and writing departmental proposals, such as the Chicago plan for 100 percent money (discussed below). Director published little and is more of an enigma during this period. And Viner was certainly no "follower" of Knight or anyone else for that matter.

Furthermore, Knight does not fit the caricature of a "Chicago school" economist. Although he strongly rejected collectivism and socialism, he was hardly a fervent advocate of free markets. In fact, he made a strong ethical and moral critique of markets in his 1923 article "The Ethics of Competition," something Friedman and Stigler never would have done.[10]

9. See Emmett 2009. Cowan 2016 provides an intellectual biography of Knight.

10. "Knight's successors at the University of Chicago, Milton Friedman, and George Stigler, did not inherit his reservations about capitalism's cultural degradations and institutional volatility," Burgin (2009, 515–16) writes. "As a result, their social vision involved a less restrained application of market principles, and a less equivocal interpretation of the market economy's largesse . . . . By conflating teachers with their students, and followers with their sources of inspiration, we have forgotten the degree to which the conservative economists of the 1930s disagreed with the policies their successors advocated in the supposed pursuit of a shared ideal."

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A harsh critic of socialism, he also gave a famous lecture titled "The Case for Communism" in 1932 (Burgin 2009; Samuels 1991). In terms of economic method, Knight rejected the positivism that Friedman and Stigler later embraced (Hammond 1991; Fiorito 2016). Unlike later Chicago economists, Knight was skeptical about the value of empirical work and was concerned about economic inequality. He dismissed institutional economics as atheoretical, and yet in practice he was quite sympathetic to that approach (Rutherford 2010, 2011). Although he was revered by many students in the 1930s, he had little lasting influence on Friedman, Stigler, or later Chicago economists. (While Stigler, whose dissertation Knight supervised, shared his interest in the history of economic thought, Stigler later questioned Knight's views on many issues.) In the 1960s, Knight wrote critically of Hayek's work and in his correspondence even had kind things to say about John Kenneth Galbraith.[11]

Thus, as Emmett (2009) points out, the second Chicago school probably would have rejected him as a member. Knight is remembered as an odd but memorable teacher who left a legacy in terms of price theory and economic liberalism at a time when neither was popular within the profession, but he did not impart anything in terms of research method or specific research questions. Emmett (2009, 155) puts it well when he writes: "the Chicago School can be said to owe everything, and nothing, to Knight. Without his initiation of teaching price theory and persistence in defending it against its numerous opponents in the interwar years, there would be no Chicago tradition. Yet the methodological approach and research infrastructure which propelled the Chicago School to its central position in the economics profession and among policy-makers across the globe by the 1980s owe little or nothing to him."

Meanwhile, Jacob Viner was arguably the foremost economist at Chicago at this time. Figure 1 is a Google n-gram of book citations to Viner, Knight, and Simons and demonstrates that he was by far the most cited of the three. (Since the 1960s, book citations to Viner's work have declined while attention to Knight's work has remained steady and now Knight has overtaken Viner by this measure.) A leading international economist, as well as a historian of economic thought, Viner was never a dog-

11. Knight wrote an ambivalent report to the University of Chicago Press on Hayek's *Road to Serfdom* (see Caldwell 2007, 16–17). In a critical piece on Hayek's *Constitution of Liberty*, Knight (1967, 790–92) says Hayek's treatment of inequality is "a flagrant example of false generalization" and his treatment of equality of opportunity is a "supreme absurdity" and "the peak of fallacy."

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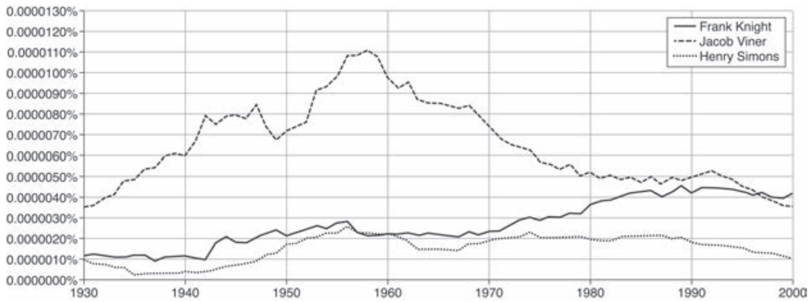

Figure 1. Google n-gram of book citations of Jacob Viner, Frank Knight, and Henry Simons

matic proponent of particular policies.[12] Viner was best known for his rigorous and intimidating class on price theory, later known as Economics 301, a gateway course through which all graduate students had to pass. This famous class influenced legions of students, particularly Milton Friedman, who reported that it was the greatest intellectual experience of his life. Detailed notes from Viner's price theory class were recently published (Viner 2013) and show that much of the theoretical content in the course is unexceptional by modern day standards, having been absorbed into almost every undergraduate microeconomics course. At the time, however, the rigorous use of Marshallian supply and demand as a way of understanding markets and a multitude of other economic problems was considered novel. Viner established the Chicago tradition of using partial equilibrium methods to explain a wide range of phenomena as well as using them in applied fields, such as labor economics and public finance.

Many Chicago-trained economists later testified to the importance of Viner's demanding course and how it changed the way they viewed the world.[13] Price theory was not just simple supply and demand reasoning but a way of thinking about the world that converted many students with sympathies for socialism and collectivism into appreciating the merits of

12. See Bloomfield 1992 for an overview of Viner's work; for Viner as historian of thought, see my introduction to Viner 1991.

13. Thanks in large part to Viner, Marshallian economics became the bedrock of Friedman's approach to price theory, which was also absorbed by Stigler in his work on markets, and used by Aaron Director to understand antitrust economics. This approach also influenced Chicago work in labor economics by H. Gregg Lewis and (through Friedman) Gary Becker.

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a market economy.[14] Yet Friedman and Stigler tended to draw a straight line from competitive price theory to public policy conclusions in a way that Viner and Knight would have been reluctant to do. As Emmett (2009, 150) suggests: "For Knight, price theory was necessary, but not sufficient, for public policy formation. The Chicago tradition since Knight, on the other hand, has often acted as if price theory were both necessary and sufficient for public policy formation."

Aside from his critical role in establishing a Chicago tradition in price theory, however, Viner also does not fit the mold of a "Chicago school" economist. Viner was a staunch supporter of the free enterprise system, but he was not rigidly opposed to government intervention. In the 1930s, he stood outside what is often taken to be the Chicago tradition in monetary policy (Nerozzi 2009). He served as an adviser to the Treasury Department during the Roosevelt administration in the mid-1930s on New Deal banking policy (Nerozzi 2007). During World War II, he was involved in discussions about postwar international trade and finance (Nerozzi 2011). He later explicitly denied being part of any "Chicago school" and even became a critic of it (Van Horn 2011). In the 1950s, he opposed Friedman on such issues as flexible exchange rates and monetary rules (Irwin 2016). While Viner left a durable legacy at Chicago, in terms of making price theory the centerpiece of the curriculum, it would be erroneous to conclude that he was a part of some doctrinaire "Chicago school."

Henry Simons, a graduate student who became an instructor and then an assistant professor in the economics department in the early 1930s, never achieved the scholarly distinction of Knight or Viner. In fact, he narrowly avoided being released by the department in 1934, when Aaron Director was let go. Having barely kept his position on the faculty, Simons then went on a publication tear starting with his widely discussed pamphlet *A Positive Program for Laissez Faire* in 1934 and his influential article

14. Boetkke and Candela (2017) quote Simons as saying that price theory is a prophylactic against popular fallacies. Friedman described himself as a socialist when he entered Chicago, but he did not stay that way (Taylor 2000, 110). Coase (1998, 602) attributed Director's conversion away from socialism to Viner's price theory course: "It is easy to understand why a solid course by this great teacher and great economist would have swept away like chaff in a windstorm the nebulous idealism and Socialist views of Director's Yale days." James Buchanan (1992, 5) came to Chicago as a "libertarian socialist," but "within six weeks after enrollment in Frank Knight's course in price theory, I had been converted into a zealous advocate of the market order." Buchanan continues: "Frank Knight was not an ideologue, and he made no attempt to convert anybody. But I was, somehow, ready for the understanding of economic process that his teaching offered. I was converted by the power of ideas, by an understanding of the model of the market."

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"Rules versus Authorities in Monetary Policy" in 1936. He started the law and economics tradition by teaching a course at the University of Chicago Law School. Like Knight and Viner, Simons also contributed to the Chicago price theory tradition with his famous syllabus prepared for Economics 201, a lower level version of Viner's 301. (The syllabus was reprinted in 1983 with an introduction by Gordon Tullock.) More than Viner or Knight, Simons became famous for organizing various departmental memoranda on monetary and financial policy during the Great Depression. He had strong views on the importance of monetary stability and was the driving force behind the Chicago plan for 100 percent money.[15] During the New Deal, Simons warned of the dangers of concentrated economic power, whether in the public or the private sector, including both producers and labor unions. And, what seems to have escaped most historians of economics, Simons was an extremely influential thinker about tax policy, where his ideas are still discussed and taken seriously (particularly the Haig-Simons definition of income; see Shaviro 2013).

To the extent that the Chicago school is associated with specific proposals for economic policy, Simons was arguably its founder. It is much easier to show the intellectual commonalities between Simons and the later generation of Chicago economists (particularly Friedman and Stigler) than either Knight or Viner. Simons was particularly influential in shaping their early views on monetary policy and deconcentration (or competition) policy. In the *Positive Program for Laissez Faire*, Simons makes five policy recommendations: (1) eliminate private monopoly to ensure that markets remain competitive, (2) establish rules for monetary stability, (3) use the tax system to reduce economic inequality, (4) eliminate tariffs and subsidies to private industry, and (5) limit wasteful advertising. With the exception of the last item, a case can be made that this list constitutes the research and policy focus of subsequent Chicago economists.[16]

15. Simons played a much greater role than Knight in organizing the famous "Chicago plan" for banking reform (100 percent money) in 1932. The plan received renewed attention during the financial crisis of 2008 and Great Recession of 2009. See Benes and Kumhof 2012 and Fiebiger 2014. For details on the Chicago plan, see Phillips 1993.

16. On point 1, Simons (1948, 4), who wrote "the great enemy of democracy is monopoly, in all its forms," something Friedman (1962, 2) echoes in writing that "the greatest threat to freedom is the concentration of power." The second generation had a strong desire to ensure competitive markets (worrying less about the private concentration of power as compared to that created by government policy), as will be discussed later. On point 2, Friedman clearly endorsed the idea of promoting economic stability through explicit rules on monetary policy, as the next section will discuss. On point 3, like Simons, Friedman wanted to use the price and tax system

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Yet later Chicago economists saw Simons not as a defender of private enterprise, but as an interventionist if not a socialist. In large part, this is because Simons was so concerned about maintaining competition that at one point he endorsed government ownership of particular industries (natural monopolies) where competition could not be made effective.[17] Later Chicago economists were sometimes so critical of Simons that DeLong (1990) stepped in to defend him as someone representing the classical liberal tradition.

As this discussion has hinted, historians of economics have focused on how the second generation of Chicago economists (Friedman and Stigler) departed from the views of the first generation (Knight and Simons). As Van Horn, Mirowski, and Stapleford (2011, xix) note: "the ideas of the postwar Chicago School did not remain unchanged over time; on the contrary, the views of its principal members sometimes underwent radical shifts: Friedman initially supported Simons's 100 percent money scheme and Stigler initially supported Simons's deconcentration proposals, but both had moved away from such positions by the late 1950s." For Emmett (2009), the intergenerational continuity at Chicago is to be found in its emphasis on price theory and economic liberalism more broadly (to which one could add monetary theory, as discussed in the next section) while the differences are in the realm of methodology, ethics, and specific research

to reduce income inequality. Rather than interfering in individual markets or require government mandates to transfer resources to selected groups, Friedman (1962) proposed a negative income tax that would use the tax system to redistribute income. On point 4, Friedman clearly supported free trade and advocated flexible exchange rates as a way of achieving that goal, something Simons had also embraced. Furthermore, Friedman often maintained that economists generally agreed about the goals of economic policy, but differed on the means of achieving those goals. In doing so, he was repeating Simons. As Simons (1934, 1) says: "There is in America no important disagreement as to the proper objectives of economic policy—larger real income, greater regularity of production and employment, reduction of inequality, preservation of democratic institutions. The real issues have to do merely with means, not with ends (or intentions)."

17. Simons (1934, 18) had proposed "gradual transition to direct government ownership in the case of all industries where competition cannot be made to function effectively as an agency of control." Coase expressed surprise that *A Positive Program* was such a "highly interventionist pamphlet" and even Friedman was "astounded" when he reread it, although both he and Stigler defended Simons in the context of the times (Kitch 1983, 178). Yet Simons (1936, 74) later clarified his remarks: "Candidly, I feel that our situation with respect to these industries will always be unhappy, at best; and I have no genuine enthusiasm for public ownership," but he thought that outcome or private monopoly would dominate regulated monopoly. "Unregulated, extra-legal monopolies are tolerable evils; but private monopolies with the blessing of regulation and the support of law are malignant cancers in the system. . . . I am, indeed, not much distressed about private monopoly power."

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agendas. But Van Horn, Mirowski, and others focus more on the apparent shift from "classical liberalism" to "neoliberalism" in their policy analysis.

If the first "Chicago school" only loosely deserves that appellation, when does one emerge? Burgin (2009) and Mitch (2016) argue that the year 1946 marks an important transition. In that year, the "first" Chicago group broke apart. Viner left Chicago for Princeton, Simons passed away, and Knight became less influential in the department as he approached retirement.[18] Other leading lights, such as Paul Douglas, left the university around this time, and key newcomers, such as Theodore W. Schultz, had arrived (in 1943). The year 1946 is singled out because it marked the return of Friedman and Director to Chicago: Friedman replaced Viner in the economics department and Director replaced Simons in the law school. A few years later, in 1950, Friedrich Hayek joined the Committee on Social Thought (leaving Chicago in 1962), and in 1958 George Stigler joined the graduate school of business.

Using newly available archival evidence, Mitch (2016) pieced together how the offer to Friedman came about in early 1946. He shows a department sharply divided between Knight, Simons, and Mints who wanted to hire Stigler or Friedman, and another wing (Douglas, Jacob Marschak, and the Cowles Commission) who wanted to hire John R. Hicks, Paul Samuelson, or another theorist. We know this because the economics department did something that no department should ever do: keep a detailed tally of the faculty votes on the ranking of the various candidates! As a result, the department made sequential offers to John R. Hicks, Albert G. Hart, and George Stigler. Hicks and Hart declined the offer, while Stigler's appointment was blocked by the university administration. Thus, Friedman was not the department's first choice to replace Viner. Furthermore, T. W. Schultz made at least two offers (in 1947 and 1949) to Paul Samuelson to lure him away from MIT, as noted by Maas (2014). In the first case, Samuelson accepted the offer only to reverse his decision after a weekend of reflection and lobbying from the MIT administration (Backhouse 2017, 603–13). One could only speculate what the postwar Chicago department would have looked like with Samuelson on the faculty.

As it happened, Friedman became the leading intellectual figure in the second-generation, postwar Chicago department, at least in the 1950s and 1960s. And yet Van Horn and Mirowski (2009) make a strong case that Simons, Hayek, and Director were the key individuals involved in forming a new Chicago school. This will be discussed in more detail later, but

18. Van Horn (2014) explores the mysterious circumstances surrounding Simons's death.

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suffice it to say that Simons wanted to build a program devoted to the study of free markets that Director would direct. Hayek helped arrange the financing of the project, but Simons died as Director was in the process of negotiating a move to Chicago. Director, in the law school, then tried to continue the work Simons had started.

Director has always been a relatively overlooked figure in the Chicago lineup, in large part because of his lack of publications, but scholars have given him increased attention in recent years. In terms of Chicago's role in reformulating economic liberalism, Van Horn and Emmett (2015) argue that Knight's importance should be revised down and Director's role should be revised up. They also suggest that Director put postwar Chicago thought on liberal democracy on a different trajectory. Whereas Knight argued that democratic discussion and ethical considerations were key components of democratic society, Director conceived of government action as inherently irrational and disputatious. Because rational democratic deliberation was out of reach, Director fell back upon the importance of political and economic competition in preserving freedom. While both agreed that the price mechanism and competitive markets provided social order, Knight viewed democracy and democratic discussion as important as well.

Director also played a large role in establishing the field of law and economics. Through his teaching rather than through his publications, Director changed established views on market competition and concentration. He saw competition as a pervasive force, and did not view monopoly as much of a problem as thought in the 1930s.[19]

19. See Hammond 2011 and Medema 2011. Director also organized a famous (or infamous) 1951 conference in which talk of a "Chicago school" came out into the open. Knight made a statement expressing his loyalty "to the Chicago tradition about which you have heard something. And I think there actually is a tradition in the economics group at Chicago to lean in the direction of free enterprise and of freedom rather than the opposite direction," saying that this tradition opposes "protectionists, inflationists, and price-fixers" (Director 1952, 295, 298). In an oft quoted letter to Don Patinkin, Viner says that this conference was the first time that he saw evidence of an "organized conspiracy in favor of laissez faire." As Viner wrote: "It was not until after I left Chicago in 1946 that I began to hear rumors about a "Chicago school" which was engaged in an organized battle for laissez faire and 'quantity theory of money' and against 'imperfect competition' theorizing and 'Keynesianism.' I remained skeptical about this until I attended a conference sponsored by University of Chicago professors in 1951" (Patinkin 1980, 266). At the conference Viner stated that the "doctrine which explains the course of events in terms of the quantity of money alone, as if nothing else matters, is a grotesquely simplified explanation" (Director 1952, 178).

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Friedman and the Monetarist Counterrevolution

Having returned to Chicago to join the faculty in 1946, Friedman quickly established himself as the leading intellectual figure and remained so over the next thirty years.[20] Friedman continued the Chicago tradition established by Viner and Knight in teaching the key graduate course in price theory.[21] By all accounts, Friedman was a superb teacher and ample testimony to his effectiveness in the classroom can be found in a large two-volume collection titled *The Legacy of Milton Friedman as Teacher*, edited by Hammond (1999b). Friedman also excelled as a scholar, but in contrast to Viner and Knight he had a deep interest in empirical work. This interest came from his training as a statistician, his earlier work at Chicago with Henry Schultz, and then his involvement with the National Bureau of Economic Research working with Simon Kuznets. Friedman developed a strong belief in using economic theory to generate testable hypotheses, as discussed in his controversial 1953 essay "The Methodology of Positive Economics." Famous for its statement that theory should be judged not by the realism of its assumptions but by the accuracy of its predictions, this essay described a particular approach to doing economics that set Friedman (and Stigler) apart from their Chicago predecessors. This single essay was the subject of an entire volume edited by Mäki (2009), which demonstrates the continuing power of attraction and revulsion that the essay has generated over the past half-century.[22]

Friedman's scholarly reputation rests with several works, such as *A Theory of the Consumption Function* (1957), which continues to be studied but has not attracted much interest from historians of economics.[23] Perhaps his most consequential scholarly work is *A Monetary History of the United States, 1867–1960*, coauthored with Anna J. Schwartz and

20. In 1998, Friedman and his wife Rose published a joint memoir. Recent biographies of Friedman include Ebenstein 2009 and Ruger 2013. However, Stanford historian Jennifer Burns is currently writing what promises to be a definitive biography of Friedman. For a large collection of generally sympathetic essays about Friedman's contributions to economics and policy, see Cord and Hammond (2016).

21. Hammond and Hammond (2006) present the correspondence between Friedman and Stigler between 1946 and 1957 to show how they shaped price theory for their own purposes.

22. Another institution that set the later Chicago economists apart from their predecessors was the establishment of the workshop system in the 1950s for conducting research, something examined by Emmett (2011).

23. Also neglected has been the role played by several female economists at Chicago, such as Margaret Reid, who worked on the theory of consumption, as well as Hazel Kyrk and Mary Jean Bowman.

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published in 1963. This book is not only a monumental work of economic history, but it provided the empirical basis for many of his policy views, such as his contention that changes in the growth of the money supply have been the key determinant of changes in nominal income throughout history. This represented a sharp challenge to prevailing Keynesian ideas in the 1950s and 1960s.[24]

The chapter titled "The Great Contraction" has been particularly influential in providing a monetary explanation for the Great Depression of the 1930s. Prior to Friedman and Schwartz, the Great Depression would often be attributed to a collapse in aggregate demand (an autonomous drop in consumption and investment spending) triggered by the stock market crash in October 1929. Monetary policy was not considered to have been an important factor in pushing the economy into the Depression, nor for pulling it out. Nominal interest rates were low and therefore monetary policy was "easy," it was reasoned, and yet investment spending collapsed (animal spirits) and remained depressed despite the availability of cheap credit. Furthermore, it was commonly believed, a more expansionary monetary policy would have failed to stimulate the economy due to the liquidity trap (in which case policy is "pushing on a string").

Friedman helped overturn all of these views. By focusing on the money supply and distinguishing between real and nominal interest rates, Friedman and Schwartz argued instead that monetary policy had been "too tight" in 1929–33 and that monetary expansion after 1933 was responsible for the recovery. As a result, Friedman and Schwartz (1963, 300) concluded that the Great Depression was "a tragic testimonial to the power of monetary forces."

Rockoff (2010) and others have examined the intellectual origins of the *Monetary History*. Hammond (1996) stresses that the method Friedman and Schwartz employed in the book, involving the painstaking collection and analysis of time series data, came directly from the Wesley C. Mitchell and Arthur Burns tradition of the early National Bureau of Economic Research. Bordo and Rockoff (2013) point to the influence of Irving Fisher on Friedman and Schwartz's conceptual framework. Bordo and Schwartz (1979) and Lothian and Tavlas (2016) also explore the influence of Clark Warburton, an economist in the federal government who corresponded with Friedman and Schwartz and whose research came to similar conclusions.

24. On Friedman's monetary economics in practice, see Nelson 2013.

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The empirical findings of the *Monetary History* were not preordained. Using draft manuscripts and correspondence in the Friedman papers, Lothian and Tavlas (2016) show how the conclusions of Friedman and Schwartz evolved as the research project progressed. When they began their project in the late 1940s and early 1950s, Friedman and Schwartz downplayed autonomous monetary policy as a stabilization tool. Drawing on Chicago views from the 1930s, particularly those of Simons, Friedman initially believed that changes in fiscal policy were important and could be used to generate changes in the money supply. As they compiled and analyzed the historical data, Friedman and Schwartz began to think that changes in the money supply—independent of fiscal policy—were the prime mover of economic activity over the business cycle. This conclusion, reached between 1948 and 1958, eventually led Friedman to advocate a rule for fixed growth of the money supply.

The Friedman and Schwartz chapter on the Great Depression radically changed the mainstream interpretation of that period and had enormous implications for the profession's thinking about macroeconomics and the role of monetary policy. Of course, as Laidler (1999) reminds us, the monetary nature of cyclical fluctuations was widely discussed in the 1930s. Given this fact, how original was the thesis of the *Monetary History*? Steindl (1995) argues that none of Friedman and Schwartz's precursors, with the exception of Clark Warburton, anticipated the analytic core of their book, which Steindl believes consisted of three elements: (1) documenting a decline in the quantity of money, (2) linking Federal Reserve policy to the decline, and (3) establishing that the supply of money was independent of the demand for money. Each of these elements was discussed by other economists, but forgotten during the Keynesian consensus in the 1950s and 1960s. Friedman and Schwartz put them all together.

The impact of Friedman and Schwartz's book is readily apparent even today, more than fifty years after its publication. The book has generated an enormous secondary literature, as Bordo (1989) documents, and has kept economic historians and macroeconomists busy probing the various monetary episodes discussed in the book and questioning the conclusions derived therefrom. For historians of economics, however, there has been much less to do. Friedman and Schwartz were exceptionally clear writers (for economists) so that there has been no mistaking the overall message of their book. Unlike Keynes's *General Theory*, the *Monetary History* has not generated a large secondary literature exploring the intentions of the authors. (Thankfully, we have been spared dozens of papers arguing about

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"what Friedman really meant.") However, one shortcoming of Friedman's work that has always dogged him is the absence of an explicit theoretical framework; the quantity equation of money is an accounting identity, not a behavioral relationship. Friedman's failure to write down "the model" that he was using has been a perennial complaint and perhaps explains why there is no Friedman model or Friedman economics the way there is a Keynesian model and Keynesian economics (Hammond 1999a).

What accounts for the enormous success of the *Monetary History*? Aside from its reinterpretation of US macroeconomic history, one of the signature contributions of the book is its empirical method. A problem that has always plagued researchers is determining whether changes in the money supply caused changes in the economic activity or the other way around, or (put differently) whether changes in the money supply are independent from changes in money demand. Bernanke (2002), Bordo and Rockoff (2015), and others have suggested that Friedman and Schwartz's "narrative approach"—the attempt to find something approaching a "natural experiment" in the historical record to solve the identification problem—constituted a real advance. Friedman and Schwartz used plausibly exogenous variation in the money supply to identify the effects of monetary policy on national income.[25] As a result, they were able to provide convincing historical evidence on the importance of monetary policy to the economy.

One thing that historians of economics have not fully explored is the reception of the *Monetary History* by the economics profession and how it changed opinion over time. While Friedman's work on monetary economics was deeply imbibed at Chicago in the 1960s, it was greeted skeptically at other places, such as MIT.[26] While Paul Samuelson never reviewed

25. As Bernanke (2002) put it: "The special genius of the *Monetary History* is the authors' use of what some today would call 'natural experiments'—in this context, episodes in which money moves for reasons that are plausibly unrelated to the current state of the economy. By locating such episodes, then observing what subsequently occurred in the economy, Friedman and Schwartz laboriously built the case that the causality can be interpreted as running (mostly) from money to output and prices, so that the Great Depression can reasonably be described as having been caused by monetary forces. Of course, natural experiments are never perfectly controlled, so that no single natural experiment can be viewed as dispositive—hence the importance of Friedman and Schwartz's historical analysis, which adduces a wide variety of such episodes and comparisons in support of their case."

26. See Mehrling 2014 on MIT and money. One recalls the amusing but dismissive quip of Robert Solow that, if everything reminded Friedman of money, everything reminded Solow of sex, but at least he kept it out of his papers.

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the book, he would sometimes cast aspersions on it. Robert Solow (1964, 710–11) considered it "a work simultaneously of scholarship and special pleading. One ought not to be misled by either aspect by forgetting about other." He further charged that the book "can indoctrinate through its choice of what to emphasize and what not to say," although regarding the chapter on the Great Depression he conceded that "one must grant the substantial truth of this account." Later, MIT's Peter Temin (1976) attempted a frontal assault on the book using the IS-LM model. He rejected the contention that monetary forces caused the Great Depression, although Mayer (1978) and others did not consider this attempt to be a success.[27]

However, the arrival of Stanley Fisher and Rudiger Dornbusch at MIT in the mid-1970s, both of whom had spent time at Chicago and had an appreciation for Friedman's work, brought a more sympathetic view of Friedman and monetary analysis to Cambridge, Massachusetts. As a result, graduate students at MIT in the late 1970s and early 1980s, such as Ben Bernanke, Frederick Mishkin, and Christina Romer, were exposed to Friedman's work in a more positive light, and it deeply influenced their subsequent academic research. As a member of the Federal Reserve, Bernanke (2002) spoke at a conference celebrating Friedman's ninetieth birthday and famously stated: "Regarding the Great Depression. You're right, we [the Federal Reserve] did it. We're very sorry. But thanks to you, we won't do it again."[28] Six years later, as chair of the Federal Reserve, Bernanke was put to the test in the financial crisis of 2008. The Fed responded with three rounds of "quantitative easing" of monetary policy. Unfortunately, Friedman's death in 2006 deprived us of his commentary on the 2008 crisis, the subsequent deep recession, and the Federal Reserve's response.[29] Drawing on Friedman's writings about Japan, Sumner (2015) speculates that Friedman would have blamed the Fed for insufficiently expansionary monetary policy during 2008 and 2009 and would have endorsed quantitative easing.

27. However, in his belated review of the book, Temin (1977, 151) states: "Even for those (like me) who cannot accept Friedman and Schwartz's main conclusions, the book is indispensable. . . . No reader can fail to benefit from exposure to Friedman and Schwartz's evidence and reasoning."

28. www.federalreserve.gov/boarddocs/speeches/2002/20021108/.

29. The Federal Reserve under Bernanke reacted to the financial crisis of 2008 by increasing the monetary base sharply to avoid the onset of another Great Depression. When this failed to prevent the Great Recession or to produce higher inflation, Paul Krugman noted on his blog: "I think the thesis of the *Monetary History* has just taken a hit" (krugman.blogs.nytimes .com/2008/11/28/was-the-great-depression-a-monetary-phenomenon/).

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Of course, not everyone at MIT came around to fully accepting Friedman's interpretation of the Depression. After Friedman's death, Solow wrote that *The Monetary History*, "while highly interesting, is not a towering intellectual achievement."[30] Paul Krugman, who by then had left MIT for Princeton but can still be regarded as representative of MIT's Keynesian approach, wrote a critical essay about Friedman's legacy for the *New York Review of Books*. Among other things, Krugman charged that the Friedman-Schwartz position on the Great Depression "seemed a bit slippery" and that Friedman's later accounts of the Depression "began to seem—there's no other way to say this—intellectually dishonest."[31] At issue was what Krugman called the "Friedman two-step."[32] It was one thing to argue that the Federal Reserve could have prevented the Great Depression with more aggressive countermeasures, something that is now generally accepted, yet altogether another thing to say that the Federal Reserve "caused" the Great Depression. Krugman argued that Friedman and Schwartz may have showed the former but that Friedman would sometimes slide into arguing the latter. In other words, instead of simply saying that the Federal Reserve "failed to prevent" the Depression, Friedman was to blame the Depression on the Fed in what Krugman viewed as an ideological attempt to make government responsible for the greatest economic calamity of the twentieth century. Krugman provoked a sharp defense of Friedman by Nelson and Schwartz (2008a), followed by a response by Krugman (2008) and another response by Nelson and Schwartz (2008b).

Friedman's presidential address before the American Economic Association, "The Role of Monetary Policy," published in 1968, has been almost as influential as *The Monetary History.* The address is remembered for the

30. "The Serfdom Scare." *New Republic,* December 6, 2012, newrepublic.com/article/110196/hayek-friedman-and-the-illusions-conservative-economics.

31. Krugman wrote that "some of the things Friedman said about 'money' and monetary policy—unlike what he said about consumption and inflation—appear to have been misleading, and perhaps deliberately so" (www.nybooks.com/articles/2007/02/15/who-was-milton-friedman/). During the Great Recession of 2009, Krugman said even more disparaging things about Friedman and the *Monetary History* on his *New York Times* blog.

32. As Krugman explained: "By the Friedman two-step, I mean the process of argument that began with Friedman and Schwartz on the Great Depression, in which they argued that the Fed could have prevented the Depression by aggressively expanding the monetary base to prevent a sharp fall in broader monetary aggregates. This was a defensible argument, although it looks much weaker in the light of more recent developments . . . . But what happened over time—and Friedman himself was very culpable—was that the claim 'the Fed could have prevented the depression' turned into 'the Fed caused the depression'" (krugman.blogs.nytimes.com/2015/12/07/the-passive-aggressive-monetary-two-step/).

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natural rate of unemployment hypothesis (the vertical Phillips curve) as well as his critique of a monetary policy that targets the interest rate. The fiftieth anniversary of this address in 2018 has been the occasion for several articles that reassess its impact and contest its originality.[33]

Despite the squabbling over Friedman's legacy, there is no doubt that he changed the shape of postwar macroeconomics by putting monetary policy at the front and center of the analysis of inflation. He was the leading participant in the now distant battle between monetarists and Keynesians in the 1960s and 1970s. That battle has been ripe for reassessment and is now beginning to receive some. Forder (2010, 2014) argues that the Phillips curve, particularly the idea that there was a stable trade-off between unemployment and inflation that policymakers could exploit, was a myth.[34] Whether this revisionist contention survives scrutiny remains to be seen; indeed, Schwarzer (2013) maintains that Samuelson and Solow did offer up the Phillips curve as a "menu" that faced policymakers, albeit one that was unstable.

Modern macroeconomics has absorbed many of the key tenets of Friedman's monetary economics. The mantra that "inflation is always and everywhere a monetary phenomenon," rather than something caused by "cost-push" factors and that had to be suppressed by incomes policy or wage and price controls, has gained wide acceptance. The power of central banks over the economy is also widely accepted. Indeed, a key feature of "new Keynesian" models of the 1980s is that monetary policy (which is thought to operate through the interest rate rather than the money supply) is considered to be a more effective tool for stabilizing the economy than fiscal policy. Given the priority of monetary policy over fiscal policy, it may seem somewhat incongruous to call these models "new Keynesian,"

33. Forder (2016b) argues that Friedman was attempting to make the case for rules over discretion (much in the way that Simons had made the case for rules over authorities in his 1936 *Journal of Political Economy* article), not (as commonly thought) an attack on the Phillips curve. Nelson (2018) addresses what he sees as "seven fallacies" in subsequent discussions of the article. See Mankiw and Reis (2018) for a current interpretation of Friedman's message.

34. Consider the testimony of Rachel McCulloch, who studied graduate economics at MIT in 1966–67 before going to Chicago for her PhD. As she recalled: "During my year at MIT, the senior faculty seemed obsessed with Chicago, and definitely not in a positive way. My teachers believed in a long-run tradeoff between inflation and unemployment. We were told that Chicago economists didn't care about the unemployment that MIT macroeconomists saw as an inevitable result of low inflation. . . . Arriving at Chicago I had expected to find a similar obsession with MIT, but in fact the whole atmosphere was quite different. Both students and faculty were passionate about economics and much more diverse in their opinions than their MIT counterparts" (Graddy 2014, 14).

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even if they build in such features as sticky prices, an incongruity that has not gone unnoticed.[35]

Although Friedman resurrected the study of monetary economics and thereby changed the field of macroeconomics, the specific policy prescription of "monetarism"—that the central bank should limit the growth in the money supply to a stable rate, say 5 percent per year—is widely considered to be a failure. Questions remain about how influential Friedman's monetarist ideas were in affecting the behavior of central banks and monetary policy more generally. Nelson (2007) reports on Friedman's commentary on monetary developments in the United States starting in 1961. In the case of the United Kingdom, Friedman was considered either very influential (Nelson 2009) or hardly influential at all (Forder 2016a) or very influential (Nelson 2017, in response to Forder). Whatever the case, the idea of a fixed growth rule for the money supply never found much favor among central bankers. Furthermore, monetary economists and central bankers almost never focus on "the money supply" these days; Laidler (2010) is not alone in noting the absence of the money supply from contemporary monetary economics. One reason is that by the early 1980s deregulation led to financial innovations that weakened the link between changes in the money supply and inflation. As Friedman himself confessed in a 2003 interview, "the use of quantity of money as a target has not been a success," adding that "I'm not sure I would as of today push it as hard as I once did" (*Financial Times*, June 7, 2003).[36]

Why did Friedman push the idea of a monetary growth rule for so long? Much like Simons had a generation earlier, Friedman was grappling with how to achieve monetary stability, which he viewed as a prerequisite for economic stability. As he explained at length in his Henry Simons Lecture (Friedman 1967), this is another example of Simons's impact on him. Whereas Simons wanted the monetary authority to target the price level, Friedman wanted to stabilize the growth rate of the money supply. Tavlas (2015) contrasts the two positions and argues that Friedman's research on *The Monetary History* convinced him to change his views. Glasner (2017) also shows that the "rules versus authorities" or "rules versus discretion"

35. "A look back at the intellectual battle lines between 'Keynesians' and 'monetarists' in the 1960s cannot help but be followed by the recognition that perhaps New Keynesian economics is misnamed," DeLong (2000, 85) observes. "We may not all be Keynesians now, but the influence of monetarism on how we all think about macroeconomics today has been deep, pervasive, and subtle."

36. And regarding bank regulation, see how Rockoff (2011) contrasts the views of Friedman and Adam Smith.

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debate, which Simons elaborated on, has been a perennial one that goes way back in time.

In reinvigorating the study of monetary economics, Friedman once claimed that he was drawing on an "oral tradition" (from Viner, Simons, and Lloyd Mints) at the University of Chicago in the 1930s. This oral tradition at Chicago, Friedman and others argued, might explain why economists there were less susceptible to the Keynesian revolution than at other academic institutions, such as Harvard. Patinkin (1970) famously pushed back against this idea, Friedman partially retreated, and the issue became a fertile one for historians of economics. In the 1990s, a series of papers investigated the state of early monetary economics at Chicago. Siding with Friedman, Tavlas (1997, 1998, 2017) argued that Chicago economists of the 1930s were early proponents of using the quantity theory of money to understand business fluctuations. Tavlas further shows how they advocated public works projects and budget deficits as a means of putting money in circulation. Meanwhile, Laidler (1993, 1998a, b) argued that Friedman's views on the monetary causes of the Great Depression were anticipated by a group of Harvard economists (Allyn Young, Lauchlin Curry, and John H. Williams) under the influence of Ralph Hawtrey.[37] Much of the subsequent debate explored the similarities and differences between the Harvard and Chicago memoranda on the Great Depression.[38]

Friedman was such a dominant figure at Chicago, and so influential in the wider world, that comparatively little scholarly attention has been directed to other leading Chicago economists during that period. George Stigler has been the focus of some attention, much of it critical. Stigler has been criticized for creating a "Coase theorem" to the neglect of Coase's larger message (Medema 2002, 2011; Marciano 2017), for being too dismissive of the views of Adolf Berle and Gardiner Means on ownership and control of the modern corporation (Medema 2010), and for having propounded a simplistic interpretation of Adam Smith (Evensky 2005; Samuels and Medema 2005; Medema 2009). Freedman (2008) calls him a political partisan. Nik-Khah (2011) is critical of Stigler for having a political agenda that dovetails with the interests of big business, thereby abetting a neoliberal agenda. (These charges are somewhat curious in that Stigler never left academia or wrote for a broader audience, and often

37. On the latter, see Ahiakpor 2010, Laidler and Sandilands 2010, and Alacevich, Asso, and Nerozzi 2015.

38. Not everyone has found this debate edifying; in DeLong's (2000, 87) view, "There is nothing of substance at stake in such debates."

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thought that Friedman was wasting his time trying to influence public policy.) Still, Stigler receives some credit (or blame) for extending price theory into areas such as regulation and politics, a forerunner of public choice. Stigler's work on government regulation is considered foundational and has even been thought to play an intellectual role in the deregulation wave of the 1970s.[39]

Ronald Coase's influential work on the nature of the firm and the role of social cost has been studied extensively by Medema (1994), Marciano, and others. Although he spent the better part of his career at Chicago, in the law school, he was certainly not a "Chicago school" economist in the sense that Friedman and Stigler were. He had a very different perspective on economic method and has been called a modern institutionalist (Medema 1996). His papers have only recently been opened to researchers at the University of Chicago special collections library. However, interest in the "Coase theorem" ensures that historians of economics will continue to explore his ideas, although Medema's (2018) massive survey of work on the theorem may convince others that the marginal gains from further work are low.

Other economists at Chicago in the 1950s and 1960s have also received some attention. Moggridge (2008) wrote a major biography of the international economist Harry G. Johnson, who served on the Chicago faculty from 1959 until his death in 1977.[40] Theodore W. Schultz, who made important contributions to agricultural economics and human capital, seems worthy of further study. Historians of economics have focused mainly on his role in support of the growth of the workshop system at Chicago (Emmett 2011) or his pre-Chicago role in the Iowa butter-margarine controversy (Seim 2008; Burnett 2011a, b), with less focus on his work on agriculture or human capital, or his long service as department chair. As the father figure to the "Chicago boys" who influenced economic policy in Chile in the 1970s, and Latin America more broadly, Arnold Harberger is a leading figure in Valdés (1995) and even the 2015 documentary movie *Chicago Boys*.

More recent figures are also beginning to be the focus of study. If there was a transition at Chicago in the mid-1940s, another transition took place in

39. See the unpublished dissertation by Eduard Canado on the deregulation movement in the 1970s.

40. Johnson also wrote on macroeconomics, some of which was critical of Friedman, even though he is thought to have been "converted" from Keynesianism to monetarism; see Boyer 2011.

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the mid-1970s with the retirement of Friedman and the arrival of Robert E. Lucas, Jr., bringing the new classical approach to macroeconomics to Chicago at the expense of old-fashioned monetarism (Ramalho da Silva 2017).

Chicago and Neoliberalism

Perhaps the most controversial work on the Chicago school, in terms of recent research, has been its relationship to the revival of "neoliberalism."[41] There is no readily agreed upon definition of neoliberalism, but it is generally taken to imply a market fundamentalist approach to economic policy that emphasizes deregulation and privatization, suggesting a more libertarian bent to public policy that wants to "roll back the state" and give greater scope to market forces. It is frequently used as "an all-purpose term of abuse" by those who opposed such policies (Jackson 2014, 194). These critics claim that it puts "market values" above "social values" and, by seeking to minimize any role for government, supposedly undermines democratic collective action.

The intellectual origins of neoliberalism are often traced back to the 1930s and the reaction against the collectivist policies of the New Deal in the United States and statist policies in Europe. With Knight and Simons attacking the corporatist and planning elements of the New Deal and supporting the free enterprise system, Chicago has been a place where historians such as Burgin (2009) have located the mainsprings of neoliberal thought. Mirowski and Plehwe (2009) have linked the rise of neoliberalism to the formation of the Mont Pelerin Society by Hayek in 1947.[42]

Van Horn and Mirowski (2009) focus on Hayek, Simons, and Director as the key individuals responsible for the formation of the postwar "Chicago school" in 1946 that made it a part of the "neoliberal thought collective." The story goes roughly as follows. As we have seen, Simons wanted to create an institute devoted to the study of the free enterprise system. He was assisted in this endeavor by Hayek, who had ties to the conservative businessman Harold Luhnow, the president of the Volker Fund and apparently the Charles Koch of his day.[43] Luhnow was to provide the financial backing for Simons to bring Director back to Chicago to head a "Free

41. See Mirowski and Plehwe 2009 and Nik-Khah and Van Horn 2016.

42. The Chicago economists who attended the first meeting included Frank Knight, Milton Friedman, and Aaron Director, along with George Stigler, who was still a few years away from returning to Chicago.

43. On the Volker Fund, see McVicar 2011.

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Market Study." Simons died in 1946, but Director did return to Chicago to run the short-lived project and to carry on Simons's teaching in the law school.[44] While Director never wrote the major book in defense of free enterprise that Luhnow wanted, he became a key figure in establishing a Chicago tradition in law and economics and stimulated a complete rethinking of antitrust policy, giving greater space for corporate business practices without legal restraint (in the eyes of critics).

In this telling, Aaron Director is arguably the key figure in the rise of the Chicago school. As mentioned earlier, Director is a fascinating figure about whom we know very little. Van Horn (2010) explores his early life as a labor activist who came to Chicago to study labor economics from Paul H. Douglas, but came under the influence of Frank Knight and eventually became a staunch libertarian. The story of Director's ideological transformation would be a fascinating one that remains to be told, if the archival materials exist that would allow it to be told. Unfortunately, Director is likely to remain an enigmatic figure because he had few publications and there is a scarcity of primary source material on him. Although Director published little, Friedman, Stigler, Coase, and many others have testified to the powerful influence that he had on them.[45]

At the law school, Director had a large impact on antitrust economics and the policy views of Chicago economists on such matters as industrial concentration and various business practices that were previously thought to be anticompetitive. The common implication is that Director led Chicagoans to view monopoly quite differently from the way Simons had. In Director's view, monopoly was not all that pervasive, unless supported by government, and various business practices (resale price maintenance, tying arrangements, exclusionary contracts, predatory pricing) were not damaging to competition. In Van Horn's (2009, 219) view, Director's teachings "marked a crucial watershed in the emergence of neoliberalism at Chicago." Thus, "Chicago law and economics should be regarded as one of the path-breaking neoliberal movements in modern intellectual history." Van Horn and Mirowski (2009, 140) go on to say that "the rise of the Chicago School must be understood as one component of a specific larger transnational project of innovating doctrines of neoliberalism for

44. Director paid homage to Simons by collecting his major papers for publication after his death. In the introduction to this book, Director said that Simons, "through his writings and more especially through his teaching at the University of Chicago . . . was slowly establishing himself as the head of a 'school' " (Simons 1948, v).

45. See Stigler 2005 and Peltzman 2005.

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the postwar world." Thrown into the mix is the suggestion that this radical transformation made Chicago economists apologists for big business. Going further, they argue that this transformation was bought by big business, acting through the Volker Fund, which "directly exerted its influence throughout the duration" of Director's Free Market and Antitrust projects in the late 1940s and early 1950s (Van Horn 2009, 208). There is no doubt that Director had an enormous role in changing contemporary views of antitrust law, and that his role remains controversial.[46]

One problem with this view is that Lunhow money does not seem to have bought much of anything. Director himself confessed that the free market study "never amounted to very much" (Kitch 1983, 181). Director seemed incapable of writing for publication or proselytizing much on behalf of the free market, although his students (including Robert Bork) published many articles inspired by his ideas. The question is whether the role of Director can sustain the weight that critics of Chicago neoliberalism put on him. Indeed, this rather conspiratorial story of big business influence has been met with resistance. Caldwell (2011, 302) accepts that Simons, Hayek, and Director were key figures, but argues that the larger narrative that Chicago was supposedly building a project devoted to neoliberalism is "deeply flawed" because it "relies much less on archival material and contains claims (often in the form of hints and innuendoes) that have not been substantiated." Furthermore, the big-business conspiracy story seems to rule out the simple hypothesis that changing circumstances and new research findings were responsible for the transition, rather than simply the bidding of a paymaster.

How much of a deviation from Simons's views were Director's? When compared to the 1934 Simons's pamphlet *A Positive Program for Laissez Faire*, Director's views seem to diverge, but not so much when comparison is made to Simons's 1936 article "The Requisites of Free Competition." There, Simons (1936, 74) says that he was "not much distressed about private monopoly power" on its own, but argues that monopoly is problematic because it seeks government regulation to entrench its position.[47] And, if Director and the new generation argued that the extent of monopoly in

46. See Giocoli 2015 and Bougette, Deschamps, and Marty 2015. Olsen (2017) sees the invocation of consumer interest on the part of Chicago economists as part of a justification for deregulation.

47. When he criticizes the idea that government should enforce "fair prices" for manufacturers, for example, he explains his position in a way that very much sounds like Stigler's work on regulatory capture.

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America was commonly exaggerated, they also said that the extent of labor monopoly was exaggerated (Friedman 1951). If they were embracing a pro-business agenda, this labor stance is curious because, presumably, business would have been strongly antiunion (as Simons was, strongly). Thus, in saying that the distortions caused by labor monopoly were small, the new generation was treating business and labor power symmetrically. Finally, even though Friedman and Stigler suggested that the extent of monopoly was commonly exaggerated, neither rejected the use of the antitrust laws to prevent collusion and even mergers. Indeed, throughout his career, Stigler took an interest in antitrust enforcement, particularly with respect to mergers, and was always concerned about monopoly, as much for their political effects as their economic ones.[48]

That said, the Friedman-Stigler-Director generation appeared to be much more skeptical about political action than the Knight-Simons-Viner generation. Many economists—including James Buchanan, as well as Ebenstein (2016) and Colander and Freeman (n.d.)—have lamented the transition from the eclectic classical liberalism of Knight, Viner, and Simons to the libertarianism of Friedman, Director, and Stigler.[49]

What about other figures at Chicago, such as Hayek? Van Horn and Mirowski (2009, 158) believe that Hayek played a "pivotal role in getting the Chicago School up and running" since it was Hayek who had the contact with Luhnow to raise the money to bring Director to Chicago. Van Horn (2013b) explores the relationship between Hayek and Director in more detail. Yet, while Hayek helped facilitate Director's move to Chicago, he did not play much of a role in the development of any Chicago school itself. Hayek eventually joined the faculty at Chicago in 1950, but he took a position with the Committee on Social Thought, where he worked on *The Constitution of Liberty* for much of the decade.[50] In that position, Hayek played virtually no role in the rise of postwar Chicago thinking, including any alleged neoliberalism. By this time, Hayek was no longer doing research in technical economics. He had little impact on or interaction with other members of the department of economics, and in fact was somewhat isolated from the economists in the economics department, business

48. See reason.com/archives/1984/01/01/interview-with-george-stigler/print. As late as 1984, Stigler said that the antitrust law was a public interest law, stating that "I like the Sherman Act. I don't like the Clayton Act." And see Friedman in *Capitalism and Freedom* (1962, 132), where he supports enforcing the antitrust laws against both business and labor.

49. Buchanan's 2010 address can be viewed here: www.youtube.com/watch?v=7_atDse06r4.

50. Based on archival evidence, Mitch (2013, 225) makes clear that family reasons were key to bringing Hayek to Chicago.

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school, and law school.[51] As Van Horn (2013a, 91) concludes: "The archival record—that is, the Director papers, the Friedman papers, and the Hayek papers—confirms that Hayek had a negligible impact on the rise of the post-war Chicago School during his time at Chicago."

The one person who is largely missing from this story of Chicago neoliberalism is Friedman himself. Surprisingly, the literature on the rise of neoliberalism has not focused to a great extent on Friedman, although he is a key figure of interest in Cherrier 2011 and Burgin 2012. With the possible exception of Hayek, Friedman is the best known public advocate of free markets and limited government thanks to his *Capitalism and Freedom* (1962), the PBS television series and companion book *Free to Choose* (1980, coauthored with Rose D. Friedman), as well as his column in *Newsweek* that ran from 1966 to 1984. Friedman only began writing for a more popular audience in the mid-1950s. To say that the Volker money bought much, one has to say that it led in some way to Friedman's *Capitalism and Freedom* about fifteen years later. And that is what they say: Van Horn and Mirowski (2009, 166–68) argue that *Capitalism and Freedom*, "a corporate neoliberal version of *Road to Serfdom*, appears to have finally provided Luhnow with the book he had arguably paid for many times over." Calling Friedman an "intellectual for hire," they conclude that he "accomplished what Hayek never did and what Director was apparently incapable of doing."

In my view, this is going way too far. The suggestion that Friedman's book was "bought" by Luhnow or anyone else is ludicrous. Going through Friedman's papers at the Hoover Institute should convince anyone that Friedman was someone with deeply held convictions and was not a sellout to corporate interests. While the line between Friedman's "scientific" and his "political" writings may have been blurred at times, as Cherrier (2011) has examined, the hint that Friedman was a cog in someone else's machine or the implication that his intellectual integrity was for sale is a stunning charge to make without evidence.

Furthermore, as already noted, the return of Friedman to Chicago as a faculty member in 1946 to replace Viner had nothing to do with outside money. Mitch (2016, 1716) carefully goes over the archival evidence on the department deliberations in filling faculty slots in 1946 and concludes:

51. Arnold Harberger, who was on the Chicago faculty from 1953 to 1991, reports: "There was amazingly little interaction between Hayek and the rest. I think it would have been more interesting if there had been more interaction. There was a great difference in focus between Hayek (the Austrians) and Chicago as a whole." See www.mpls.frb.org/publications/the-region/interview-with-arnold-harberger.

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"Rather than reflecting the conservative, free-market, pro-business elements that putatively brought Friedman and Hayek as well to Chicago proposed by van Horn and Mirowski . . . currently available archival evidence suggests that Friedman was actually a compromise candidate between the recognized rival factions within the department, [one] associated with the Cowles Commission led by Marschak on the one hand and that led by Knight and his protégés on the other."

Perhaps the most important question about the postwar Chicago school is tracing exactly how the ideas developed in research workshops or published in *Newsweek* columns were received by the public and motivated those working in the policy arena. Backhouse (2005) believes that the rise of free market economics in the 1970s was the result of "learning from past mistakes." That is, economic developments, such as higher inflation and unemployment, broke down the postwar consensus and were responsible for the rethinking of policy. He points to several intellectual strands of thought, such as rational choice and public choice analysis, as well as the rise of free market networks (such as think tanks), for the spread of new ideas. The Chicago school is credited with being only one of many factors in this development. In fact, it is somewhat ironic that so much has been attributed to the influence of the Chicago school when Stigler was famously dismissive of the notion that economists had very much effect on policy and Friedman argued that experience was more important than ideas in changing the role of government in society. The never ending debate about the role of the state in the economy ensures that future historians of economics will continue to look into these matters and trace their impact on policy debates and policy outcomes.

Conclusion

Reflecting on his education at Chicago in the late 1960s, Rudiger Dornbusch (2000) wrote that: "Chicago economics was built on two pillars: price theory and monetary theory." These pillars were established in the 1930s by Viner, Knight, Simons, and Lloyd Mints, and carried on later by Friedman and Stigler, among others, but with a more libertarian public policy bent. This intellectual continuity of the price theory and monetary theory traditions, and the influence that it has had on public policy, has been fascinating for scholars to investigate. At the same time, while the term *Chicago school* is a useful shorthand for the common themes (emphasis on the power of markets and limitations of the state, the impor-

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tance of monetary discipline to control inflation), this review suggests what most scholars probably already knew: the term obscures as much as it reveals. Perhaps then, like Patinkin (1980), we should speak of the Chicago tradition and not a Chicago school to the extent that a tradition implies a loose commonality of views whereas a school implies a greater conformity of opinion or doctrinal rigidity.

As Chicago continues to attract the attention of researchers in the years to come, in what directions should researchers focus their questions? While the contributions of Gary Becker and Robert Lucas are sure to merit examination in coming years, the field of finance has been relatively neglected. The creation of this field, as well as the efficient markets hypothesis of Eugene Fama, has been discussed in more popular accounts such as Bernstein 1992, but not as much by historians of economics with exceptions such as Jovanovic 2008.

Another area of research would be to identify how distinctive Chicago appeared to be in the 1950s and 1960s compared with peer institutions. Now that MIT is also the object of scrutiny by historians of economics, as in Weintraub 2014, it seems that a comparison of the research environment across different departments and their different approaches to matters of theory and policy would be an interesting line of inquiry. MIT was equally influential in the development of postwar economics, but arguably less distinctive in terms of policy views and obviously quite different in terms of research methods.

Chicago could also be usefully contrasted with other "schools" of thought, such as the Austrians and the Virginia school of political economy or the UCLA school of Alchian and Demsetz (sometimes called the University of Chicago at Los Angeles, or Chicago West). Vienna and Chicago both celebrated markets and cast a skeptical eye on government, but the two had very different views on economic method (a priori theorizing versus empirical testing) and monetary arrangements (gold standard or currency competition versus monetary rules and fiat currency), as Paque (1985) and Skousen (2005) examine. James Buchanan led the Virginia school in a very different direction than Chicago went (Brady 2007; Burns 2016 on monetary constitution; Mitchell 2001 on public choice; Backhouse and Medema 2012 on government failure; and Johnson 2014 on public finance). Boettke and Candela (2017) argue that there are closer intellectual links between the Knight/Viner/Simons generation of Chicago economists and the Alchian/Buchanan/Coase generation, and not so much with the Friedman/Stigler/Becker group.

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Finally, more work could be done on the international success of the Chicago school in the 1980s and 1990s, which led Shleifer (2009) to declare the period "The Age of Friedman." Some work has been done on the controversial case of Chile by Valdez (2008) and Montes (2016), and Latin America more broadly by Biglaiser (2002). Chicago economics was also popular in Eastern Europe after the collapse of communism. And there is further scope for looking into the influence of Chicago on the economic policy debate in the United States and Britain, particularly with regard to deregulation.

In other words, there are many avenues to be explored by historians of economics with respect to the impact of Chicago economists on the discipline of economics and the world beyond the Midway.

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