From Department to School: the Mid-Century Transition in Chicago Economics

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Abstract

The Chicago School of Economics has increasingly been considered a phenomenon located in the postwar period, product of a transition that happened in the 1940s. Broadly speaking, the transition was from a pluralistic Department of Economics, in terms of both intellectual and political views, to a distinguished, although not necessarily homogeneous school of thought. This transition was not out of context, as neoclassicism rose to dominate American economics and the Cold War context made itself felt in academia. A general statement of the transition, however, is not sufficient to elucidate the process as it happened at Chicago: to do so, we must evaluate the specific institutional forms established at its Department of Economics to enforce a specific approach to the discipline, encompassing both theoretical and political elements. This paper seeks to advance in that understanding of the Chicago School's birth as a particular institutionalization of broader transformations in American economics.

1. Introduction

The Chicago School of Economics has increasingly been considered a phenomenon located in the postwar period (Irwin, 2018; Stapleford et al., 2011; Emmett, 2010a). It was traditionally understood as the natural development of a style of thought, whose main representatives were Jacob Viner, Frank Knight and Henry Simons, in broad terms already existent. Growing importance, however, has been attributed to a transition that began to happen in the 1940s and that gave birth to a strain of economic thought which did present some continuity with the preceding tradition, but was effectively original.

Broadly speaking, the transition was from a pluralistic Department of Economics, in terms of both intellectual and political views, to a distinguished, although not necessarily homogeneous school of economic thought². The prewar Department, which presented an important institutionalist element

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² What is meant by Chicago School will be discussed ahead, but we should anticipate now that it is not equivalent to the Department of Economics at the University of Chicago, although our discussion in this text centers on the Department's transformations. Not all members of the Department were members of the School, nor did all of the latter's members have some affiliation to the Department. Because of that, our argument throughout the text is not exhaustive, but is deemed to apply to the fraction of the Chicago School centered on the Department of Economics at the University of Chicago, or rather to comprehend how the Department's transformations were part of the School's formation, even if the latter exceeded the former in scope. People affiliated with the Chicago School can be found in other economics departments, as is the case with Armen

(Rutherford, 2003; 2010; Fiorito, 2012) coexisting peacefully with different intellectual approaches to economics and political positions in its faculty and student roster, was markedly pluralistic. Its postwar format, dominated by neoclassicism and pro-free market political positions, would be a lot less open; institutionalist faculty and students, and positions more generally, would mostly fade³.

This transition, in the postwar United States, was not out of context. In American economics in general, the postwar period saw a notable rise in the influence and prestige of neoclassicism (Morgan; Rutherford, 1998). Politically, the situation was not as straight-forward, but some elements of the Cold War political environment can be considered as favoring pro-free market positions broadly conceived. To grasp the significance of the transition's political dimension it would be necessary to further evaluate the general historical processes happening in the United States in the postwar decades, and how they were reflected in academic economics. We do not intend to have done so here in a sufficient manner, but we attempted to take this context into account in its broadest lines to show that Chicago was not a completely isolated case in the political aspects of its transformations, even though, as we argue later, it had its peculiarities in that realm.

A general statement of the transition, however, is not sufficient to elucidate the process' features as it happened at Chicago. To advance in that direction, it is necessary to assess the forms in which the new features of American economics were institutionalized there. This process took specific forms in Chicago, which are relevant to investigate the intellectual production of its members. Chicago's neoclassicism has been more widely recognized as a particular branch of economic theorizing, but its political element is subject to greater controversy. Particularly, the identification of a Chicago neoliberalism has been discussed in recent academic work within the history of economics.

The remainder of the chapter is organized as follows. Section 2 evaluates the transition in American economics, whereas Section 3 evaluates the transition in Chicago economics, in more detail relative to the general American process due to the greater relevance Chicago evidently has as our main object. In Section 3, we first present the pluralistic character of the pre-1940s Department, moving on

Alchian at the University of California, Los Angeles (Benjamin, 2010; Mirowski, 2011) and W. Allen Wallis at the University of Rochester, where he occupied the post of president after heading Chicago's Graduate School of Business (GSB), and in other sciences' departments, such as Aaron Director at Chicago Law School or George Stigler at the GSB (Nik-Khah; Van Horn, 2012; Van Horn; Nik-Khah, 2020).

³ The transition happened gradually over time. Accompanying Rutherford (2010), who has defended the increased reduction of pluralism beginning in the mid- to late-1930s, and Mitch (2016; 2020), who has argued for the maintenance of some degree of pluralism lasting until the first half of the 1950s, we find it proper to consider that the transition began before the 1940s and happened mainly throughout that decade, with the old pluralistic Department still leaving some reminiscences in the early 1950s. Once complete, the transition did not render alternative approaches absolutely non-existent in the Department, but created an environment mostly dominated by the Chicago School approach - sufficiently dominated to create a generalized sense of distinctiveness regarding Chicago economists, which Miller (1962) and Brofenbrenner (1962) pioneerly identified.

to discuss Chicago neoliberalism, and finally the ways in which the transition was institutionalized at the Department, pointing to neoliberalism as one the main elements that helped to shape Chicago's specific form of institutionalization of the transition. Some concluding remarks are made in Section 4.

2. The transition in American economics

In the interwar period, American economics did not have the strong prevalence of a single, even if not completely homogeneous, school of economic thought. In contrast with the postwar decades, where different branches of neoclassicism largely prevailed in academia, interwar American economics was pluralistic in three senses (Morgan; Rutherford, 1998): institutionalism and neoclassicism coexisted in academia, and within departments of economics; institutionalism and neoclassicism both presented important heterogeneities within each of them; and within the same individual economist positions of institutionalist and neoclassical inspiration coexisted.

This pluralism did not restrict itself to academia, but translated into policy influence. Following the proclaimed-to-be-neutral political activism the economists had exercised during the Progressive Era to attain greater social relevance and scientific credibility (Leonard, 2015), in the 1920s and 1930s neoclassical and institutionalist economists continued to influence governmental policies. This influence was exercised differently according to the political leaning of the economist (Leonard, 2015) and to his or her closer affiliation to neoclassicism or institutionalism, which had different conceptions of the economist's role in society (Biddle, 1998, p.112-114), but there was no impediment to the influence of an economist based on his or her theoretical or political affiliations.

When influencing economic policies, economists could opt for a variety of intervention or planning perspectives and associated instruments (Balisciano, 1998). Management of macroeconomic variables, social control over production processes through government coordination, and rational and scientific management of businesses and industrial activities led either by business managers or by scientific experts were all legitimate ways the economist and his or her economics could interfere with political activities and governmental interventions on the economy, and on society more broadly.

The essence of the transition from this pluralist environment to the dominance of neoclassicism seems to have been a shift in the conception of what a scientific economist is and how he or she should interact with the real world. The shift consisted mainly of a change in the form (alleged) value neutrality and scientific distancing from the object of study were conceived. Whereas the search for scientific neutrality as a socially displayed value was already present in the economics profession, in the postwar period it was pursued chiefly through a specific form of producing economic knowledge:

mathematical formalism, usually oriented by the rational choice theoretical framework⁴. Mathematical formalism and the rational choice theoretical framework proliferated outside of economics, influencing other social sciences (Erickson, 2010), and were part of the process of proliferation of the economic apparatus of analysis to traditionally non-economic phenomena (Fleury, 2010), but it was within economics that they attained the most profound influence, being accepted with less epistemological controversy in comparison to other social sciences (Isaac, 2010).

The reasons scholars have pointed to this process, which has been qualified as a revolution in economics (Blaug, 2003), are a few different ones, supporting the claim that the transition to postwar neoclassicism was a complex phenomenon, non-reducible to a single explaining factor (Morgan; Rutherford, 1998). The search for scientific status in a changing scientific environment (Barber, 1996; Solovey, 2001) and the necessity to adequate economics' claims to a political environment marked by the Cold War (Balisciano, 1998; Bernstein, 1998; Barber, 1996; Goodwin, 1998) seem to be the central factors in explaining the general transition towards the formalization of economics, and the specific ways in which they acted upon the science can help explain the benefits this process represented to neoclassicism in detriment of the American institutionalist tradition.

The search for scientific status suited the neoclassical way of understanding economic phenomena through the lens of rational agents acting upon a world of relative scarcity in that it did not account for elements of power or historical processes as explaining factors for economic behavior, and therefore tended to avoid accusations of partisanship. This was also important for the Cold War environment, especially in the McCarthyism period (1948-1956), when even Keynesians were being persecuted as communists and academic freedom was effectively at a low point (Mata, 2010, p.80). The Cold War environment, however, was not solely demanding of (displayed) political neutrality, but also of practical guidance to public policy, in both domestic and international realms, and neoclassicism, with its cost-benefit analyses obtained through rational choice mathematical models, served the task appropriately. Military (Solovey, 2001) as well as more regular social and economic matters (Fleury, 2010) were approached within the framework of neoclassical economics very easily, in a manner that appeared to be scientifically neutral and reliable.

⁴ Mathematical formalism, although as close to unanimity as it gets when it comes to transformations in economics in the twentieth-century, did not achieve its canonical form in the Chicago School tradition. Chicago economists (particularly Friedman) surely used mathematics, but the way they did it contrasted with the mathematical models created by Cowles Commission's economists, for example, with whom Friedman was engaged in methodological and theoretical arguments during his first few years at Chicago. We can say Chicago inserted itself in (and helped to shape) the emerging mainstream, but it did so perhaps with recourse more to the rational choice type of reasoning than to mathematical formalisms (although it did use the latter, in a different fashion from general equilibrium analyses). See also note 6 ahead.

Enforcing this transition in the conception of the scientific economist that favored neoclassical economics was - certainly not exclusively - the funding of academic activities (Goodwin, 1998; Solovey, 2001). The military had an important influence in the patronage of economics in the postwar period, but other funding sources, such as the government in its non-military branches, private foundations and corporations and higher education patrons, also enacted a similar shift in the kind of economic knowledge they valued and financed. Two of the three traditions that dominated neoclassical economics - and therefore economics in general - in the postwar American context (Mirowski; Hands, 1998), the Chicago School and the Cowles Commission, received important funding from private corporations (Van Horn, 2018) and military initiatives (Mirowski, 1999), respectively, and the change in the funders' parameters of what good economics should look like certainly influenced the kind of science produced by the economists at Chicago and at Cowles.

3. The transition in Chicago economics

Meanwhile American economics went through this important transition, Chicago went through its own. The American conception of scientific economics and its equally relevant effects on the type of theoretical production socially valued changed entering the postwar period, at the same time that the Department of Economics at the University of Chicago abandoned its early theoretical and political pluralism in favor of the establishment of a relatively coherent school of thought. The transformations in Chicago were parallel to those of American economics in general, but a couple of elements made it a distinct school of thought within postwar American neoclassicism, namely a specific approach to neoclassical theory and the influence of the neoliberal political movement, then in its early steps. Those elements were crystallized in institutional structures that nurtured a relative unity within the Department's faculty and student rosters and intellectual production, even if heterogeneity and important disagreements did occur and were constitutive of its functioning.

3.1. Prewar pluralism

In the Department of Economics at the University of Chicago, pluralism was an important feature from its origins. Although first headed by a political conservative, in its faculty and theoretical production the Department showed important variety. This manifested itself in the cohabiting of institutionalists and neoclassical economists, which lasted until the mid- to late-1930s, when neoclassicism began to dominate (Rutherford, 2010; Fiorito, 2012). Even after the last prominent institutionalist economist at Chicago, John Maurice Clark, left for Columbia in 1926 (Rutherford, 2003, p.361), the Department continued to nurture a strong institutionalist element, continued in important

part by Frank Knight and his influence on graduate training at Chicago both through his course on "Economics from an institutional standpoint" and his influence on the price theory course and other PhD requirements (Asso; Fiorito, 2013, p.64). Despite being an important critic of the institutional tradition (Fiorito, 2000, p.271), Knight had great intellectual respect for it and for the institutionalists, signaling the pluralism of the times.

The Department was headed from 1892 to 1916 by J. Laurence Laughlin, but his political inclinations did not substantively affect it. An economic historian trained at the then-conservative Harvard tradition on the subject (Mitch, 2011, p.241), Laughlin was considered one of the most conservative economists in the country (Coats, 1963, p.489), and in both his own work and public debate he defended the interests of businesses in opposition to those who sought to promote social reform and market regulation (Mitch, 2011, p.241). His conservative ideological preferences, however, did not translate into the Department's hiring policy or intellectual production. During Laughlin's twenty-four year heading of the Department, it was a leading center for economic heterodoxy (Coats, 1963, p.491).

In fact, Chicago "has a strong claim to be seen as the birthplace of what became known as 'institutional economics'" (Rutherford, 2010, p.26)⁵. The Department of Economics up to 1920 had housed some of the most prominent institutional economists, such as Wesley C. Mitchell, Walton Hamilton, John Maurice Clark, and Thorstein Veblen, the latter being in Chicago from 1892 to 1906, a period during which he produced some of his major works (Rutherford, 2010, p.25). Due to its systematic character, the presence of institutionalists side by side with other, neoclassical economists was not an exceptional concession from Laughlin, but an institutionalized practice of nurturing different approaches to economics inside the Department.

Around the 1920s, some of the figures often considered precursors of the Chicago School started to arrive at the Department. Jacob Viner came in 1916, and attained full professorship in 1925 (Fiorito, 2012, p.832); in 1927 arrived Frank Knight and Henry Simons. Two economists who also had influence on the School, Paul Douglas and Henry Schultz (Reder, 1982, p.3), arrived respectively in 1920 and 1926. Those economists were at times critical of the institutional tradition that was so relevant in the Department's intellectual production, but did not share a coherent and unified viewpoint (Rutherford, 2010, p.29) and had important disagreements among themselves and with what would become the Chicago School. Nonetheless, they brought to Chicago a tradition in neoclassical

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⁵ Schliesser (2012) argues that there was an effort, chiefly undertaken by Stigler, but with contributions also by Friedman, to erase in the standard narrative the influence of American institutional economics in the Chicago School. This is perhaps one of the reasons why Chicago is typically not associated with the institutionalist tradition - the most important one certainly being their adherence to the neoclassical theoretical apparatus.

economics, and in some ways, especially through Simons and Knight, influenced graduate students throughout the 1930s in favor of more pro-free market political views.

Those precursors carried with them some of the fundamental ideias that would be later resignified by the Chicago School. Paul Douglas and Henry Schultz, whom Reder (1982, p.3) calls "quantitative economists or pioneer econometricians", had an important role in promoting the use of mathematical methods and empirical quantitative analysis among Chicago economists in the 1930s, later an important feature of the Chicago School, although not properly distinctive of it⁶. Whereas Douglas pioneered the use of statistical analysis to empirical research (Cain, 2010, p.270), he did not fully adhere to, and was at times openly critical of the neoclassical paradigm - a manifestation of the latter's internal plurality in the interwar period. Henry Schultz, on the other hand, was a more strict adherent to neoclassical theory, and impacted profoundly not only Chicago but the whole of the economics profession by establishing a research agenda to empirically verify it, specially the neoclassical theory of demand (Mirowski; Hands, 1998; Hands, Mirowski, 1998; Hands, 2010).

Jacob Viner made his influence on the Chicago School felt mainly through his price theory graduate course. All students were obliged to take it, but many opted to take first Henry Simons' Econ 201, the undergraduate equivalent, before attempting Viner's version (Reder, 1982, p.8) due to his exceptional demand from students (Barber, 2010, p.343). Politically, however, he distinguished himself from what his then students would later become by his important involvement in New Deal policies⁷, and he would reflect after leaving Chicago for Princeton in 1946 that he did not consider himself a member of the Chicago School.

Henry Simons taught initially at the Department of Economics, then at the Chicago Law School, but his influence was not so much in the classroom or in academic publications as it was political. In fact, he was removed to the Law School due to his near absence of academic success and teaching abilities (Kasper, 2010, p.334). But his political views seemed to have been very influential. The liberal propositions contained in Simons' famous 1934 pamphlet *A Positive Program for Laissez Faire* were widely accepted in Chicago in the 1930s. Aaron Director, Milton Friedman, George Stigler and W. Allan Wallis, some of the then-Chicago students that would become leading members of the School, all

⁶ The use of mathematics, at least in the classroom, was less important in Chicago than elsewhere (McDonald, 2009, p.172), as the formalist revolution (Blaug, 2003) made it a feature generally valued in the profession. The empirical bent, on the other hand, has been argued to characterize the Chicago School (Hammond, 2010; Harberger; Edwards, 2021; Miller, 1962; Mirowski, 1999; Reder, 1982), although McDonald (2009, p.177) points to the problem-solving orientation of economic theory to be present in other places (namely Yale) as well (again, at least in the classroom). This empirical orientation is further discussed ahead.

⁷ Even though Aaron Director, Milton Friedman, George Stigler and W. Allen Wallis all participated in government activities during the New Deal era, by the time they were Chicago School economists (in the postwar period) they would judge negatively the general social reform purposes of New Deal policies. They would all be active members of the Mont Pèlerin Society, of which more will be said ahead.

seemed to accept them (Van Horn; Nik-Khah, 2018, p.100). Nonetheless, a few decades later they all came to partially reject those same propositions (Peck, 2011, p.xxxi-xxxii), something that has been argued to result from Simons' attachment to more classical liberal than neoliberal positions⁸ (Van Horn, 2011; Van Horn; Nik-Khah, 2018).

Simons' political positions, even if accepted by the most important of his students in the 1930s, among Chicago faculty in the 1940s were, according to his own perception, underrepresented. In 1945-46, despite the presence of liberals such as himself, Knight, Viner, H. Gregg Lewis and Lloyd Mints, Simons only truly politically trusted Mints and himself. He thought the Department needed some more liberals, but found it unlikely for this type of hiring operation to be executed since the Department's policy had been to build its faculty with different schools of thought proportionally represented (Van Horn, 2015, p.97), which attests for the plurality of the Department still in the mid-1940s.

Frank Knight's influence was probably the greatest among the precursors, and also notable were his differences with the more typical Chicago School economics. His main role was that of assembling the School's main economists in a close network of interpersonal relations, which Reder (1982) called the Knight affinity group. He was certainly aligned with liberal political positions, and the primary spot he attributed to neoclassical price theory in explaining economic behavior is also a feature he shares with the Chicago School. According to Emmett (2006), Knight had a relevant role in determining the content of graduate study at Chicago, particularly via his involvement in the course on price theory until the mid-1950s, through which he defended the relevance of and helped to consolidate neoclassical economic theory at Chicago⁹.

Nonetheless, his rejection of empirical and quantitative analysis in economics and the more general social-theoretic framework inside of which he understood the validity of price theory distinguished him from his most prominent students. Since at least the mid-1920s, Knight had been, under the influence of Max Weber's work, conceiving neoclassical theory as an 'ideal type' theory, to which economic reality was not and could not be directly correspondent. It was useful in understanding basic economic relations, but the content of those relations was historically and socially specific, and could only be adequately grasped through a comparative historical investigation (Emmett, 2006). Perhaps partly because of that methodological alignment, Knight was marginalized from the economics

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⁸ Caldwell (2011, p.312-316) has argued quite convincingly that Simons cannot be clearly considered a classical liberal. In our account, he might even be considered an early and under-investigated neoliberal, who died too soon to become an active part of the Mont Pèlerin Society and the more organized neoliberal political project that had it at its core. In any case, his positions were influential and later came to be partially rejected by the School.

⁹ Even if, as Asso and Fiorito (2013) have argued, he also preserved the pluralistic character of the Department through the same channels of influence.

profession more generally and the Department of Economics in particular (he was working mostly on the Committee on Social Thought in the 1950s), and the Chicago School economists do not seem to have received from him a profound direct theoretical influence.

The Department's variety in terms of faculty is an important institutional marker of intellectual plurality pre-transition. It is also an institutional marker of political plurality, since institutionalists tended to have positions different from those of Knight or Simons, for example. And in terms of political plurality, even those who are considered important influences on the Chicago School on theoretical or methodological grounds, such as Viner and Douglas, held political positions distinct from the typical Chicago ones.

3.2. The transition and neoliberalism

One important element in the transition that substituted this pluralistic Department of Economics for the distinguished postwar Chicago School was neoliberalism. Due to a coincidence of personnel (and to some extent, in its initial stages, of funders), Chicago is importantly linked to neoliberalism. We cannot overstate its importance as a specific political project in shaping Chicago economics, since the latter is importantly related to transformations that the United States political and overall social scenario was under and particularly to the transformations taking place in American economics. But neoliberalism's relation to Chicago cannot be underappreciated either, because Chicago economists were deeply involved with neoliberalism and a political commitment as relevant as that inevitably influenced their scientific activity (and *vice versa*), contributing to the distinctiveness of their interpretation of neoclassical theory in its ascension to dominance.

The polysemic character of neoliberalism demands some brief comments. It is sufficient to note here, following the major works on neoliberalism from the perspective of the history of economics, that it is a political project, organized in the postwar period primarily around the Mont Pèlerin Society (MPS), aimed at reinvigorating liberalism for its perceived challenges in the mid-twentieth century (Mirowski; Plehwe, 2015). The MPS was, at the time (although it still exists today), an organization that gathered many liberal personalities (politicians, journalists, businessmen, academics, etc.) to discuss the theoretical and practical features of this renewed liberalism in conditions of semi-privacy.

Apart from the presence of Chicago economists in the MPS, recent literature has highlighted the intricacy of the Chicago School to neoliberalism in a shared origin. The fact that Milton Friedman, George Stigler, Aaron Director and Frank Knight attended the MPS's first encounter in 1947 and that other Chicago School economists were also active members¹⁰ in the decades ahead would be sufficient,

¹⁰ Most notably in the early years, W. Allan Wallis was the MPS's Treasurer from 1948 to 1954.

in our view, to sustain that the neoliberal political project is something to be taken into account when investigating Chicago economics. But the important presence of the Austrian economist Friedrich Hayek in the founding of both groups is a link that is also worth examining to assess the strength of the connection.

The MPS was a Hayekian initiative unambiguously, but his role in forming the Chicago School is more controversial. Van Horn and Mirowski (2015) have put forth the argument that Hayek, through the mobilization of funds and personnel, achieved the establishment of the Free Market Study in the Chicago Law School in 1946. The latter was a project initially aimed at producing an American version of Hayek's best-selling *The Road to Serfdom* (1944), led by Aaron Director, an enthusiast of Hayek's political ideas (Van Horn, 2013), and with the participation of Chicago economists (including Simons and - as a late but welcome addition - Friedman) and lawyers. According to Van Horn and Mirowski (2015), this would be the beginning of an important shift in Chicago economics, marking the formation of the distinguished school of thought later recognized as the Chicago School.

The argument, then, is that the School's origins are part of Hayek's greater project to reinvent liberalism in the immediate postwar period (Van Horn; Mirowski, 2015, p.158). The influence of neoliberalism would be enforced by relatively close control of the intellectual production undertaken in the Free Market Study from its funders (whom Hayek connected to Chicago), the conservative Kansas City-based William Volker Charities Fund (Van Horn, 2018, p.484). The patronage of the study, then, is a central element, since the intellectual activity that took place within it could have been relatively independent in a different financial context.

Hayek's role in forming the School, however, was much more relevant in its early phases than it was from then on, when the actual economic doctrines characteristic of the Chicago School would be built (Van Horn, 2015). He initiated the process, but the more it advanced, the less it resembled an adaptation of Hayek's ideas for the American public (Van Horn; Mirowski, 2015, p.166). In 1950, Hayek would come to the University of Chicago, not to the Department of Economics but to the Committee on Social Thought, where he could more appropriately pursue his research interests unconstrained by the approach the Chicago economists were developing in departure from his own intellectual conceptions, closer at the time to social philosophy than to economics (Caldwell, 2011; Mitch, 2015).

An important criticism directed at the identification of neoliberalism as a relevant cause of the Chicago School's birth is the absence of sufficient evidence to assert the influence of corporate funding on the School's scientific production. Caldwell (2011, p.317-324) and Irwin (2018, p.761, 763), for example, point out that the presence of Volker money would not be sufficient nor necessary for Chicago

economists to sustain the political beliefs they did. Particularly in the case of Friedman, who Van Horn and Mirowski (2015, p.168) call a proud "intellectual for hire", Irwin (2018, p.763) argues that "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".

We agree with the general tone of the criticism. Although funding of scientific activity is certainly relevant in assessing its results (Backhouse, 2005, p.378; Goodwin, 1998), the relationship is not deterministic. We do not think, however, that this was Van Horn and Mirowski's main point, but rather that there was an important political element influencing Chicago economics due to the sharing by its members of neoliberal political beliefs and due to their active participation in the neoliberal political project's central organization. Recognizing the non deterministic influence of Volker Fund money in Chicago, then, does not seem to render the influence of neoliberalism any less relevant.

If we might not say that Chicago economics was the work of intellectuals for hire, or that corporate money bought certain theoretical and empirical conclusions, it would certainly be less controversial to state that political orientation is an important determinant of scientific inquiry. Value judgements, including political ones, can influence scientific activity in its objects of interest, methods of analysis, or interpretation of results. In the Chicago School's case, Emmett (2010a) argues the contrary causal link was predominant, with scientific conclusions influencing political positions. The balance of both effects (which certainly co-existed) is rather difficult to attain, but more reasonable than attempting it is considering Chicago theories as profoundly influenced by political beliefs and the latter, in turn, as shaped in their specific formats by the particular interpretation of neoclassical economic theory that was developed by Chicago School economists.

3.3. Institutionalizing the School

What was produced from the transition on was not an immediately homogeneous economic and political view. Rather, it is precisely in heterogeneity that what constitutes the Chicago School is observable. It is not so much a set of closed-ended theoretical, methodological or political propositions that characterize it, but a set of commom political and theoretical problems that were open to a range of different answers, made coherent among one another due to their institutionalized engagement with both Chicago-style neoclassical economics and neoliberalism (which were in turn shaped by that process of collective institutionalized interaction).

This understanding is coherent with the literature on schools of economic thought, which sees them not as monolithic intellectual blocs, but as fairly fluid collectives of thinkers¹¹, whose aggregation under the same label bothers some arbitrariness on the part of the investigator (Dow, 2004, p.284, 288; Negru, 2013, p.994-995; Koley, 2020, p.35-38). Schools of thought share some common general features in the realms of ontology, epistemology and methodology, as well as in the politico-ideological and ethical dimensions (Dow, 2004, p.277-278; Negru, 2013, p.987-988). These general features, however, are not static, but rather constantly changing over time due to the school's internal dynamics and its interactions with other schools of thought, so that internal inconsistencies are a normal feature of its functioning.

The distinct approach to economic theory that characterizes a school is developed and maintained by its institutionalization (Garnett, 2012, p.231-232; Koley, 2020, p.35). Curriculum, personnel, graduate funding, and the overall infrastructure and the material resources available to the organization within which the school of thought is developing or established are used according to the preservation of its specific approach, enforcing its continuity over time (which of course is never guaranteed and is subject to potential inflections and ruptures). To forge responses in terms of economic theory in a coherent, albeit not homogeneous manner, then, an institutional structure was created in the Department of Economics at the University of Chicago to enable the nurturing of a "Chicago subculture" (Reder, 1982, p.2). There was no answer given a priori; different ones were forged along the way, through a process of concerted and more or less delimited collective thinking. To institutionalize such a subculture, faculty composition, curriculum, academic training and research procedures were transformed.

In terms of faculty changes in the Department, 1946 was a seminal year (Mitch, 2016), but some prior events were also relevant. Beyond Simons' sudden death¹², in 1946 Jacob Viner left for Princeton, Milton Friedman was brought in to replace him teaching the price theory graduate course, and Theodore Schultz became chair of the Department of Economics. Before 1946, Oskar Lange, a prominent mathematical economist and member of the Cowles Commission for Econometric Research, then located at Chicago, left in 1945 to serve his national Polish government; Henry Schultz, one of the pioneer econometricians, had died in 1938; Paul Douglas also left Chicago to pursue a political career after serving in World War II; and Theodore Schultz had arrived from Iowa State University in 1943.

¹¹ This resembles Plehwe's (2018) use of the concepts of thought collectives and styles as a framework to study neoliberalism. On those concepts, see also Wojciech (2019).

¹² The conditions of Simons' death are detailed in Van Horn (2014).

Viner, although one of the intellectual precursors of the Chicago School, did not consider himself a member of it (Reder, 1982, p.7), and had important disagreements with its economics (Van Horn, 2011). As stated in a famous letter to Don Patinkin¹³, Viner did not realize there was a school of thought at Chicago when he was there. He only became aware of its existence when he returned to a conference after he had left the Department. To Patinkin, he wrote that "at no time was I consciously a member of it [the Chicago School], and it is my vague impression that if there was such a school it did not regard me as a member, or at least as a loyal and qualified member" (Patinkin, 1981, p.266, quoted in Reder, 1982, p.7, brackets added). His leaving, therefore, especially in the light of his substitution for Friedman, which was not obvious at the time (Mitch 2016), meant an advance in the path to build the Chicago School.

That Friedman was not the Department's obvious choice to replace Viner is telling of its institutionalized plural character still in the mid-1940s. At the time, the main division on that matter was between the Knight affinity group (including Knight, Simons, H. Gregg Lewis and Lloyd Mints) and the Cowles Commission's members (Jacob Marshak, Tjalling Koopmans, and not as a member but as a sympathizer, Paul Douglas¹⁴). Their political and methodological differences were relevant, and they manifested themselves in this dispute to fill Jacob Viner's role as teacher of the price theory graduate course when he left for Princeton. Names as varied as John Hicks, Paul Samuelson, Friedrich Hayek, Lionel Robbins and George Stigler, apart from Friedman, were considered, and initially Friedman did not rank in the higher half of the faculty's aggregate preferences (Mitch, 2016, p.1719). His hiring was the product of historical contingency, which stood in the way of some preferred options such as Hicks and Stigler, and of Friedman's conciliatory character due to his experience in statistical analysis, something positively valued by the Cowles' economists. There was not, then, a defined preference among Chicago faculty in terms of economic theory or political positions¹⁵.

That substitution was even more relevant due to the importance of the graduate price theory course as a means of acculturation of Chicago students (Reder, 1982, p.9). Even without Viner's particularly hard treatment of students (according to many accounts), which contributed to the overall difficulty of the course, between the 1930s and the 1950s some relevant changes occurred in the structure of curricular responsibilities in the Department of Economics which kept its relevance in that sense (Emmett, 1998). Graduate requirements were tightened, demanding students to follow a rigidly

¹³ Relevant excerpts are reproduced in Reder (1982, p.7, note 19).

¹⁴ "Paul Douglas can also be seen as having sympathies with Cowles in both political leanings and research methodology" (Mitch, 2016, p.1718).

¹⁵ Mitch (2020) argues that this absence of a definite hiring position towards Stigler in the first half of the 1950s signals the Department's persisting plurality still at that time.

structured line of courses, examinations and research work. The focus of the courses also changed, from problem-oriented to method-oriented¹⁶, with neoclassical price theory coming to the forefront in both courses and examinations¹⁷ (Emmett, 1998, p.144-145).

Not only neoclassical price theory arose in importance within the course, but it did so in a particular version. The latter was primarily built between 1945 and 1951 by Friedman (McDonald, 2009, p.165), who would go on to teach it from 1946 to 1964, and then again from 1972 until his classroom retirement in 1976 (Hammond, 2010, p.7). Apart from drawing on annotations from a course he had previously lectured at Columbia and from his correspondence with George Stigler (Hammond, 2010, p.12-13), he constructed the course, from its introductory readings, as a means to teach students not only neoclassical economic theory, but a whole vision on the functioning of economics and the role of economists heavily informed by his own reflections, crystallized in *The methodology of positive economics* (1953) (McDonald, 2009, p.168).

Another feature of Friedman's price theory course was its focus on applications to concrete economic problems¹⁸. He impressed on the course his conception of price theory as "a tool to solve problems rather than a set of problems to be solved" (Hamond, 2010, p.10), an inheritance from his reading of Alfred Marshall's methodology. That is what might have led Miller (1962) to identify in Chicago economics an equalization of the actual and the ideal market: pure theory was used as a direct instrument to evaluate the economic reality's functioning¹⁹. Bronfenbrenner (1962) also saw something similar. In his view, the emphasis of Chicago economists in the testing of hypothesis, notwithstanding its merits, is the counterpart of a deliberate ignorance of many relevant aspects of reality, namely "the narrative or insightful history of how the facts developed to be what they are" (Brofenbrenner, 1962, p.75).

This feature of the Chicago School variant of price theory can be traced back also to the events with which Friedman and other Chicago economists, namely Stigler and W. Allan Wallis, were involved in World War II. According to Mirowski (1999, p.701), the application of Marshallian partial

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¹⁶ Possibly a manifestation of the specialization process Chicago social sciences in general went through in the postwar period (Emmett, 2010b).

¹⁷ Fiorito (2012) presents some evidence of the growing importance of price theory in graduate examinations.

¹⁸ A concrete link to support this claim has not been established to the best of our current knowledge, but the consolidation of the social sciences at the University of Chicago was marked by an empirical bent, both in terms of research methods (including the ideia of generating testable hypotheses) and preoccupations with social reform (Bulmer, 1980), and it could have influenced the Chicago School economists during their graduate education in the 1930s. The Local Community Research Committee and later the Social Science Research Council encompassed the Department of Economics, and Henry Schultz, who influenced Friedman despite their disagreements, received important funding from the interdisciplinary initiative. Nonetheless, further research seems to be necessary to firmly establish such a link.

¹⁹ This contrasts with Knight's view of neoclassical price theory, as noted earlier.

equilibrium analysis to concrete problems was something Columbia's Statistical Research Group (SRG), led by Harold Hotelling and Wallis with the participation of Friedman and Stigler, had imported from the British tradition in military operations research (OR), and through the SRG it passed on to the Chicago School. This practical inclination was parallel to a nearly complete disconsideration of a realistic approach to human behavior, which is also present in Friedman's 'as if' methodology, since the immediate application of partial equilibrium analysis taken up by both British OR and the Chicago School did not demand an empirically sound explanation of the underlying fundamentals of the law of demand. Enforced through the price theory graduate course built and taught in large part by Friedman, therefore, was this particular approach to neoclassical economic theory.

In this point the influence of neoliberalism in the Chicago School can be seen in a way that is not related to corporate funding of the Department's activities or faculty, as we noted in the last subsection that was the case. Apart from being an inheritance of SRG's OR approach, the suppression of concerns with how actual behavior occurred in the economy was also functional for the neoliberal political movement. Friedman's 'as if' methodology and the associated understanding of price theory allowed him and other Chicago economists to escape from complicated mathematical models and cognitive considerations and go on to assert that the market worked perfectly fine through the supraindividual-scale mechanisms of the law of demand - interpreted by Friedman in his 1953 essay as an evolutionary process -, making the market the best allocative mechanism available (Mirowski, 2011, p.260). This has led Maas (2014, p.97) to claim that Friedman's methodology rests ultimately on political-ideological beliefs, something we do not necessarily endorse, but which contributes to an understanding of the Chicago School that accounts for neoliberalism's influence outside of financial ties to corporations.

The other important faculty change in 1946 was Theodore Schultz's arrival and ascendancy to organizational leadership in the Department. His institutional role as Department's head was essential in building the School²⁰. As a policy-driven intellectual, Schultz brought important assets to the Chicago School. Apart from the practical orientation of research activities, Schultz, who thought a free market required some form of planning to be installed and maintained, brought with him from Iowa a set of social networks connecting him, and now the Department, with powerful actors (Burnett, 2010, p.69). He navigated among them by painting his claims, which, like all economic theory, were embedded in particular political beliefs, as strictly objective social science (Burnett, 2010, p.71).

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²⁰ Harberger, himself an important member of the School, claims that "If one talks about the existence of a 'Chicago School', one also needs to talk about T.W. Schultz. He was incredibly influential, very talented, and a great economist" (Harberger; Edwards, 2021, p.5).

He also pioneered and enforced the establishment of the workshop system at Chicago during his heading of the Department of Economics, from 1946 to 1961. This type of initiative, that was not unseen at the time and was even inspired by the Cowles Commission own workshops, took a distinctive format at the Department due to the intense engagement of senior faculty (Reder, 1982, p.2). The workshop system served as a means to normalize a scientific paradigm in Chicago economics, contributing to the formation of disciplinary research specialists, in line with what was happening in social science education at the time (Emmett, 1998; 2010b). This specialization was not, however, a "gradual turn inward" (Emmett, 1998, p.138) in the sense that economic reality was disconsidered in research activities; quite the contrary, the workshop system was designed as "a laboratory for applied economic research" (Emmett, 2011, p.94), and the preoccupation to deal with matters relevant to policy was there.

In fact, the practical orientation of the workshop system suits fairly well the practical concerns many Chicago economists had in their positions as Mont Pèlerin members. As political activists for neoliberalism, faculty members such as Milton Friedman or George Stigler, who ran important workshops in topics of policy relevance (Monetary Economics and Industrial Organization, respectively), were certainly concerned with policy implications when they conducted the debates. Although perhaps not fully consciously, and probably with the best of intentions, as senior faculty members running the debates over current research matters in highly contested policy arenas they most likely imprinted their own view of things over students and colleagues, fulfilling the role Emmett (2011, p.111) attributes to the workshops, and in which senior faculty were central: the building of "a common format of analytical criticism and research success"; in other words, of a certain set of questions and of ways of answering them 'correctly'.

Having set that institutional infrastructure, the Department of Economics at the University of Chicago was in condition to become one of the central *loci* of the Chicago School of Economics' formation. The economists there managed to collectively produce scientific answers articulating the neoliberal political project's practical demands and their particular interpretation of neoclassical economics. They reached neither final nor completely homogeneous responses, as we have already stated; disagreements did occur, including in central topics of the School's work, but they were made coherent inside a shared social space of knowledge production.

4. Conclusion

The birth of the Chicago School of Economics has at its roots transformations in the American general social and political environment, with its reverberations in the economics profession, as well as

specific features of economics at Chicago. The broader transition, influenced chiefly by a shifting conception of what it meant to be a respectable social scientist, and specifically a respectable economist, and by the Cold War political environment, made neoclassical economics more apt to dominate American academic economics. The emerging orthodoxy was not homogeneous, and the Chicago branch of neoclassical theorizing had its specific characteristics determined by the personal trajectory of its members (for example, on Columbia's SRG and as neoliberals in the MPS) and by specific characteristics of the Chicago Department of Economics (the existence of a tradition in neoclassicism through Viner and Knight, among others)²¹.

To enforce those movements in a manner that was relatively persistent in time, although bearing some flexibility and malleability, institutional structures were put into place. The price theory graduate course was one of them, transmitting systematically to students not only knowledge on how economic phenomena worked, but an approach marked by an empirical orientation of basic Marshallian neoclassical price theory and by the disregard of actual individual economic behavior. The empirical orientation was also enforced through the workshop system, which put students to interpret economic phenomena within relatively determined lines of reasoning by the example of more senior scholars.

The result of the transition, therefore, was an academic environment within the Department that made it possible for a relatively unified, but not completely homogeneous school of economic thought to emerge. Within such an environment, the Chicago School economists were able to make the important contributions they did to economics and to social thought more broadly, while contributing also to the dissemination of the political understandings and goals their economic theorizing had incorporated in it to the respectable and scientifically credible economic and social knowledge available in the latter half of the twentieth-century.

Bibliography

ASSO, Pier Francesco; FIORITO, Luca. Studying institutional economics at Chicago in the 1930s: the case of Arthur Bloomfield. **Research in the History of Economic Thought and Methodology**, v.31B, p.57-77, 2013.

BACKHOUSE, Roger. The rise of free market economics: economists and the role of the State since 1970. **History of Political Economy**, v.37, Supplement, p.355-392, 2005.

BALISCIANO, Marcia. Hope for America: American notions of economic planning between pluralism and neoclassicism, 1930-1950. **History of Political Economy**, v.30, Supplement, p.153-178, 1998.

BARBER, William. Postwar changes in American graduate education in economics. **History of Political Economy**, v.21, Supplement, 1996.

²¹ Thinking of footnote 18 above, we could also mention the specificities of Chicago social sciences more generally (the empirical bent), provided the evidence to support the claim there alleged be properly assembled.

BARBER, William. Jacob Viner. In: EMMETT, Ross. (Ed.). The Elgar Companion to the Chicago School of Economics. Cheltenham, UK/ Northampton, MA, USA: Edward Elgar Publishing, 2010.

BENJAMIN, Daniel. Armen Alchian on evolution, information, and cost: the surprising implications of scarcity. In: EMMETT, Ross. (Ed.). **The Elgar Companion to the Chicago School of Economics**. Cheltenham, UK/ Northampton, MA, USA: Edward Elgar Publishing, 2010.

BERNSTEIN, Michael. Academic research protocols and the Pax Americana: American economics during the Cold War Era. In: HUNTER, Allan (Ed.). **Rethinking the Cold War**. Temple University Press, 1998.

BIDDLE, Jeff. Institutional economics: a case of reproductive failure?. **History of Political Economy**, v.30, Supplement, p.108-133, 1998.

BLAUG, Mark. The formalist revolution of the 1950s. **Journal of the History of Economic Thought**, v.25, n.2, p.145-156, Jun. 2003.

BRONFENBRENNER, Martin. Observations on the "Chicago School(s)". **Journal of Political Economy**, v.70, n.1, p.72-75, Feb. 1962.

BULMER, Martin. The early institutional establishment of social science research: the Local Community Research Committee at the University of Chicago, 1923-30. **Minerva**, v.18, n.1, p.51-100, Spring 1980.

BURNETT, Paul. The price is not right: Theodore W. Schultz, policy planning, and agricultural economics in the Cold-War United States. In: VAN HORN, Robert; MIROWSKI, Philip; STAPLEFORD, Thomas (Eds.). **Building Chicago Economics**: new perspectives on the history of America's most powerful economics program. Cambridge University Press, 2011.

CAIN, Glen. Paul H. Douglas. In: EMMETT, Ross. (Ed.). **The Elgar Companion to the Chicago School of Economics**. Cheltenham, UK/ Northampton, MA, USA: Edward Elgar Publishing, 2010.

CALDWELL, Bruce. The Chicago School, Hayek and Neoliberalism. In: VAN HORN, Robert; MIROWSKI, Philip; STAPLEFORD, Thomas (Eds.). **Building Chicago Economics**: new perspectives on the history of America's most powerful economics program. Cambridge University Press, 2011.

COATS, Alfred William. The origins of the "Chicago School(s)". **Journal of Political Economy**, v.71, n.5, p.487-493, 1963.

DOW, Sheila. Structured pluralism. Journal of Economic Methodology, 11:3, 275-290, 2004.

EMMETT, Ross. Entrenching disciplinary competence: the role of general education and graduate study in Chicago economics. **History of Political Economy**, v.30, Supplement, p.134-150, 1998.

EMMETT, Ross. Frank Knight, Max Weber, Chicago economics and institutionalism. **Max Weber Studies**, Beiheft I, p.101-119, 2006.

EMMETT, Ross. Introduction. In: EMMETT, Ross. (Ed.). **The Elgar Companion to the Chicago School of Economics**. Cheltenham, UK/ Northampton, MA, USA: Edward Elgar Publishing, 2010a.

EMMETT, Ross. Specializing in interdisciplinarity: the Committee on Social Thought as the University of Chicago's antidote to compartmentalization in the social sciences. **History of Political Economy**, v.42, Supplement, 2010b.

EMMETT, Ross. Sharpening the tools in the workshop: the workshop system and the Chicago School's success. In: VAN HORN, Robert; MIROWSKI, Philip; STAPLEFORD, Thomas (Eds.). **Building Chicago Economics**: new perspectives on the history of America's most powerful economics program. Cambridge University Press, 2011.

ERICKSON, Paul. Mathematical models, rational choice, and the search for Cold War culture. **Isis**, v.101, n.2, p.386-392, Jun. 2010.

FIORITO, Luca. The years of high pluralism: U.S. interwar economics: new lights from the Mitchell correspondence. **Research in the History of Economic Thought and Methodology**, v.18C, p.267-335, 2000.

FIORITO, Luca. American institutionalism at Chicago: a documentary note. European Journal for the History of Economic Thought, 19:5, 829-936, 2012.

FLEURY, Jean-Baptiste. Drawing new lines: economists and other social scientists on society in the 1960s. **History of Political Economy**, v.42, Supplement, 2010.

FRIEDMAN, Milton. The methodology of positive economics. In: FRIEDMAN, Milton. **Essays in positive economics**. The University of Chicago Press, 1953.

GARNETT, Robert. Schools of thought in the republic of social science. In: KOPPL, Roger; HORWITZ, Steven; DOBUZINSKIS, Laurent (Eds.). **Experts and epistemic monopolies**. Emerald Publishing, 2012.

GOODWIN, Craufurd. The patrons of economics in a time of transformation. **History of Political Economy**, v.30, Supplement, p.53-81, 1998.

HAMMOND, J. Daniel. The development of post-war Chicago price theory. In: EMMETT, Ross. (Ed.). **The Elgar Companion to the Chicago School of Economics**. Cheltenham, UK/ Northampton, MA, USA: Edward Elgar Publishing, 2010.

HANDS, D. Wade; MIROWSKI, Philip. Harold Hotelling and the neoclassical dream. In: BACKHOUSE, Roger; HAUSMAN, Daniel; MÄKI, Uskali; SALANTI, Andrea (Eds.). **Economics and methodology**: crossing boundaries. St. Martin's, 1998.

HANDS, D. Wade. Henry Schultz. In: EMMETT, Ross. (Ed.). **The Elgar Companion to the Chicago School of Economics**. Cheltenham, UK/ Northampton, MA, USA: Edward Elgar Publishing, 2010.

HARBERGER, Arnold; EDWARDS, Sebastian. **The Department of Economics at the University of Chicago, 1947-1982**. Documentos de Trabajo, Universidad del Cema, Buenos Aires, Argentina, No. 788, Abril 2021.

HAYEK, Friedrich. The road to serfdom. New York: Routledge, 1944.

IRWIN, Douglas. The midway and beyond: recent work on economics at Chicago. **History of Political Economy**, 50:4, 735-775, 2018.

ISAAC, Joel. Tool shock: technique and epistemology in the postwar social sciences. **History of Political Economy**, v.42, Supplement, 2010.

KASPER, Sherryl. Henry Calvert Simons. In: EMMETT, Ross. (Ed.). **The Elgar Companion to the Chicago School of Economics**. Cheltenham, UK/ Northampton, MA, USA: Edward Elgar Publishing, 2010.

KOLEV, Stefan. The legacy of Max Weber and the early Austrians. Review of Austrian Economics, v.33, p.33-54, 2020.

LEONARD, Thomas. Progressive Era origins of the regulatory state and the economist as expert. **History of Political Economy**, v.47, Supplement, p.49-76, 2015.

MAAS, Harro. Milton Friedman and the Cowles Commission for Econometric Research: structural models and 'as if' methodology. In: MAAS, Harro. **Economic methodology**: a historical introduction. London: Routledge, 2014.

MATA, Tiago. The enemy within: academic freedom in 1960s and 1970s American social sciences. **History of Political Economy**, v.42, Supplement, 2010.

McDONALD, John. Graduate education in economics: microeconomics at Chicago and Yale in the 1960s. **Journal of the History of Economic Thought**, v.31, n.2, June 2009.

MILLER, H. Lawrence. On the 'Chicago School of Economics'. **Journal of Political Economy**, v.70, n.1, p.64-69, Feb. 1962.

MIROWSKI, Philip; HANDS, D. Wade. A paradox of budgets: the postwar stabilization of American neoclassical demand theory. **History of Political Economy**, v.30, Supplement, p.260–292, 1998.

MIROWSKI, Philip. Cyborg agonistes: economics meets operations research in mid-century. **Social Studies of Science**, 29/5, 685-718, Oct. 1999.

MIROWSKI, Philip. On the origins (at Chicago) of some species of neoliberal evolutionary theory. In: MIROWSKI, Philip; STAPLEFORD, Thomas; VAN HORN, Robert (Eds.). **Building Chicago Economics**: new perspectives on the history of America's most powerful economics program. Cambridge University Press, 2011.

MITCH, David. Economic history in departments of economics: the case of the University of Chicago, 1892 to the present. **Social Science History**, v.35, n.2, p.237-271, Summer 2011.

MITCH, David. Morality versus money: Hayek's move to the University of Chicago. In: LEESON, Robert (Ed.). **Hayek**: a collaborative biography. Part IV: England, the Ordinal Revolution and the Road to Serfdom, 1931-1950. London: Palgrave Macmillan, 2015.

MITCH, David. A year of transition: faculty recruiting at Chicago in 1946. **Journal of Political Economy**, v.124, n.6, p.1714-1734, 2016.

MITCH, David. George Stigler's career moves: the roles of contingency, self-interest, ideology, and intellectual commitment. In: FREEDMAN, Craig (Ed.). **George Stigler, enigmatic price theorist of the twentieth century**. Palgrave MacMillan, 2020.

MORGAN, Mary; RUTHERFORD, Malcolm. American economics: the character of the transformation. **History of Political Economy**, v.30, Supplement, 1998.

NEGRU, Ioana. Revisiting the concept of schools of thought in economics: the example of the Austrian School. **American Journal of Economics and Sociology**, v.72, n.4, p.983-1008, Oct. 2013.

NIK-KHAH, Edward; VAN HORN, Robert. Inland empire: economics imperialism as an imperative of Chicago neoliberalism. **Journal of Economic Methodology**, 19:3, 259-282, 2012.

PATINKIN, Don. Essays on and in the Chicago tradition. Durham, N.C.: Duke University Press, 1981.

PECK, Jamie. Orientation: in search of the Chicago School. In: VAN HORN, Robert; MIROWSKI, Philip; STAPLEFORD, Thomas (Eds.). **Building Chicago Economics**: new perspectives on the history of America's most powerful economics program. Cambridge University Press, 2011.

PLEHWE, Dieter. Neoliberal thought collectives: integrating social sciences and intellectual history. In: CAHILL, Damien; COOPER, Melinda; KONINGS, Martjin; PRIMROSE, David (Eds.). **The SAGE Handbook of Neoliberalism**. London: SAGE, 2018.

REDER, Melvin. Chicago economics: permanence and change. **Journal of Economic Literature**, Vol. 20, No. 1, p.1-38, Mar./1982.

RUTHERFORD, Malcolm. American institutional economics in the interwar period. In: SAMUELS, Warren; BIDDLE, Jeff; DAVIS, John (Eds.). A companion to the history of economic thought. Blackwell Publishing Ltd., 2003.

RUTHERFORD, Malcolm. Chicago economics and institutionalism. In: EMMETT, Ross. (Ed.). **The Elgar Companion to the Chicago School of Economics**. Cheltenham, UK/ Northampton, MA, USA: Edward Elgar Publishing, 2010.

SCHLIESSER, Eric. Inventing paradigms, monopoly, methodology, and mythology at 'Chicago': Nutter, Stigler, and Milton Friedman. **Studies in History and Philosophy of Science**, 43, 160-171, 2012.

SIMONS, Henry. **A positive program for** *laissez faire*: some proposals for a liberal economic policy. Chicago: The University of Chicago Press, 1934.

SOLOVEY, Mark. Project Camelot and the 1960s epistemological revolution: rethinking the politics-patronage-social science nexus. **Social Studies of Science**, 31/2, 171-206, April 2001.

STAPLEFORD, Thomas; VAN HORN, Robert; MIROWSKI, Philip. Blueprints. In: STAPLEFORD, Thomas; VAN HORN, Robert; MIROWSKI, Philip; (Eds.). **Building Chicago Economics**: new perspectives on the history of America's most powerful economics program. Cambridge University Press, 2011.

VAN HORN, Robert. Jacob Viner's critique of Chicago neoliberalism. In: VAN HORN, Robert; MIROWSKI, Philip; STAPLEFORD, Thomas (Eds.). **Building Chicago Economics**: new perspectives on the history of America's most powerful economics program. Cambridge University Press, 2011.

VAN HORN, Robert. Hayek's unacknowledged disciple: an exploration of the political and intellectual relationship of F. A. Hayek and Aaron Director (1945-1950). **Journal of the History of Economic Thought**, 35:3, 271-290, Sep. 2013.

VAN HORN, Robert. Henry Simons's death. History of Political Economy, 45:3, 525-535, 2014.

VAN HORN, Robert. Hayek and the Chicago School. In: LEESON, Robert (Ed.). **Hayek**: a collaborative biography. Part V: Hayek's Great Society of Free Men. London: Palgrave Macmillan, 2015.

VAN HORN, Robert. Corporations and the rise of Chicago law and economics. **Economy and Society**, v.47, n.3, p.477-499, Aug. 2018.

VAN HORN; Robert; MIROWSKI, Philip. The rise of the Chicago School of Economics and the birth of neoliberalism. In: MIROWSKI, Philip; PLEHWE, Dieter (Eds.). **The road from Mont Pèlerin**: the making of the neoliberal thought collective. Cambridge, Massachusetts: Harvard University Press, 2015.

VAN HORN, Robert; NIK-KHAH, Edward. Planning the 'free' market: the genesis and rise of Chicago neoliberalism. In: CAHILL, Damien; COOPER, Melinda; KONINGS, Martjin; PRIMROSE, David (Eds.). **The SAGE Handbook of Neoliberalism**. London: SAGE, 2018.

VAN HORN, Robert; NIK-KHAH, Edward. Shattering hope and building empire: economics the imperial science at Chicago, George Stigler and Aaron Director. In: FREEDMAN, Craig (Ed.). George Stigler, enigmatic price theorist of the twentieth century. Palgrave MacMillan, 2020.

WOJCIECH, Sady. Ludwik Fleck. In: ZALTA, Edward (Ed.). **The Stanford Encyclopedia of Philosophy**. Winter 2019. Available at: https://plato.stanford.edu/archives/win2019/entries/fleck/. Last access: 07/02/2022.