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Economics as a Public Science. Part I: The Economist's Ethos and Modes of Persuasion

edited by Harro Maas,
Steven G. Medema, and Marco Guidi

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Economics as a Public Science. Part I: The Economist's Ethos and Modes of Persuasion

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Introduction to Economics as a Public Science

Harro Maas*, Steven G. Medema**, and Marco Guidi***

This short article introduces readers to the papers published in this issue on the theme of "public reason" in economics. It provides ground to the notion of "public reason" in economics as a two-way process taking place in interstitial spaces between economics, as an academic discipline, and the various publics in which economics—its concepts, tools, and methods—acquires meaning as an instrument of social understanding and political change.

Keywords: methodology, public reason, expertise

Introduction à l'économie comme science publique

Ce court article sert d'introduction aux articles publiés dans ce numéro sur le thème de la « raison publique » en économie. Il précise la notion de « raison publique » en économie comme un processus à double sens qui s'inscrit dans les espaces interstitiels entre l'économie comme discipline et les publics variés parmi lesquels ses concepts, outils et méthodes acquièrent une signification comme instrument de la compréhension sociale et du changement politique.

Mots-clés : méthodologie, raison publique, expertise

JEL : A11, B20, B40, Z18

The essays in this and the next issue of *Œconomia* are the result of a conference on "Economics and Public Reason," which was hosted by the Centre Walras-Pareto for the History of Economic and Political Thought at the University of Lausanne in early May 2018. After the conference, the papers were rewritten in the light of the conference's discussion and sent out for peer-review. In the end, fourteen papers were retained that will be published in this and the next issue, guest-edited by Harro Maas of the Centre Walras-Pareto, Steven Medema of the Center for the History of Political Economy at Duke University, and Marco Guidi of the University of Pisa. Before briefly introducing the papers of this issue, the guest-editors would like to thank the editorial board of *Œconomia*, but especially Jean-Sébastian Lenfant,

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The call for papers articulated the relation between economics and public reason as a two-way process, in which economics as a discipline developed its forms of argument and evidence in exchange with its publics. The call also emphasized our interest in contributions that would take specific sites, textual genres, formal and informal networks, or profiles of specific categories of mediators as point of departure. It was not our intention, as some might take "public reason," to investigate the relation of economics to the specific liberal democratic context encroached by John Rawls and Jürgen Habermas in their respective analyses of how such a liberal democratic order could or should be conceived.[1] Instead, we used the label "public reason" to loosely refer to the interstitial spaces between economics, as an academic discipline, and the various publics in which economics—its concepts, tools, and methods—becomes meaningful. We therefore conceived of our subject rather as a reference to Sheila Jasanoff's collection of essays, *Science and Public Reason* (Jasanoff, 2012; see also 2009), in which Jasanoff develops the idea of science, not as a purely academic enterprise, but as an endeavor which develops in exchange with its publics. To make clear the nature and scope of our enterprise, we have elected to employ the title, "economics as a public science" for these two thematic issues of *Œconomia*.

Nowadays, it is of course a commonplace to say that public and policy discourse is immersed in economic terminology and reasoning. Scholarly writing within the history of economics, and in recent years increasingly from economic sociologists and science and technology studies, has detailed the role of economists as expert advisors and public intellectuals (Mata and Medema, 2013), their role in politics (Guidi, 2017), individually or as part of groups and networks (Forget and Goodwin, 2011), from Roosevelt's Braintrusters (Barber, 1988; 1996) to the New Economics of the Sixties (Bernstein, 2001; Romani, 2018), to the Mont Pelerin Society and the rise of neo-liberalism (Mirowski and Plehwe, 2015). In their excellent review of recent scholarship in this field, Hirschman and Berman (2014) made the useful distinction between economists and economics. They noted that the influence of economists on public and policy discourse may reside far less in their direct pronouncements than in what Science and Technology Studies refers to as the socio-technical infrastructures of

[1] The literature is too vast to reference here, but see for example Rawls (1997); Benhabib (1991).

economic knowledge production and transmission. These studies do not concentrate on individual economists or networks but look at what Hirschman and Berman capture under the labels of *styles of reasoning* and *policy devices* that provide specific economic knowledge and produce its force and persuasiveness. Both notions have their own complex histories and connotations, but for present purposes they usefully distinguish between the core principles with which questions of economic policy are approached and the "sociotechnical" tools put in place to "help policymakers see and make decisions about the world" in specific ways.[2]

The contributions in this first special issue thus center around questions of the economist's ethos and his or her tools and modes of persuasion, while those in the second take up the (international) institutional settings within which economic concepts, tools and theories became and become expressed. The distinction is one of degree rather than kind, because inevitably there are many crossovers between the distinctions just made, as is easily seen from the attention that will be paid to the political institutional settings in this volume as well.

The question of the economist's ethos is perhaps most visible in the contribution by Andrés Alvarez, Andrés Guiot-Isaac, Jimena Hurtado. They raise the issue of the neutrality or non-neutrality of economic expert advice against the diverging perspectives of Albert Hirschman and Lauchlin Currie on the role of the economic expert and the possibilities and limits of expert advice on economic development. While both were concerned with the patchwork approach to economic planning which they experienced during their consulting work in Colombia, they took opposing messages from this, with their respective positions premised on their divergent perspectives on the interplay between "sound economic principles" and the force of local circumstances. While Currie was a believer in both sound principles and the need to adapt them to local circumstances, Hirschman was more sceptical about the existence of any such principles. Instead, he saw the economic expert as a mediator and catalyst whose judgment could enhance initiatives on the ground, but who by no means could enforce a consistent and encompassing development plan (something Currie perhaps ideally might have wished for, but deemed not possible in an imperfect world). Both perspectives thus suggest different roles to play by economists, embodying different attitudes toward the different audiences with whom they engage.

The economist's ethos is important in Arthur Cecil Pigou's reflections on and practice as an economist in the public sphere as well. Pigou has commonly been considered an academic recluse, certainly

[2] Hirschman and Berman thus cut the cake rather differently from the vast literature on (economic) modeling that considers modeling itself as a style of reasoning that should be added to Alistair Crombie's original list. For a discussion, see especially Morgan (2012).

in comparison with his much more vocal contemporaries such as John Maynard Keynes. But as Nahid Aslanbeigui and Guy Oakes detail, "public enlightenment" in correct principles of economic reasoning was a project of lifelong concern to Pigou, one for which he mobilized the support of his fellow economists when he deemed it necessary. Prominent here was his initiative in the early 1930s to publish a letter, signed by a wide list of economists (but not covering the whole spectrum of opinions) setting out the economists' arguments against Chamberlin's austerity policies. The initiative illustrates Pigou's abhorrence of "partisanship" but also his naïveté in assuming the possibility of a neutral vantage point from which economists could lecture politicians and the general public about a sphere of economic reasoning that could be distinguished from political *parti-pris*. Pigou articulated an *ethos* of neutrality which effectively functioned, as Aslanbeigui and Oakes show, as an epistemological trap; economic policy prescriptions are inconceivable without being political.

Pigou argued his position against a belief in the self-correcting power of markets, and hence the belief that involuntary unemployment would only be temporary. That such a belief has material consequences as to how economists perform their research can be seen in the opposing positions of the Wisconsin institutionalists and Robert Lucas, discussed by Marianne Johnson and Aurélien Goutsmedt, Danielle Guizzo and Francesco Sergi, respectively. The Wisconsin institutionalists took as a consequence of their belief in the malfunctioning of markets, and especially labor markets, the need to pursue a research agenda that was useful to diagnose market shortcomings and intervene by creating an institutional environment to correct them. This not only implied a heavy emphasis on legal reform, but also an educational commitment to show and tell the facts and the reforms needed.

The result was a research agenda that focused on particulars, conducted time and again using difficult and time-consuming (participant) field work, instead of an agenda that generalized its findings. For Robert Lucas, at the other end of the spectrum, such an activist agenda was anathema. His strong belief in self-correcting markets made it important to create an institutional environment that would *prevent* governments from actively intervening in the economy. This is why he strongly criticized the Employment Act of 1946, which institutionalized an activist government in the marketplace. One vehicle for this activism was the newly formed Council of Economic Advisors. Indeed, Lucas blamed the Employment Act of 1946 for legitimizing government activism instead of institutionalizing governmental restraint. To put it bluntly, if you *don't* believe in self-correcting markets, you have to put institutions in place that correct them. That's exactly what Wisconsin institutionalists did with their agenda of action research and legal reform. If you *do* believe in self-correcting markets, you have to put institutions in place that *prevent* the government from intervening in them. This is what Lucas and Buchanan's constitutionalist approach to economic policy tried to achieve. As Goudsmedt et al. show, the "high theory" approach to macroeconomics developed by Lucas and others was never neutral with regard to economic policy. Instead, their general approach to macroeconomic modeling incorporated a "passive" view on economic policy which from the outset intended to constrain government activism.

The paper in which Lucas articulated his famous "Lucas critique" and which he had distributed strategically in the right venues, was a manifestation of this overarching concern. It provides a nice illustration of Hirschman and Berman's point that economists sometimes can be more effective indirectly by framing a policy agenda than through direct, concrete policy interference. In Lucas' case, the irony, of course, was that his notion of passive politics became hailed by the medium he deliberately tried to steer away from: journalism and the daily press.

The story told by Goudsmedt et al. is complemented in this volume with an account of the nemesis of Lucas's approach to economics: The New Economics of the 1960s that self-consciously took the possibilities of fine tuning the economy to the extreme. As Béatrice Cherrier shows, Walter Heller was New Economics incarnate. Cherrier concentrates on Heller's most effective weapon in changing politics, one that in its form and execution was the radical opposite of high theory: the memo to the President. Cherrier's detailed account of Heller's crafting of his memos, and the important place they gained in policy preparation, shows them to be genuine policy devices that help policymakers to make economically informed decisions (Hirschman and Berman, 2014, 782). But her contribution also points to the important role played by institutional infrastructures. Heller's memos could never have had such an important influence on the decisions of the American president were it not for the existence of the recently created Council of Economic Advisors (as rightly seen by Lucas), a system that gives substantial discretionary power to the President, a particular President willing to discuss and trying to understand economic policy matters, and the interventionist style of economic reasoning of the New Economics that generically backed up Heller's arguments.

The importance of this setting becomes clear when contrasted with the very different institutional structure for macro-economic policy that evolved in the Netherlands after the Second World War. As Tom Kayzel argues, the so-called Dutch Central Planning Bureau gained its present overwhelming authoritative voice on questions of macroeconomic policy when it adjusted its macro-modeling approach away from mere forecasting to the design of "railway timetables" that compared the consequences of different economic policies in one comprehensive table, thus enabling politicians to discuss forecasting outcomes while black-boxing the economic model that produced them. But just as the memos to the President lost their patina once Heller and the New Economics were no longer there, so did the comparative policy tables produced by the Dutch CPB once it tried to take on board the medium- and long-term effects of technical change. That model produced policy alternatives that were substantially reduced in scope and, paradoxically, it was only by mobilizing the political domain as an ally against the substantial resistance to the new CPB modeling coming from within the academic realm that the CPB was able to regain and even increase its political authority.

These last contributions thus show the contingencies that make economic styles of reasoning, policy devices and socio-technical infrastructures sufficiently aligned to be effective. Sometimes, however, the necessary alignment never occurs, as a result of which potentially influential ideas fail to gain traction. This was the case in the applied field of port economics, where marginal cost pricing, as in Pirandello's famous piece, was waiting for an audience that would pick up on its importance. That audience only came when ports were no longer only considered within the context of national economic politics, as a question of national interest, but instead had moved into the sphere of the European Union and became considered in terms of legitimate competition and economic efficiency. When ports were no longer seen as public utilities and lost their public goods character, they became 'economized' in terms of marginal cost pricing. But this did not happen without the transfer of decision-making authority to the European Union, which provides our final reminder, to be followed up in the next issue, that it is not only the economist's perception of his or her role in the public sphere which matters. The institutional setting in which an economist provides public policy pronouncements is equally important.

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Lauchlin Currie and Albert O. Hirschman on Development as a Problem of Decision Making

Andrés Álvarez*, Andrés Guiot-Isaac**, and Jimena Hurtado***

This paper analyzes L. Currie and A. O. Hirschman's contributions to development economics in the context of their Colombian experience as foreign experts. We show that the common ideas about the divergences between these authors have overlooked the view they shared of the experts' role as a triggering factor in development strategy. They both believed experts should facilitate and guide the decision-making process. Using published and archival sources, we show that their experiences as experts in Colombia led them to redefine their ideas and understand the influence of the political economy of development policies on the advice that experts give.

Keywords: Currie (Lauchlin), Hirschman (Albert O.), Colombia, development economics, political economy

Le développement comme problème de prise de décision chez Lauchlin Currie et Albert O. Hirschman

Cet article analyse les contributions de L. Currie et A. O. Hirschman à l'économie du développement dans le contexte de leurs expériences colombiennes en tant qu'expert étranger. Nous montrons que les idées reçues sur les divergences entre ces auteurs ne tiennent pas compte leur vision commune quant au rôle de l'expert comme élément déclencheur

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dans la stratégie de développement. Tous deux considèrent que les experts devraient faciliter et guider les processus de prise de décision. A l'aide de sources publiées et d'archives, nous montrons que leurs expériences en tant qu'experts en Colombie les ont poussés à redéfinir leurs idées et leur ont fait comprendre l'influence qu'ont les théories des politiques de développement sur les conseils dispensés par les experts.

Mots-clés : Currie (Lauchlin), Hirschman (Albert O.), Colombie, économie du développement, économie politique

JEL: A11, B2, B31, N16, O2

> Although our treatments differ significantly, Hirschman and I appear to be close on this most fundamental of diagnoses: 'If backwardness is due to insufficient number and speed of development decisions and to inadequate performance of developmental tasks, then the fundamental problem of development consists in generating and energizing human action in a certain direction.' The difficulty lies in securing agreement on the direction. (Currie, 1966, 141, fn 1).

Paul Krugman (1993; 1994) defines the 1940s and 1950s as the period of "High Development Economics." During these years, according to Krugman, an alternative view on development emerges, trying to overcome the limits perceived in the prevailing theoretical economic models. The main claim of this alternative view was that the problem of underdevelopment escaped from traditional economic analysis, and therefore demanded new tools of analysis. Precisely during these years, Lauchlin Currie and Albert O. Hirschman built their views on development using their experience as foreign experts in Colombia. Even if these views share the main assumption Krugman identifies in high development economics, namely, the central place given to increasing returns to scale[1], their distinctive trait is something else. In this paper we try to show that what Currie and Hirschman share, and distinguishes them from high development theorists, is their common understanding of development as a strategic process of decision making; an idea that begins with recognizing the importance of the political economy of development and the role experts play in it.

The scholarship on Currie and Hirschman has traditionally underscored the opposition between them due to theoretical, personal and

[1] "Loosely, high development theory can be described as the view that development is a virtuous circle driven by external economies -that is, that modernization breeds modernization" (Krugman, 1994, 41).

sociological positions (Sandilands, 2015). Whereas Currie is associated with balanced growth, Hirschman is presented as an advocate of unbalanced growth[2], and these contradicting theoretical stands were evidenced during their joint work in Colombia, when their strong personalities and quest for reputation made this opposition particularly salient (Alacevich, 2009; 2016). In this paper, we explore another possibility. Following Deas (2012), instead of starting from their oppositions, we begin with what is common to both thinkers. We then aim at reframing the divide among them from a different point of view. We take seriously Currie's (Sandilands, 1991) and Hirschman's (1984; 2001) own avowal about their scarce knowledge of development economics at the time they were appointed advisers in Colombia, and we explore how their ideas changed due to their work in a developing country. In particular, we retrace their views on the role of experts as policy advisers in countries they know little about.

As the opening quote shows, Currie and Hirschman coincide in that the strategic nature of development should lead to the coordination of economic and political forces and decision makers in a consensual path of development. The key to the divide between both is the way each one of them believes this coordination can be achieved. Currie (1965; 1981) advances a top-down approach, underscoring the importance of economic education in order to have an informed public opinion and professional economists. When public opinion becomes informed about its own interests and how to achieve them and national professional economists can produce reliable information and analysis it will be possible to have a favorable situation for development. Hirschman (1984), on his side, considers it is necessary to take advantage of what already exists because the seed of development is there, and does not require being planted or special education, but rather fostering a common vision or a project of society that an expert might help make visible and publicly debated (Hirschman, 1970).

Currie (1966; 1967) and Hirschman (1958) share a deep belief that the main thrust of development is strategic thinking or a strategic view, where experts may play an important part. The way towards modernity, they agree, requires the construction of common social goals and coordinated actions of the main actors involved in this transformation. They diverge on the exact part experts should play,

[2] However, Currie's notion of "balanced growth" differs significantly from the way that Hirschman interprets Rosenstein Rodan's (1943) theory of the "Big Push." For Currie, "balance" involves a balancing of supply with the actual or potential elasticities of demand that vary considerably as between the various sectors of the economy, and is the basis for Currie's selective prioritization of 'leading' sectors accordingly. See Currie's (1970 [2018]) critique of Hirschman's interpretation of Rosenstein Rodan in a paper published only recently, in Sandilands (2018). In sections 2.1 and 2.2 we come back to these views.

and on the way this strategic thinking could be brought about and promoted. This divergence is the consequence of the way each of them thinks economics and politics are related. Whereas Currie (1981) believes politics should accommodate to the economic reality, Hirschman (1984) is convinced that there is a fundamental interdependence between politics and economics, and that economists should learn to deal with this. According to Currie experts should advise, propose and guide decision-makers using the art of advising, trying to have direct influence on their understanding, and therefore on their decisions. For Hirschman, emphasizing the uncertain character of any decision-making process and its context, experts should act as facilitators, catalyzers and promoters of public and political debate that reveal hidden or underused mental, intellectual and physical resources, following the principle of the hiding hand. Therefore, they both recognize the importance of decision makers and stake holders, and of experts in dealing with these fundamental agents of development as a strategic process.

The paper is divided in three parts besides this introduction. In the first part, we position our interpretation on the divide between Currie and Hirschman considering prevailing interpretations. In the second section, we flesh out our contribution analyzing how Hirschman and Currie reacted to their early experience as foreign advisers in Colombia. We show this experience allowed them to converge on a view of development as a process of change that faces the problem of implementation given the scarcity of decision-making skills. The third section deals with their divergence about the role experts play in this process of promoting the coordination of decisions towards appropriate development paths. Some concluding remarks, pointing at Currie and Hirschman's influence in Colombia and the influence the Colombian experience had on both, end this paper.

1. Towards an Alternative Interpretation of the Currie-Hirschman Divide

Hirschman and Currie visited Colombia as experts, commissioned by the International Bank for Reconstruction and Development (IBRD), during 1949 and into the 1950s[3]. Although they share the same goal of contributing to the formulation of economic policies with a developmental purpose, it has been recognized they disagree on their theories, their personalities clashed, and they differ in their views on expertise. These are the three prevailing interpretations about their differences.

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[3] See Álvarez, Guiot-Isaac, and Hurtado (2017) for an account on Currie´s and Hirschman's experiences as experts in Colombia and the details of their personal and professional controversies during that period.

The first interpretation, found in Sandilands (2015) and Caballero (2008), underlines theoretical differences between Currie and Hirschman. The second, developed by Alacevich (2009; 2016), offers a sociological explanation building on Merton's view of a "battle of egos" that was engaged and heightened with their joint work in Colombia. The third can be found in Adelman (2013) and Escobar (1995), who associate Currie with technocratic development, and Easterly (2014), taking this a step further, associates Hirschman with *free development*.

Technocratic and free development are terms Easterly (2014) uses to describe different forms of development policy and design. He associates the former with autocratic approaches to development in specific political contexts with little to no participation of citizens who have practically no economic or political rights, in contrast with the latter. Easterly (2014) places experts as allies with autocratic development. Neither Currie nor Hirschman would agree with the place given to experts in these definitions. As we will show in what follows, Currie and Hirschman do not associate expert advice and involvement in development policies with a specific type of political regime (i.e. dictatorships or authoritarian regimes and democratic regimes). Experts might participate either in authoritarian or democratic regimes and they will always be involved in the decision-making process, which should make them aware of the political economy in the country.

Following Seers (1962), we argue the success of expertise depends upon the technical and political economy aspects in the underdeveloped countries where expert advice is provided. This is the combination that we intend to explore and that brings to the fore something we believe has been overlooked in all three interpretations. Namely, development is about strategy, which has to do with the particular context under transformation and the decision-making skills needed to define, adapt and implement such transformation.

1.1. A Theoretical Debate on the "Big Push" Mechanisms

Sandilands (2015), the main comparative study on the theoretical standpoints of Hirschman and Currie, shows that, in spite of their agreement about the advantages of external economies to trigger economic transformation, they disagree on the theoretical mechanisms to attain such a process (Sandilands, 2015).

This interpretation builds upon the divergence between Currie and Hirschman on the growth model underlying their theories. According to this view, Rosenstein-Rodan's (1943) model of the *Big Push* is the main seminal reference and inspiration for Currie's theory (Sandilands, 1990, 227; 2018), and the target of Hirschman's criticism. Sandilands's argument emphasizes that for Currie the *Big Push* model implies a *demand-side* argument according to which growth arises from pecuniary externalities that result from the interrelationships between reciprocal real demand. Unlike Currie, Hirschman's theory of economic growth does not follow the "real demand" approach that stems from this theoretical tradition that runs from Adam Smith (1776) to Allyn Young (1928)[4].

The most striking feature of Hirschman's theory would be his opposition to the idea that the process of virtuous growth and economic transformation, called development, is the result of the expansion of the market due to pecuniary externalities. Therefore, according to Sandilands (2015, 229), Hirschman privileges the supply side and technological linkages over real demand, and his notion of forward linkages results in a poor representation of market-size conditions. While the extension of Hirschman's ([1977] 2015) analysis to "final demand linkages" brings him closer to Currie's notion of real demand effects, nevertheless they may be held to differ on the potential empirical magnitudes—hence strategic significance—of the linkages as opposed to the number of the linkages, making their opposition on this matter less clear.

These theoretical differences explain the opposition of these two economists on the role of planning as a mechanism to implement development policies. Currie has been traditionally associated with plans and Hirschman with projects as means of problem-solving (Adelman, 2013, 302). Both plans and projects are policy mechanisms that involve decision-making, but they differ on the scale. Both have to do with allocating investments and searching for means to finance them, but plans have been more associated in Colombia with general policy guidelines headed by the central government, and projects with specific problem solving by economic agents[5].

Even if there are theoretical elements that place Currie and Hirschman on different stands as to the appropriate growth model that should be implemented in developing countries their theoretical distance can be shortened or, at least, put into perspective using the Colombian context. This will bring us closer to the second interpretation of the divide between these two economists; an interpretation which privileges sociological and personal traits.

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[4] We thank Roger Sandilands for his remarks on Hirschman's difficulties to understand the distinctiveness of this tradition.

[5] This does not mean that overall plans, conceived and implemented under the responsibility of the central government, do not imply decision-making. As we note here, the main difference has to do with the scale at which decisions are made and who appears as the primary body responsible for such decisions. We come back to this point in section 3.2.

1.2. A Sociological Divide: "A Clash of Egos"

Colombia has a long tradition of economic planning (Urrutia, 1988), inaugurated precisely with the IBRD's Mission Report. When Currie (in 1949) and Hirschman (in 1952) arrived in Colombia they found a central administration interested in promoting technical analyses and recommendations but largely in the hands of non-professional economists, mainly lawyers. The impetus these foreign experts gave to economic planning was halted in 1953 with the military coup of General Gustavo Rojas Pinilla, whose military government lasted until 1957[6]. During the first civil government of the so-called National Front of Alberto Lleras Camargo (1958-1962) a national Law was passed by a future president, Carlos Lleras Restrepo, considered to be one of the main promoters of technocratic economic policy design, creating the National Council of Economic Policy and Planning and, later, the National Planning Agency. Urrutia (1988, 165) argues that the Bank's Mission Report (1950) had paved the way for the creation of these agencies showing the scope and possibilities of applying economic analysis to specific problems. It succeeded in showing the importance of trained economists to diagnose, inform and provide policy recommendations. The so-called "Currie mission" then appears as the starting point of a long tradition of expert economic policy design in the country.

The creation of the planning agency during the first National Front government reinforces this perception. The military government was deposed through an alliance between the two traditional political parties, the Conservatives and the Liberals. They agreed to alternate in government leading to 16 years of two liberal and two conservative governments. Both Liberal governments, Alberto Lleras (1958-62) and Carlos Lleras (1966-1970), gave ample room and support to economic planning. Whereas national professional economists were not yet available during Alberto Lleras' administration, Carlos Lleras created a more significant group of young economists who were in charge of supervising and advising the government on economic affairs.

This transformation of the sociological features of those in charge of economic policy can be associated with the IBRD's mission and its results. Currie and Hirschman arrived in a country with little experience in technical economic policy making and came with previous experience in economic recovery plans but not exactly in developing countries. Prior to arriving in Colombia, Currie had worked as assis-

[6] Adelman (2013) and Sandilands (1990), in their authoritative biographies of Hirschman and Currie, respectively, show that both economists took their distance from the Rojas Pinilla government. Currie retired to a cattle farm in Albán, in the Colombian central region, and Hirschman opened a private consultant office, travelling through Colombia. These personal decisions show that the political regime in Colombia is not the main feature to understand the role of experts for Currie and Hirschman.

tant to the chairperson of the Board of Governors of the Federal Reserve System and assistant to President Roosevelt, making him a New Deal economist. Hirschman had worked as an economist in the Marshall Plan for the reconstruction of Europe[7].

When they arrived in Colombia the development question was in its beginnings so they were confronted with the challenge of analyzing and talking about economic transformation from the place that needed to be transformed rather than revitalized. No doubt their economic training was crucial, but realizing the political economy of development policies and being directly involved in it also played an important part. We believe this means their disagreements went beyond theoretical positions, and involved life experiences but cannot be reduced to those either.

Alacevich (2009) proposes an interpretation of the Currie-Hirschman divide that can be classified along these lines, even though it underscores the clash of egos, leaving aside the influence of the place where they were acting as development experts. According to Alacevich (2009), Hirschman and Currie's divergent theoretical stances regarding development plans and projects, and balanced and unbalanced growth are not fundamental as there is evidence of a certain convergence between their policy recommendations. Therefore, their disagreements would be the expression of a tactical conflict between experts in their handling of relevant information especially that concerning their diagnoses and policy recommendations on fiscal and monetary matters (Alacevich, 2009, 86).

This tactical clash, as Alacevich (2009) argues, took place within a particular institutional setting. Internal tensions within the IBRD, and the way it wanted to deal with Colombia and local officials, fostered Currie and Hirschman's confrontation. The way they inserted themselves within the Colombian government, the networks and relationships they established, play a major role (Álvarez et al., 2017). Their experience as experts in Colombia revealed not only their theoretical divergences or their personal strategies to be seen as key figures but also a divergence of attitudes towards the place that each one should occupy as "counselor of the prince."

In Colombia, Currie and Hirschman had first-hand experience in dealing with the economic and political actors involved in development planning and policy making. They both enjoyed a certain degree of freedom in their role as foreign experts. Currie as head of the first economic international mission to the country, and Hirschman as an expert hired by the government through the advice of the IBRD appeared as outsiders and, to some extent, impartial agents (Hirschman, 2001, 81). Their advice, even if not always followed *à la lettre*, was sought and respected. Sometimes, also, their advice was used in

[7] We provide more details on their background in section 3.1.

power disputes among national actors, which made them realize the waving frontier between technical and political discussions (Álvarez et al., 2017). Almost in spite of themselves, they were involved in the national political dynamics and negotiations, which gave them a privileged and inside view of the political economy of development in a developing country (Álvarez et al., 2017). As we shall see in section 3, this had profound implications for their view on the role of experts.

1.3. Policy Design: Technocratic vs. Free Development

According to Easterly (2014) the 1949 IBRD Mission to Colombia marked the ultimate triumph of the alliance between autocrats and economic experts. Committing to a nonpolitical clause in the Bank's 1944 Articles of Agreement[8], the IBRD hired Currie to lead an economic mission in a country that was in state of siege due to growing partisan violence[9]. The clashes between Hirschman and Currie in the follow-up planning council created after the Mission[10] has led some authors, notably Easterly (2014), to associate Currie with a technocratic approach towards development and Hirschman with a commitment to free development.

Currie, the leader of the Mission, is depicted as the prototypical foreign adviser that privileges expert knowledge, and Hirschman is presented as the dissenter who promotes bottom-up autonomous development. The former would manifest contempt for the visited country and the latter fascination for it. Adelman (2013, 299) associates personal traits to their opposite positions: Currie, with more experience than Hirschman, was a confident expert, convinced he knew what should be done to accomplish development goals, whereas Hirschman, less experienced but also coming from a more troubled personal path that had taken him through trying ordeals, was more skeptical. Adelman (2013) contends that such different personal backgrounds also influenced the way they played their roles as experts.

[8] "The Bank and its officers shall not interfere in the political affairs of any member; nor shall they be influenced in its decisions by the political character of the government of the member or the members concerned. Only economic considerations shall be relevant to their decisions" (Easterly, 2014, 115). For Easterly, this was the original sin by which the Bank embraced the technocratic approach to development at the expense of ideals of freedom (Easterly, 2014, 105).

[9] In 1948 presidential candidate and leading figure of the Liberal Party, Jorge Eliécer Gaitán had been assassinated, giving rise to what is known as the *Bogotazo* with massive riots and the destruction of an important part of downtown Bogotá on April 9th, the day of the assassination. The *Bogotazo* is also considered as the key date for the open display of violent confrontations between political parties and factions at the origin of Colombia's lengthy period known as *La Violencia*. Currie arrives in Colombia in 1949, and what he finds is a country full of poverty amidst abundant natural resources, with little public administration and respect for the rule of law (Sandilands, 1990, 163).

[10] See Álvarez, Guiot-Isaac, Hurtado (2017).

Currie led the mission as if Colombians were incapable of understanding the structural reasons of the country's situation because they were immersed in it and lacked the perspective and objectivity of foreign experts, a position Hirschman deeply disagreed with (Adelman, 2013, 307). Hirschman had more confidence in local knowledge and experience as a valid source of meaningful inputs to advance development policies.

Escobar (1995, 26) associates positions such as Currie's, and the Currie Mission specifically, with the normalizing of the third world, as no other visions or alternatives were seriously considered. Development experts were to act as missionaries showing the way towards the affluence of the West, following in its steps (Escobar, 1995, 56). Hirschman's differences with the IBRD mission have been interpreted as a general reaction against the centrality of expertise in development and to this view of a "normal" path towards development. Currie has the "missionary trademark," the "exalted status as *the* foreign expert," which makes Hirschman "cringe" (Adelman, 2013, 299, 307). Also, Hirschman reacts against a premise of the Currie mission that "only foreign experts could really understand the problem because they were foreign and because they were experts" (Adelman, 2013, 307). Easterly (2014) and Ellerman (2004) present Hirschman as an early dissenter of the technocratic approach, and a precursor of grassroots development, citing his opposition to the mission but drawing mostly from his writings on foreign aid and north-south relations from the 1960s.

However, this narrative presents an incomplete picture of the conception that Currie and Hirschman had on the role of expertise in development. Currie was not unconcerned with involving other agents in decision-making, and nor does Hirschman completely deny a place for expert knowledge. Political dynamics and technical advice are fundamental for expertise to play a meaningful role in development processes (Seers, 1962), and the combination of both factors is what Currie and Hirschman realized determines the possibilities of successfully implementing expert policy recommendations. This shared recognition highlights the common ground Currie and Hirschman share (section 2), and allows presenting a nuanced interpretation of their disagreements (section 3).

2. Beyond the Divides: Sharing Ideas against the Mission's "Comprehensive Approach"

We propose an alternative interpretation of the Currie-Hirschman divide that allows us to focus on the place from where they started thinking and working on development, following Malcolm Deas' (2012) suggestion for understanding their differences by starting with what they share:

> It has been common to contrast Hirschman and Currie, but …, they both shared certain characteristics. Neither the one, nor the other believed so much in development economics. (Deas, 2012, 148)

Their disbelief stems from their view of theory and economics as just an instrument, a tool, in understanding and producing policy recommendations that could be translated into development policies. They both believed in the need to mobilize resources and energies in a desired direction, which they identify with development as requiring strategy. Currie and Hirschman agreed on their critique of the IBRD's comprehensive approach to development because it did not take into account implementation details and local political and economic features.

Hirschman's critique is well-known and has been seen as being addressed to Currie because it was he who led the Survey Mission to Colombia that resulted in the 1950 report advocating a comprehensive approach. However, Currie also distances himself from this approach after his return to Colombia in 1950, this time on a Colombian Government contract to advise a newly formed Committee on Economic Development (later the National Planning Council), to help elaborate the precise ways and policies needed to implement the report's recommendations for Colombia.

Even if they share their critical view on the comprehensive approach, the substance of their criticism diverges as well as their own alternatives to it. This critical view is, for both, the result of their experience in the country because they both change their opinion about the report afterwards (Álvarez et al., 2017).

As mentioned above, both economists agree that development is a problem of mobilizing resources and energies in a desired direction. The solution to development problems is not technical as orthodox development theorists argued[11]. In practice, Hirschman and Currie share a common understanding of development as a strategic process that implies political economy considerations; in particular, the role of the expert and the place of public involvement in economic matters.

Hirschman takes issue with overall planning and with balanced growth theory. He advances instead the idea of development as fostering decision-making skills. Currie criticizes the approach advanced in the Survey Mission report and especially the eclectic approach of attacking problems separately. He considers coherence and order is needed to trigger development. Therefore, he asserts general planning is the appropriate approach, prioritizing goals and steps; planning means focusing on the sequence and order of steps that lead to those goals.

[11] We expand on what "orthodox" means in section 3.3.

2.1. Currie's and Hirschman's Prior Development Policy Experience

Neither Currie, nor Hirschman were experts on development upon their arrival in Colombia. While Currie had worked as a top economic adviser in the Federal Reserve, 1934-39, and then as President Roosevelt's White House adviser on economic affairs, 1939-45, his only contact with an underdeveloped country had been two visits to China in 1942 and 1943. His involvement there was initially to investigate the causes of China's wartime inflation, but he was then involved with the civilian lend-lease program for China. He was also the acting head of the Foreign Economic Administration, 1943-44 and in the early 1945 headed a wartime mission to Switzerland as President Roosevelt's emissary. He left government service after Roosevelt's death in April 1945 to work as a private consultant with projects that included private business with China, Argentina, and Mexico. Hirschman had even less knowledge in development economics. After receiving an unorthodox formation in statistical economics in Europe, he emigrated to the United States in early 1941 and worked at Berkeley University for three years before enlisting in the US Army in February 1944, serving in North Africa and Italy. After the war he worked as an economist with the US Department of Commerce and the Federal Reserve Board and was the Fed's representative on the European Recovery Program where his work included dealing with exchange control problems (Adelman, 2013; 2016). Paradoxically, both Currie and Hirschman ended up as foreign advisers in the emerging "third world" (Escobar, 1995) escaping, wittingly or unwittingly, from McCarthyism.

Therefore, their first stay in Colombia was formative for them. It was determinant in a negative way, as an experience from which they attempt to distance themselves afterwards, specifically, from some aspects of their work as foreign advisers for the IBRD Mission and the follow-up National Planning Council. This process of demarcation is productive because it allows them to present alternative views on development. Both developed a broad understanding of development, free from any economic reductionism, as a process of decision-making. It is in this sense that we propose to interpret Deas' (2012, 148) statement that "[n]either the one, nor the other believed so much in development economics."

But their view of development certainly differed about the place they assigned to politics and stake holders. Currie, for his part, contends that there is no such thing as development economics but rather economics applied to particular conditions prevailing in developing countries. He is aware of the decisive role stake holders play in the implementation of any policy, which explains the amount of time he spends communicating with key politicians, including Ministers and Presidents, in order to influence their decisions by praising their actions when they were supported and in line with technical advice instead of pointing at possible mistakes or misunderstandings. Currie sees economic advice as a type of technology transfer dependent upon the administrative capacity and the local actors' level of competence. In this sense, advising is an art (Currie, 1981, 188), using rigorous theoretical analysis and mental discipline that must consider the prevailing circumstances in order to attain desired objectives (Currie, 1981, 208). An expert must adjust theory to the situation at hand, and identify transforming forces to promote them (Currie, 1981, 231). In a context of low administrative skills and negligible advanced economic education the expert then acts as a sort of guide. This was not Hirschman's view. For him, rather than guiding, the expert can act as a catalyst in public debate, someone who does not necessarily have the answers but can help in articulating them.

2.2. Hirschman's Critique of the Comprehensive Approach of the 1949 Survey Mission and the Critique of Balanced Growth

The IBRD 1949 Mission was not the "first mission sent out by the Bank, or even its first mission to Colombia," but it was the first in charge of designing an "overall framework for development and appraising project proposals in the light of that framework" (Mason and Asher, 1973, 299). The final report the Mission submitted was conceived as a "comprehensive and internally consistent program [...] to raise the standard of living of the Colombian people" (IBRD, 1950, ix, x). According to Currie, the Mission chief, "the recommendations will have fully served their purpose if they succeed in stimulating Colombians to think in terms of the whole economy" (IBRD, 1950, xii). Following this advice, the Colombian Government created two years later the National Planning Council and hired Hirschman as foreign adviser.

After finishing his work at the Council, Hirschman concludes that the general balance of the planning experiment was disappointing[12], due to "a misconceived notion of what planning could and should be" (Hirschman, 1954 [unpublished], 3). He elaborates on this in his first scholarly article on the subject, arguing that development plans produce the "optical illusion that economics as a science can yield detailed blueprints for the development of underdeveloped countries" (Hirschman, 1954, 42). Eventually, he warns, this spurious pretension will "invite reactions of the type: But the Emperor has nothing on!" (Hirschman, 1954, 41). He believes this "overemphasis on the confection of 'overall integrated programs'" led local and internation-

[12] Hirschman, Albert O. May 15 1954. Algunas consideraciones sobre la oficina y el trabajo de planeación. Box 39, folder 4. *Albert O. Hirschman Papers, Seeley G. Mudd Manuscript Library, Princeton University, Princeton, NJ* (AOHP). Our translation, and henceforth we refer to this as Hirschman (1954 [unpublished]).

al actors to adopt an "absurd conception of the role of the economist" (Hirschman, 1954, 44).

Assigning this role of planner to the economist is rather a waste of her expertise, "one of the very scarce resources in underdevelopment countries" (Hirschman, 1954, 47), who should rather focus on identifying promising sectors, and conceiving concrete projects in close collaboration with private and public entities (Hirschman, 1954 [unpublished], 4-5). In the debate between projects and plans, Hirschman chooses the former because they allow the economist to make the best use of expert knowledge, not because the latter exceeds the limits of private knowledge. But this does not imply limiting expert knowledge to casuistry, for proper economic theory provides "meaningful generalizations … concretely helpful in the location and elaboration of promising, specific investment projects" (Hirschman, 1954, 44).

The *Strategy of Economic Development* is the result of Hirschman's effort to "elucidate his own immediate experience" as foreign adviser in Colombia (Hirschman, 1958, vii). His criticism of the "balanced growth doctrine" is the translation of his disagreement with comprehensive economic planning in Colombia into the language of the contemporary theoretical literature in development. According to Hirschman, the central idea of the "balanced growth doctrine" is that equilibrated growth reduces the risks associated with complementarities of demand, guaranteeing that society profits from external economies. The policy implication of this theoretical framework is that only a simultaneous attack on all sectors—a *Big Push*—is effective in overcoming the condition of underemployment that characterizes underdeveloped countries. However, Hirschman considers that this doctrine "fails as a theory of *development*" (Hirschman, 1958, 51), because it "is an attempt to prove the need for a sudden massive effort"[13] (Hirschman, 1958 [unpublished], 6-7), without explaining how to transform "one type of economy into some more advanced type" (Hirschman, 1958, 51-52).

In order to provide an alternative framework, Hirschman resorts to breakthroughs in growth theory; in separate works, Harrod (1939) and Domar (1957) show that some conclusions that are valid in static systems do not apply in dynamic frameworks (Hirschman 1958, 30-31). Borrowing from this idea, Hirschman shows that, from a dynamical perspective, the possibilities disequilibria create outnumber the risks. Besides, he faces the challenge of adapting Harrod and Domar's framework to the study of developing economies (Boianovsky, 2018, 485). Harrod and Domar's treatment of investment, as income and

[13] Hirschman, Albert O. [unpublished] 1958. Economic Development: Current Research and Problem Areas. Box 58, *Albert O. Hirschman Papers, Seeley G. Mudd Manuscript Library, Princeton University, Princeton, NJ* (AOHP). Henceforth we refer to this as Hirschman (1958 [unpublished]).

capacity generator, supposes an equilibrium between savings and investment that Hirschman considers inapplicable to underdeveloped countries, because there "investment and saving decisions are largely interdependent … [and] savings depend far more on the opening up of investment opportunities and on the removal of various obstacles to investment than on increased income" (Hirschman, 1958, 32). More than the result of autonomous or induced investment, economic growth in underdeveloped countries is fueled by the "perception of investment opportunities and their transformation into actual investments" (Hirschman, 1958, 36)[14]. This perception can be induced or enforced through Hirschman's Principle of the Hiding Hand (Hirschman, 2014). Experts could promote investments in certain sectors and projects emphasizing the possible positive results rather than the costs, incentivizing risk averse agents to take risks. Even if uncertainty can never be resolved, the expert should attempt to find an adequate balance between uncertainty and risk taking in order to promote transformative projects that may lead to social change and development.

Despite the fact that the language of economic growth allows Hirschman to expose the limitations of understanding economic development as a static phenomenon, he is emphatic that development is not synonymous with growth. In the Introduction to *Strategy*, he argues that "[the tension of development] is not so much between known benefits and costs but between the goal and the ignorance and misconceptions about the road to that goal" (Hirschman, 1958, 10). The divorce of development from benefit-cost analysis leads him to restate his distance from the balanced growth theory in broader terms:

> My point of departure is that development is not held back so much by scarcities in resources and abilities as by difficulties in reaching the decisions necessary to bring these resources and abilities into play … What I am presenting therefore as a theory of development is a theory of maximizing induced decision-making (Hirschman, 1958 [unpublished], 7)

Decision making is rather a political process where the Hiding Hand appears as the main tool the expert has to help specific agents to make decisions[15]. This explains why the policy recommendation of a *Big Push*—foreign lending and comprehensive planning—to achieve

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[14] Boianovsky (2018, 492) shows how Hirschman's criticism of Harrod-Domar's model relates to "investment-stimulating projects." Besides this point we focus on how this criticism leads to the Principle of the Hiding Hand and informs the role of experts.

[15] This interpretation is consistent with Frobert and Ferraton's (2003), who argue that Hirschman's notion of hidden rationalities, central for his understanding of development, entails the "will and intrinsic ability [of concerned communities] to define ends collectively and find means to achieve them" (2003, 32). We will come again to this notion in the next section.

structural transformation is "an escapist solution," because it requires "huge amounts of precisely those abilities which we have identified as likely to be in very limited supply in underdeveloped countries" (Hirschman, 1958, 52-53). In particular, comprehensive plans demand an outstanding ability to reach consensus, because they expect societies to introduce not only positive externalities but also "some of the social costs into the economic calculus" (Hirschman, 1958, 57). This prescription fails to acknowledge that underdeveloped societies lack precisely the organizational basis to solve such conflicts.

According to Hirschman, "inducement mechanisms" provide a decentralized alternative to comprehensive planning, without taking for granted the society's ability for decision-making. During his stay in Colombia, Hirschman perceived that mechanisms such as showpiece projects and social overhead capital shortages generate pressures that induce responses from private enterprises and public authorities, following their desire for profit and political survival (Hirschman, 1958, 64). This explains his interest in "a general study of decision-making processes" (Hirschman, 1958 [unpublished], 15) because he considers that "the evaluation of economic policies in underdeveloped countries" is "one of the most neglected and at the same time interesting and potentially useful research areas" (Hirschman, 1958 [unpublished], 14). Following his own advice, his study of the political economy of the 1961 agrarian reform in this country showed him further that the response of policy-makers is "not necessarily or intrinsically less automatic than the response of entrepreneurs to a rise of the price of their product" (Hirschman, 1963, 20). Citizens and stake holders can use the art of *voice* to command the attention of decision makers (Hirschman, 1970).

2.3. Currie's Critique to Programming and the Non-Strategic Features of the Survey Mission

Hirschman's critical and skeptical tone towards this comprehensive approach of the Survey Mission is not that far from Currie's own assessment of it. After arguing that the main contribution of the Survey Report was instilling in policy makers a comprehensive perspective to tackle development problems[16], he reflected upon the difficulties this legacy implied. Following the overall framework of the Mission to Colombia, the World Bank replicated this experience in several countries (Mason and Asher, 1973). The comprehensive approach seemed "to justify a broad-scale attack on many fronts, and this actually became the practice among advice-givers" (Currie, 1981, 67). However, the disappointing results of such attempts led Currie to

[16] Currie, Lauchlin. December 5 1950. Some Economic Problems, Address of Dr. Lauchlin Currie at Palacio San Carlos. RM0039, rolls 1-2, World Bank Mission, 1948-1953. *Archivo Lauchlin Currie, Biblioteca Luis Angel Arango* (BLAA), 1-2.

declare a *mea culpa*, acknowledging that "the first of such comprehensive study missions—the World Bank Report on Colombia in 1949—seems to have been responsible for much misspent or at least disappointing subsequent effort" (Currie, 1981, 53). He consoles himself, however, arguing that policy advisers failed to understand "the very special nature of this experience," which could only have been successful under a "combination of circumstances [that] is very difficult to replicate" (Currie, 1981, 67).

This line of criticism continues to appear in Currie's writings each time he deals with this type of planning characterized for including "many separate items without giving predominance to any of them." The problem of this eclectic approach is that "many disparate goals are pursued simultaneously, and at first sight, there appears to be no order or scale of priorities" (Currie, 1966, 68). Moreover, it leads to confuse planning with programming, placing the "emphasis on quantitative relationships to the neglect of theory and qualitative considerations" (Currie, 1966, 8).

Like Hirschman, Currie considers that in poor countries with unskilled public administrations and "few trained economists, the waste is indefensible" (Currie, 1966, 60). While programming techniques are useful, "over and above it must be planning—the choice of objectives, the diagnosis of the problems, and the strategy of the attack on the problems to achieve the objectives" (Currie, 1966, 8). Sound economic planning involves more than understanding the interdependencies between economic variables, it requires defining a "rational system of priorities" (Currie, 1966, 200) in resource allocation. This reappraisal of planning led Currie to argue that it would be more effective if it followed a strategic[17] rather than an eclectic approach: "planning (and advising), whether by foreigners or nationals, offers more chance of being effective if it is selective in emphasis rather than comprehensive" (Currie, 1981, 67).

Moreover, economic programming concentrates on empirical exhaustiveness at the expense of theoretical coherence, which leads to a

[17] On an address in the commemoration of the thirty years of the Survey Mission, Currie shared with the audience an anecdote that revealed the importance of thinking in strategic terms: "A final anecdote. The atmosphere became unpropitious for planning in early 1953 with the Presidency of Rojas Pinilla and I prepared to resign. Before I did so, however, I wanted to assure myself that the partida for a road from Barranquilla to Ciénaga Grande, which Karl Parrish of Barranquilla had urged to me in my studies there, was inserted in the next year's budget. So I saw the General on this matter. He was not very much impressed by my economic arguments. Suddenly, however, he said 'You're right, but not for the reasons you cite. It is necessary for strategic purposes.' I was suitably impressed and the partida was placed in the budget and the road was subsequently built 'for strategic purposes'". Currie, L. August 31 1979. A talk by Lauchlin Currie. RM0029, roll 1, Talks, speeches, prologues, 1979-1988 and distinctions, forum, 1963-1992, *BLAA*, 12-13. The stress is Currie's.

fundamental misunderstanding of the nature of development. Currie identifies the emphasis on capital-output ratios of programming techniques with the "capital formation approach,"[18] which he considers a misguided orthodoxy in development theory (Currie, 1966, 127). Thinkers as diverse as Myrdal, Prebisch and Nurkse share the belief that the main obstacle for underdeveloped countries was the scarcity of capital. Like Hirschman, Currie sees "no particular merit in treating all development problems in terms of capital formation, capital stock, consumption, and production" and considers that noting the identity of saving and investment is "by no means a theory of employment or a theory of development" (Currie, 1966, 130).

He even quotes a fragment of the *Strategy*[19], adding that Hirschman is "still another skeptic" of the predictive and operational value of this approach (Currie, 1966, 137). These theorists fail to understand that "the truly difficult problem in accelerating development is not technical, difficult as that is, but rather the lack of will and knowledge" (Currie, 1966, 140). Planning should not be reduced to programming because underdeveloped countries need to economize their decision-making skills—the will to develop and the knowledge of how to develop—by strategically defining priorities and possible roads to mobilize human energies in this direction.

Currie's further experiences as policy adviser in Colombia[20] made him reconsider the proper economic theory to think coherently and

[18] The way Currie reads this approach is similar to what Boianovksy (2018) identifies as a traditional view of development economists as capital fundamentalists. A simple synthesis of this historiographical approach can be found in Meier and Seers (1984, 16): "The extension of Keynesian short-run employment theory into long-run growth theory in the form of the Harrod-Domar equation ($g = s/k$, where g is the growth rate, s the savings ratio, and k the capital-output ratio) implied that the growth rate could be maximized by maximizing the marginal saving from output growth and by minimizing the incremental capital-output ratio (ICOR)."

[19] "A model based on the propensity to save and the capital-output ratio is bound to be far less useful in underdeveloped than in advanced countries. Its predictive and operational value is low" (Hirschman, 1958, 32).

[20] The political scenario of Colombia in the 1960s provided Currie a field of experimentation on policy advice. In 1961, Currie prepared an economic plan for the government called *Operación Colombia* (OC). The main idea behind this plan was to capitalize on the benefits of the green revolution by creating urban jobs for the rural unemployed. The key was to define a *leading sector*, which would trigger self-sustained growth through three mechanisms: stimulating demand for production inputs in a broad way to encourage demand in other sectors, absorbing low-skilled labor, and creating a virtuous circle of adoption of new technology. *OC* was not adopted. Currie realized he overlooked the political implications of a transformation of the agricultural sector, in a country with deep political and economic inequalities in land ownership. However, he successfully put forward a new plan, the *Four Strategies Plan*, which was implemented in 1972, thanks to energetic persuasion skills from a key advisory position in the National Planning Department and close links with President Misael Pastrana.

define priorities. Greatly influenced by his 1920s Harvard mentor Allyn Young (Currie, 1997), he believed that his theory of demand-induced growth (Young, 1928) should be the foundation for the construction of a theory of development.

Following this, he believed that the role of the adviser in developing countries is to accelerate growth by stimulating latent demand that might then stimulate latent productive capacity in areas where it is most needed and fruitful. The difference between developed and underdeveloped countries is of degree, not of substance. It affects policy but not the validity of economic theory. The question is, thus, how to implement policies derived from sound economic theory in a context where decision-making skills are scarce.

His experience with *Operación Colombia*, his first failure as policy adviser because it was not adopted, made him realize that overlooking the political implications of any policy could mean the neglect of economic advice. The need for a close relationship with economic and political decision makers led Currie to cultivate his contacts with several high-ranking officials to promote economic discussion. Praising key actors for their ability to understand and implement sound development policies instead of focusing on possible misunderstandings is an efficient way to influence and guide policy and political decisions, and can be understood as the art of advising.

Implementation of sound economic ideas and neutralizing politics become a motto of his advice for experts to interact with politicians, private agents and policy makers. Concurring with Hirschman, Currie developed the conviction that decision making is the art of aligning (coordinating) "human action in a certain direction … The difficulty lies in securing agreement on the direction" (Currie, 1966, 141, fn 1). In this sense, direct communication and the art of advising appear central.

Even if Hirschman and Currie differ in the content of their criticisms of economic planning and programming, both agree that the theory on which these policy mechanisms are grounded does not work as a strategy of development. In particular, they both disagree with what they considered the orthodoxy in development theory proposed. Neither "balanced growth"[21] nor capital formation represented the most appropriate road to development. Any such approach would lead to the misuse of resources, ignoring specific circumstances and attempting to apply general recipes. The problem is not with the recipe but with the capacity to implement any economic policy; the problem has to do with the decision-making skills present in developing countries. This explains their shared vision of development as strategy, and of the misuse of economic expertise in such comprehensive approaches. According to Currie (1967, 13), it is the

[21] At least as defined by Hirschman but again see Currie's (1970 [2018]) critique.

"task" and "responsibility" of economists to define national objectives and conceive consistent plans to achieve them. Confirming the need for experts, Currie insists that economists are the most suited for this task because they have developed coherent theories explaining the economy as a system of interrelationships.

3. The Expert's Role as Catalyst of Decision Making

If development is a matter of defining priorities and energizing resources, this means it is not just a technical, but a political problem. Both Currie and Hirschman drew this insight from their work in Colombia (see Álvarez et al., 2017). However, the Colombian experience and its particular political economy context led them both to propose alternative ways to attain that goal.

3.1. Currie: Breaking the Vicious Circle of Low Growth and Economic Ignorance

Understanding development as strategy means striving to formulate a coordinated path between local economic, political and social agents. Such coordination requires developing or enforcing decision-making skills, which need some type of common ground of discussion. For Currie, this common ground is economic education whereas for Hirschman (1970, 43) it corresponds to "*the art of voice.*"

Currie presents the challenge as breaking the difficult interaction between culture and development, which he conceived as a vicious circle between low growth and cultural practices and beliefs:

> If a people with a particular culture has, to date, shown itself to possess less than acceptable domination of environment, how can the degree of change that seems necessary to accelerate the process of development and the date of transition from a less to a more developed category be brought about? (Currie, 1981, 237)

The problem here is to transform this particular culture that seems incapable of important change, and the question is how this should be done.

Currie believes that a first step to transformation is having sound foundations to propose such changes, which are to be found not in development economics but rather in basic rudiments in economic analysis. The discussion between policy makers and decision makers should be based on this common ground, which would then lead to discussions on the specific goals and steps to achieve them.

Currie believed there is only one correct type of economic analysis, around which there is a consensus in the profession, that can be applied in different circumstances (Currie, 1981, 6, 118). This difference of circumstances materializes in the degree of control and efficiency in each country and the ability to choose over policies (Currie, 1981, 39), and here is where debate should center. Economics for developed and developing countries is the same, but the policy recommendations need to be adapted as conditions differ. Though these recommendations may differ among economists, if policy makers and decision makers share a common ground it guarantees that all those involved in determining policy goals, policy design and implementation also share a common language and understand each other thanks to it. Therefore, Currie considers economic education is paramount to development processes[22].

In line with the idea of the art of advising, Currie himself plays an important role in the development of economic education in Colombia. In his report on this topic, Currie (1965) recognized the progress made on this front over the previous 15 years. The creation of the Administrative Department for National Statistics and of some 15 Economics Departments around the country attest to this process. However, Currie insisted on a clear distinction between economic science as taught in a textbook such as Samuelson's *Economics* and the skills required for national, regional and urban planning:

> When the distinction is not recognized and the teaching of 'planning' is attempted at an early stage in the preparation of an economist, there is a risk of oversimplifying what is perhaps the most difficult branch in which an economist can work, and of creating mental rigidities. What is needed is to be alert, have originality and mental agility combined with a thorough grounding in economic theory. (Currie, 1965, 13, *our translation*).

Along these lines, an investment policy in education was needed if the country was to overcome the limitations on development associated with deficient policy making due to lack of capacity and training. Currie thought such an investment should aim first at training

> the upper class, and, to a slightly lesser extent, … the larger middle class. A corollary is that expenditures on training, especially abroad, and on creating attitudes favorable to better domination and control of the environment will prove highly productive over a period of time. (Currie, 1981, 228)

[22] Currie himself would play an important role in the development of economic education in Colombia. He was active in the country's two major Economics Departments, promoting not only their undergraduate and graduate programs, but also contributing to the consolidation of economic research centers associated with these Departments at the Universidad Nacional de Colombia and the Universidad de los Andes. He was made Professor Emeritus of the latter in 1987, where he taught until 1991, two years before his death. He is also known for participating in the direct economic education of key politicians and officials. He not only held regular classes at the National Planning Department to explain the theory behind his policy recommendations, he created the *Grupo de los miércoles*, an informal group of influential figures, made up of industrialists, bankers, and regional governors, where, using the Socratic method, he would sound out his ideas on reform.

Moreover, economic education should go beyond Economics Departments, and reach the *relevant* public: "the upper classes should have enough understanding of how the economic system works as to be able to comprehend and evaluate the probable impact of specific economic programs and proposals" (Currie, 1965, 14, *our translation*). Only where key stake holders are economically enlightened, can trained economists effectively inform policy making.

This is even more important in a context where the number of foreign experts and international missions is shrinking, making the impact of expert knowledge less direct and harder to trace. Rather than a direct influence, expert advice would now come through the form of the conditions for loans, articles, books, and the training of national policy makers abroad. These newly trained policy advisers would then have an increased responsibility "to modify and adapt theories and policies to domestic requirements" (Currie, 1981, 227).

Such an education would ease the work of policy advisers, who could then play their role as guides in the debate, using good economics and the knowledge of specific conditions in order to identify and promote transforming forces (Currie, 1981, 213). Currie compares the policy adviser with "a driver in heavy traffic" who "must be alive to many things going on around him" (Currie, 1981, 206). Therefore, the policy adviser cannot concentrate only on theory, but rather be able to consider the circumstances, the quality and reliability of the information, the coherence of the policies proposed to achieve general goals, and the social and political context (Currie, 1981). In order to be able to participate and illuminate the public debate, the expert should also be able to converse with different audiences, be them other economists or the relevant public. Besides theoretical and technical skills, the expert must also be persuasive.

3.2. Hirschman: From the "Visiting Economist Syndrome" to the "Facilitator"

Concerning the art of communication as a major requirement for the successful expert, Currie joins Hirschman. Being able to participate in professional and public debate is their skill. There is no sense in formulating goals and policies if they are not appropriated and legitimized in public debate, if public opinion and all stake holders do not understand and share them.

However, Hirschman gives a less central role to economic education and to the expert in the debate. More in the line of trying "to identify those [powerful] forces [that are tending to bring about great transformations in society] and to shape his advice to further rather than to obstruct them" (Currie, 1981, 231), Hirschman sees the expert as a figure that identifies and empowers voices that have been hidden or neglected. The focus should not be on bringing knowledge or educating people in economics, the motto of the "visiting economist syndrome," but rather finding "hidden rationalities" (Hirschman, 1984) and bringing them to the light, so that local knowledge could be used, shared and expanded. The role of the expert is precisely to involve other agents in the process of common "self-discovery" and "self-affirmation" (Hirschman, [1961] 1970, 304) that characterizes development as a process of endogenous change. It is not the art of advising behind the expert as an economic educator that advances this role but rather the promotion of voice, and the encouragement through the Hiding Hand.

Therefore, rather than, as Currie thought, economics informing and even determining public debate, Hirschman favored recognizing the political and social context within which economic policy debate took place, making this debate a political one. The purpose was not to avoid or change this debate as untechnical, uninformed or the expression of vested or unenlightened interests. Economic policy debate was a political one, where all stake holders should be able to exercise their voice.

In brief, even if Currie and Hirschman disagreed on the precise grounds for an informed public debate on economic policy and the role the expert should play in it, they agreed that with the "growth of a more informed and critical public opinion, what can be hoped for is that there will be a tendency for decision-makers to identify their personal interests more with the longer term interests of the community and to give more weight to the probable judgement of history" (Currie, 1981, 228). Therefore, the strategy of development could be defined, shared and appropriated widely.

4. Concluding Remarks

Currie's and Hirschman's experience in Colombia gives us an idea of how they believe expertise should be understood. Exploring their reflections on their own roles as foreign experts, allows to show the limits of development theory and the influence of the political economy of development, and call our attention to the role of experts. They should develop their capacity to make public interventions (Mata and Medema, 2013) through the art of advising or the Principle of the Hiding-Hand. Successful expertise implies being aware of the reciprocal influence experts and decision-making agents have on each other.

Neither Currie nor Hirschman seem to acknowledge that the former's art of advising or the latter's Hiding Hand Principle lead precisely in this direction. Their appraisals of the role of the expert in development processes point to the risks or the negative sides of these practices: the art of advising would hide the expert's superiority, and the Hiding Hand Principle would ignore the risks of false or inaccurate advice.

The divide between Currie and Hirschman can be traced to the apparent independence that the Colombian economic technocrats have from politics. Such independence seems to agree with Currie's view about the relationship between politics and economics. There is a prevailing view in Colombia as to the ability experts have to get around politics but it could also be argued that the important difficulties of the country's development are related with what Hirschman identifies as its inability to deal with politics and assume the role of experts in the political economy of development and in economic, social and political debates. Here we might find the roots of what could be called the Colombian paradox of a stable economy within an unstable political and social context.

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The Ethics of Political Economy: Pigou in the Public Sphere

Nahid Aslanbeigui* and Guy Oakes**

The career of Arthur Cecil Pigou was marked by a clearly articulated project of public economic enlightenment initiated in 1903 and sustained into the mid-1950s. We argue as follows: Pigou held that in the British polity of his time, citizens were indirectly but ultimately responsible for economic policy. However, he was convinced that the British public was woefully ignorant of economic affairs and incapable of understanding elementary economic reasoning without expert advice. He placed the responsibility for enlightening the public on how to understand and assess economic policy on the economics profession, an obligation on which he acted in various essays, lectures, and letters to *The Times* intended for the "general body of the public."

Keywords: Pigou (Arthur C.), labor market, Chamberlain (Joseph), Chamberlain (Neville A.), wage-price spiral, World War II

L'éthique de l'économie politique : Pigou dans la sphère publique

La carrière d'Arthur Cecil Pigou a été marquée par un projet clairement défini visant à éveiller le grand public aux questions économiques. Ce projet fut initié en 1903 et dura jusqu'au milieu des années 1950. Nous défendons ce qui suit : Pigou a soutenu que dans la société politique britannique de son temps, les citoyens étaient indirectement, mais en fin de compte, responsables de la politique économique. Cependant, il était convaincu que le public britannique était terriblement ignorant des affaires économiques et incapable de comprendre un raisonnement économique élémentaire sans le conseil d'experts. Selon lui, la responsabilité d'éclairer le public sur la façon de comprendre et d'évaluer la politique économique incombait aux économistes, une obligation qu'il a mise en œuvre dans divers essais, des conférences et des lettres au *Times* destiné au « corps général du public. »

Mots-clés : Pigou (Arthur C.), marché du travail, Chamberlain (Joseph), Chamberlain (Neville A.), spirale prix-salaire, Seconde Guerre mondiale

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1. Pigou in the Arena

On November 5, 1903, *The Cambridge Review* summarized the debate of November 3 in the Cambridge Union on free trade and tariff reform, the most heated fiscal issue of the day in British politics. The controversy had become inflamed in May, when the political wisdom and economic benefits of free trade—the corner stone of economic ideology in the Victorian era—were contested by Joseph Chamberlain, Colonial Secretary in the Conservative government of A.J. Balfour, committed imperialist, and self-anointed prophet of the tariff reform movement.[1] An "extraordinary fervour" was on display in the Cambridge Union: "a house crowded and overflowing—an atmosphere charged with electrical excitement—tumultuous applause"—ad hominem speeches and personal invective, "and above all the fiery intensity and bitter sarcasm of Mr Pigou." In the account of the *Cambridge Review,* Pigou eviscerated the case for protective and retaliatory tariffs by exposing the shoddy arguments of tariff reformers. In introducing unexplained data without analyzing causes, they embraced colonial trade at the expense of more profitable free trade, filling the pockets of "the richest and most idle class in Britain." Chamberlain's proposals would "establish vested interests, encourage trusts, stir up jealousy in our colonies," and inevitably lead to import taxes on critical staples such as raw cotton, wool, and lumber—in short a "ruinous policy" for the British people (*Cambridge Review,* 1903, 55-56). This was A.C. Pigou as a young firebrand, the twenty-six year-old fellow of King's College elected only the year before. His engagement in the tariff reform controversy included short books for the general reader and articles for political periodicals as well as extra-mural public speeches. In attacking the bases of an influential set of policies, he addressed the public in plain if sometimes polemically ornamented language, accessible to an audience with little or no economic expertise (Pigou, 1903a; 1903b; 1904a; 1904b; 1906a; 1906b).

The political pedagogy that underpinned Pigou's contribution to the tariff reform controversy marked the appearance of an important assumption in his thought that linked the conditions for effective economic policy to public sentiment on economic issues and the ethics of the economics profession. These linkages can be clarified by introducing the concept of a Pigouvian project of public economic enlightenment. The tutelage of the public on economic matters became a critical civic and professional responsibility of the economist when three circumstances intersected. (1) Influential policies flawed by errors in economic reasoning endangered British public interest. (2) Correcting flawed policies called for substantial changes in the conventional economic wisdom of the political class: parliamentarians,

[1] On the tariff reform controversy see Sykes (1979) and Aslanbeigui and Oakes (2015b).

cabinet members, civil servants, and influential writers and editors of political weeklies that framed and reflected perceptions in Westminster and Whitehall. However, changes of such magnitude could be made only by recasting the sentiments of the electorate. Such a shift in the public mind called for basic competence in economic reasoning and judgment on plain facts of policy making. (3) The public could not be expected to grasp the elements of economic logic unless professionals in the discipline assumed an obligation to enlighten them on the issues at stake, how they should be understood, and policies that would be reasonable in light of a sound understanding.

In this essay, we analyze Pigou's project of public economic enlightenment, how he executed it, and some of the premises on which it was based. Although differences in rhetorical tone and polemical style are evident in his popular writings and lectures, their consistency in method and purpose over some four decades is remarkable.

The plan of the ensuing investigation can be briefly sketched. Section 2 considers Pigou's conception of the institutional importance of public economic enlightenment in the British polity of his time, the responsibilities it imposed on economists, and how he acted on them. Section 3 considers the question: who or what constituted the Pigouvian public? Section 4 reconstructs three moments in the history of British public economic enlightenment in which Pigou intervened: the labor problems following the Great War, the dangers of economic austerity in the 1930s as the British government grappled with the Great Depression; and the threats to the British economy posed by wage increases and inflation in the years following World War II. Section 5 concludes the essay with skeptical observations on Pigou's principle of nonpartisanship as an ethical axiom governing conduct of economists in educating the public.

2. The Pigouvian Project of Public Economic Enlightenment

The polity that is tied to the economy in Pigou's writings was invariably the British state at the time of writing. The exigencies addressed by intelligent policy were the demands of the day and the imperatives visible on the political horizon. Long-term strategic planning, which became fashionable in the policy sciences after his death, was a vain exercise. Because of the imponderable contingencies of history, confident projections of the remote consequences of current trends were out of the question. Although British economic policy was an artifact of the mother of parliaments, a representative body chosen by eligible voters, Pigou had very little confidence in the policy judgment of voters, most of whom he regarded as economically illiterate. He also expressed occasional doubts about the economic *savoir faire* of British MPs and professional civil servants. Moreover, the democratic complexion of representative government compromised the benefits of expertise, such as it was. In his view, the institutional structure of British political economy imposed two formidable constraints on public policy. (1) A policy had reasonable chances of success only if it enjoyed the "general assent" of the public. Assent would be forthcoming only if the public understood the policy and believed in its efficacy and fairness. (2) However, citizens were unlikely to grasp the essentials of any policy because of their economic incompetence. Easily misled by economic charlatans, they were also likely to be duped by the propaganda of special interests. Untutored but often dogmatically confident in the rectitude of their opinions, they were oblivious to basic distinctions, such as the differences between saving and investing. In consequence, it was futile to suppose the public could follow arguments employed in even a simple piece of economic analysis. In order to perform their role as citizens—responding to Parliament with informed consent, reservations, or dissent—they needed primary education, even if informal, in economic reasoning and some facility in arriving at sound judgment on important issues of policy. And who would tutor the public on economic affairs? Pigou held that this responsibility fell to professional economists—it was an essential desideratum of the ethics of economics as a vocation.

The necessity of public legitimation of economic policy, the general economic ineptitude of the public, and the obligation of economists to repair this deficiency were prominent themes in Pigou's work. In his inaugural address delivered on the occasion of his election to the Cambridge chair of political economy vacated by Alfred Marshall, he noted the critical function of economic reasoning in demonstrating the fallacies in economic arguments popularly believed to be plausible. Because most British citizens seemed to believe that they were not only competent but "bound in solemn duty" to offer pronouncements on matters of policy, speaking "from the vantage point of complete ignorance concerning social science," the result was unsurprising: "arguments repugnant to any form of logical reasoning are always in the air, and are always liable to influence the policy of a Democratic State." It was the task of economists to "check misguidance" by correcting the economic logic of "untrained common-sense" (Pigou, 1908, 18-19).

In 1924, when the British government was planning for a return to the gold standard after effectively abandoning it at the beginning of the Great War, Pigou considered the wisdom of adopting an alternative monetary scheme that would loosen the ties that coupled British currency to gold. Although he made a case for a system proposed by the Yale economist Irving Fisher on the grounds of its price stability, he finally decided against it: the scheme was unfamiliar, and might even be incomprehensible, to the public.

> In practical affairs, to introduce large changes the meaning of which most people cannot understand is dangerous. So far as the United Kingdom is concerned until the gold standard has been re-established, more elaborate improvements in our monetary system are not practical politics. When it has been re-established public opinion is unlikely, for some time, to sanction any formal departure from it (Pigou, 1924, 121; see also Pigou in HMSO, 1931, 54).

Novel policies that represented a departure from convention, tradition, or what passed for common sense would not succeed. Stated in the academic discourse of our time, a policy that marked a paradigm shift would fail unless measures were taken to embed it in the public consciousness, forming a consensus in its support by developing a popular conviction in its good sense and fairness. Unlike Keynes, Pigou was profoundly suspicious of intellectually deft and ingenious policy innovations. In this respect, he rather than Keynes was the authentically Burkean political economist.

In 1924, Pigou also criticized an unconventional policy to retire the national debt Britain had amassed during the Great War. Proposals for a capital levy, whereby owners of capital or other wealth would pay a large one-time tax, would be effective only if the public gave "general assent" to its practicability. That had not happened and could not be anticipated. Although a capital levy had enjoyed broad support immediately after the war, its time had passed: current opinion had solidified against it (HMSO, 1927, 443).

In 1929, Pigou delivered the Sidney Ball Lecture at Barnett House in Oxford, a center for adult civic education. In arguing that general economic study was important for both knowledge and practice, he considered the lag between the initial development of an economic theory and its reception by "the practical man." The main explanation, he thought, did not lie in Parliament, overburdened with debate and administration and unable to keep abreast of current research. After all, Parliament had access to a "brilliant Civil Service" as well as independent expertise. The real reason: implementation of a policy often depended on "the degree of economic knowledge possessed by the general body of the public." Returning to monetary policy, he claimed that "every economist knows that in the world of economists it would be easy to set up a monetary machine much superior to the gold standard: but in the world of actual men with their prejudices and ingrained beliefs, where perhaps not one in 100,000 understands the nature of money, it may be held that an attempt to do this would lead to disaster." To Pigou, the lesson of the abysmal state of public understanding of money was clear. In order to perform their public function, economists could not in good conscience rest with education of the political class: "we need also that the main body of the people shall have some training in economics—sufficient training at least to perceive that they do not possess complete training." Economists were obligated to ensure that their subject matter was understood "in some measure by the general body of educated men" (Pigou, 1929, 21-22).[2] His Sidney Ball lecture was one of Pigou's efforts to meet this obligation.

In the preface to his last book (Pigou, 1955), Pigou addressed the difficulty of the project of public economic enlightenment: it was not an inordinately difficult enterprise. The conceptual and mathematical refinements of economic analysis could be disregarded. It was vital only to train the "plain man"—in Pigouvian parlance, "any educated person"—in the "central core of economic truth" and the basic tools of economic reasoning. In this fashion, citizens could learn how to judge the merits of policies to the extent needed for their own interests and public welfare. The requisite body of economic knowledge could "be made intelligible to any educated person who chooses to take a little trouble." Reprising a favorite comparison, he observed that "if it is possible to remove the scaffolding from Einstein's terrific structures, as Einstein himself has shown that it is, in such a way that laymen can get a good general idea of what they essentially are, the same thing should be possible in our own much easier field" (Pigou, 1955, v).[3]

In the opening pages of *The Economics of Welfare*, Pigou's magnum opus, he compared economics to physiology: its ultimate value was determined by the fruits of its discoveries, its contributions to human well-being (Pigou, 1932, 5). He regarded it as self-evident that educating the public on economic affairs was one of these contributions, placing it squarely within the province of professional economics. Was it presumptuous on his part to suppose that he was qualified to instruct the British public on how to think about economic policy? Certainly not by the standards of his time. Regardless of party affiliation, British governments routinely appointed economists to commissions formed to investigate a host of economic problems. The list of those selected during the years of Pigou's professorship is quite long and included William Ashley, William Beveridge, Edwin Cannan, John Clapham, Keynes, Dennis Robertson, and Lionel Robbins. Pigou himself served on the Committee of Economists formed by the Board of Trade (1916), the Committee on Currency and Foreign Exchanges after the War (1918), the Royal Commission on the Income Tax (1919), the Committee on the Currency and Bank of England Note Issues

[2] After World War II, Pigou returned to the political dangers of a large gap between current economic expertise and public economic literacy. In war as in peace, if the state "tried to go more than a short distance ahead of what general opinion sanctioned, the administrative machine would break down under the strain" (Pigou, 1952, 205).

[3] Albert Einstein, *Relativity: The Special and the General Theory* was first published in German in 1916. It was translated into English in 1920 and subsequently appeared in many editions. In his preface, Einstein explained that the book was written for interested readers who lacked training in the mathematics of theoretical physics.

(1924), and the Committee of the Economists formed by Prime Minister Ramsay MacDonald (1930). In addition, he gave expert testimony to the Royal Commission on the Coal Industry (1919), the Committee on National Debt and Taxation (1924-1925), and the Committee on Finance and Industry (1930).[4] Pigou's confidence in the academic economist as the most authoritative source of expertise on public economic affairs conformed to the British political ethos of the period. His professorship (1908-1943), of course, spanned a long period: from the twilight of the long nineteenth century to the depths of World War II, from the Liberal cabinet of Herbert Asquith to the wartime cabinet of Winston Churchill. Parliaments and governments were formed and dissolved, and Treasury mandarins appeared and disappeared. However, a Westminster-Whitehall consensus on the expertise of academic economists in policy matters remained in place.

3. The Pigouvian Public

The "general body of the public"? "The main body of the people"? "The general body of educated men"? Who or what constituted the Pigouvian public? True to form, the Professor did not satisfy readers with a taste for precision. By way of answering this question, he introduced terminology that was current in literary culture in order to indicate the demands his various writings made on readers: lowbrow, middle-brow, highbrow—terms that distinguished the pretensions of a literary artifact as well as the cultural aspirations of readers. Originally derived from phrenology—people with high foreheads were believed to be highly intelligent, people with low foreheads, the 'Neanderthals', much less so—the term 'high-brow' became current in the early years of the twentieth century.[5] Pigou claimed that a lowbrow book such as *Socialism vs. Capitalism* was not a learned work but intended for "the general reader" (Pigou, 1937, v). Medium-brow books such as *Lapses from Full Employment* (1945) were "semi-popular," addressing problems plagued by "a great deal of confused thinking" (Pigou to Macmillan, n.d., circa October 4, 1943, Macmillan Archive). Their aim was intelligibility and simplicity at minor costs to "unpracticed readers," who would find some arguments challenging (Pigou, 1945, 5). These books, he thought, would be helpful to readers interested in policies "the implications of which they can't possibly understand without some sound background" (Pigou to Macmillan, May 9, 1944, Macmillan Archive). High-brow works were theoretically sophisticated and fully intelligible only to economists well-versed

[4] On Pigou's theory of economic policy analysis and his engagement in the public sphere, see Aslanbeigui and Oakes (2015a).
[5] According to the *Oxford English Dictionary*, 'middle-brow' first appeared in 1925 in *Punch.*

in mathematics (Pigou to Macmillan, n.d., circa 1934-35; November 18, 1939; July 23, 1940, Macmillan Archive).

Pigou's low and middle-brow works were exercises in public economic enlightenment. *Economics in Practice* (1935) was a collection of six such lectures. Four were given in 1934 at LSE, which wanted them published. Pigou agreed to LSE's terms on the condition that the lectures not be "of an abstruse character, but on matters of general interest and more or less popular in tone." The other two were given to a similar audience in Cambridge (Pigou, 1935, v). After their visit to the Soviet Union, Sidney and Beatrice Webb published *Soviet Communism: A New Civilization?* (1936), which Pigou reviewed for *The Economic Journal*. He wrote Beatrice that he was "making up some popular lectures about socialist central planning" but had doubts about publication (Pigou to Beatrice Webb, January 13, 1937, WHB/IIb/36 [Parts V and VI]). Written in the manner of the lectures in *Economics in Practice,* they became *Socialism vs. Capitalism.* The book proved wildly popular and was reprinted ten times between 1938 and 1960. *Lapses from Full Employment,* published in April 1945 as the European war was ending, was reprinted in September 1945 and again in 1949. *Income: An Introduction to Economics* (1946) comprised seven lectures he delivered at the request of a Cambridge professor for an audience of engineering students. Believing they would have a wider appeal, Pigou attempted to "provide an outline sketch of an important part of economics that shall be intelligible and, if possible, interesting to non-economists," including soldiers returning from the war "who would like to get a general idea of what economics is about" (Pigou, 1946, v; Pigou to Macmillan, September 26, 1945, Macmillan Archive). It was also a success. Selling nearly 3000 copies in its first three weeks of publication, it was printed twice in 1946 and twice in 1948 (Pigou to Macmillan, October 8, 1946, Macmillan Archive; Pigou, 1955, v-vi). *The Veil of Money* (1949a) was reprinted in 1950, 1956, and after his death in1960 and 1962.

The Pigouvian public seems most closely comparable to the readership of the political press where he occasionally published, periodicals such as the *Edinburgh Review,* the *Contemporary Review,* and the *Speaker*—which became the *Nation* in 1907, later the *Nation and Athenaeum,* and still later the *New Statesman and the Nation.* Based predominantly in London, they targeted a middle class of reform-minded readers: largely metropolitan, broadly liberal, and progressive (Koss, 1984). In sum, the Pigouvian public should not be conflated with the British public, conceived as citizens of Britain eligible to vote. The public Pigou attempted to enlighten was limited to men and women with the disposition and intellectual faculties to follow analyses of economic policy that were simple and lucid but generally spelled out in some detail. A socioeconomic status that supplied resources adequate to support periodical subscriptions, book purchases, and the leisure to read them was also necessary; or, failing that, access to libraries where patrons could find his books and articles. Pigou claimed that he entered economics to solve the social and human problems created by unemployment (Pigou, 1912, vii), an important cause of poverty. Neither the unemployed nor the impoverished enjoyed the income or leisure presupposed by the project of public economic enlightenment. Pigou's low and middle-brow readers fell into a much smaller and more fortunate class.

Did Pigou suppose that only the economic judgments of the British *Bildungsbürgertum* carried weight in influencing the decisions of the political class? Or did he perhaps think that an increasing sophistication in the economic reasoning of the middle class would also elevate the economic sentiments of the working class and the poor, translating into a more propitious effect on policy making? Pigou did not address these questions.

4. How to Think About Economic Policy

4.1. Lessons in Labor Problems following the Great War

By early 1915, expectations on the part of all major belligerents of a short European war of only a few months had been shattered. The rapid mobility that marked the early weeks of the war was succeeded by relative stasis: hundreds of kilometers of fixed and deeply entrenched forces on both sides of the Western Front and a system of industrialized killing and destruction with no end in sight. In February and December 1915, Pigou published two articles for a general readership explaining the anticipated costs of the war (Pigou, 1915a; 1915b). They were followed by two public lectures at Cambridge on the same theme in January-February 1916 (*Cambridge University Reporter*, 25/1/1916, 469) and an article in the *Contemporary Review* on the distributive impact of the costs (Pigou, 1916b). In spring 1916, he published a "little book"—*The Economy and Finance of the War*—that drew heavily on the earlier material and provided a more thorough account of the costs of the war and how they might be covered (Pigou, 1916c, 5).[6] The book concluded with a brief chapter, "After the War," sketching the critical problems Britain would face once a peace accord had been reached: demobilization, an immense national debt, redistribution of national income to the disadvantage of workers, and a vigorous economic boom that would surely be followed by a disastrous economic collapse (ibid., 84-89). Still optimistic that the war

[6] The economy and finance of the war became leitmotifs of Pigou's writings for the public during and immediately after the war, eventually morphing into his classic work: *A Study in Public Finance* (Pigou, 1928). We have explored this body of work, which lies beyond the scope of the present paper, elsewhere (Aslanbeigui and Oakes, 2016).

would end soon in spite of the continued stalemate on the Western Front and the British introduction of conscription in January, he published two papers in quick succession on how to understand these problems. The first (Pigou, 1916a) was written for leaders of working class organizations, the second (Pigou, 1916d) for policy makers.

On July 21-23, 1916, the Working Class Associations held a conference at Ruskin College. Established in 1899, named after John Ruskin—renowned Victorian art critic and author—and located in Oxford although not one of the Oxford colleges, it offered educational opportunities to workers who did not enjoy access to British universities. Eighty-two delegates from fifty-two working-class organizations—representing societies of workmen, cooperatives, unions, operatives, managers, and clerks—attended lectures on postwar reorganization of industry, commerce, and finance. In his contribution on "The Disorganization of Industry, Commerce, and Finance: The Problems to Be Faced," Pigou considered the postwar predicament of British workers.[7] The economic transition to peace, he explained, would not be comparable to the economic mobilization for war. The British declaration of war was immediately followed by a brief period of "shock, confusion and uncertainty." Stock and foreign exchange markets collapsed, trade was disrupted, and unemployment ensued. However, the war created an enormous demand for personnel and military goods, causing a rapid economic rebound (Pigou, 1916a, 5-6). Transition to peace would be less simple and more protracted, and for several reasons. The immediate postwar increase in consumer demand would not offset the extraordinary contraction in demand that would follow demobilization. Pervasive unemployment would be inevitable, and because the institutional structure of labor exchanges that matched job vacancies with labor supply was in its infancy, it could prove durable. Although it was not Pigou's intention to propose policies—he was at the conference to elucidate problems, not to offer solutions—he suggested that strengthening the network of exchanges could clear labor markets more expeditiously. The economic needs of the long-term unemployed could be alleviated by unemployment insurance, with the understanding that their situation was a well-deserved holiday financed by the state (ibid., 6-8).

Pigou anticipated that at a later stage of demobilization, the economy would reach a relatively normal state. The economic welfare of

[7] In addition to Pigou, three other illustrious presenters were on hand. Arthur Greenwood was a civil servant, a Labour Party activist, and the editor of the *Athenaeum*. Sidney Webb was a prominent Fabian socialist, one of the founders of the *New Statesman* and the London School of Economics, and a member of the governing committee of the Labour Party. Alfred Zimmern was a historian and one of the first British academic specialists in international relations. The proceedings of the conference met with "widespread appreciation." After the first and second printings sold out, demand still remained strong (N.A., 1916, 2).

workers during this phase would depend on how the government chose to finance the war. He asked his audience to consider two modes of financing and explore their implications with him: taxation and loans, which he had analyzed in earlier publications (see for example Pigou, 1916c, 66-83). A heavy reliance on taxes during the war would leave insignificant debt to be repaid through postwar tax revenues. On the terms of this policy, the position of workers would depend on the strength of labor supply and demand. Pigou predicted that labor supply would approximate immediate prewar levels. Reduction in the number of male workers due to wartime casualties would be offset by the number of women who, having entered the labor force during the war, would continue to work after an armistice. Postwar labor demand could also be expected to return to prewar levels. Because the war was not fought on British soil, widespread destruction of British capital stock was unlikely. Nor did Pigou anticipate substantial depreciation. Capital stock, which was indispensable to the prosecution of the war, would be protected from wear and tear. Ruling out major shifts in labor market conditions and assuming industrial peace, he predicted average postwar real wages to settle around prewar levels, forming a basis for peacetime wage negotiations. Strikes and lockouts, however, were very likely. Thus the machinery of industrial peace—an institutional structure that established systematic procedures for conciliation, mediation, and arbitration—would be critical. Failure to create such a structure would mean that a new era of European peace would be marred by industrial war in Britain (Pigou, 1916a, 8-10).

Pigou also spelled out in simple and stark terms the implications for workers of accumulating a large national debt. If the state financed the war by borrowing, it would be compelled to repay loans through increased postwar tax revenues. Indirect taxes—a regressive mode of taxation—would punish workers disproportionately. If, on the other hand, the state raised revenue through a progressive tax system, the rich and the middle classes would pay, sparing the working class from the debt burden (ibid., 11).

Shortly after his appearance at Ruskin College—it seems that this is the only conference of any kind that he attended in the years of his professorship—Pigou published "Labour Problems after the War" in *Contemporary Review* (Pigou, 1916d). Addressing policy makers, he foresaw three dangers on the postwar horizon and offered suggestions on how to avert them. The most serious was the prospect of widespread labor disputes, an issue he had discussed at Ruskin College. Underscoring the importance of creating "tribunals" that would resolve such disputes long before they led to strikes or lockouts, he argued that legislation was needed to regulate labor relations in "all industries of national importance" (ibid., 334). However, legislation alone would not be sufficient. The effectiveness of labour tribunals would depend on whether the state provided them with basic guidelines on how to arrive at recommendations. Pigou believed that wage disputes were the most disruptive of all labor problems and considered in some detail how the tribunals should proceed after the war. Adding more particulars to his Ruskin College presentation, he proposed that immediate prewar real wages form the basis of postwar wage negotiations (ibid., 335-340). Although he recognized that postwar conditions could invalidate any forecast of labor demand and supply, he regarded this contingency as inconsequential. It was only essential that tribunals accept some level of wages as a preliminary basis for negotiations. Otherwise, chaos would ensue. Prewar wage levels had a “far better chance of acceptance with goodwill by people in general,” he supposed, than any alternative. The benefits of preventing strikes and lockouts would far outweigh the cost of imperfect forecasts (ibid., 340).

The second major problem that merited the attention of policy makers was postwar labor immobility. Reallocating the demobilized workforce would be complicated and most likely hampered by ignorance of market conditions on the part of economic agents and the costs they would incur in moving from one occupation or industry to another. Pigou believed that, in principle, labor exchanges could facilitate postwar mobility. Because many labor decisions took place outside the exchange system, however, the Labour Exchanges Act of 1909 had been relatively ineffective. A new parliamentary act was in order to perfect the system, ensuring that it would be “in complete readiness to act” when needed, and Pigou offered several suggestions on how parliamentarians might approach this problem (ibid., 342). The act would require all businesses in an area to register with the local labor exchange, listing jobs for their workers who had served in the war. In the first six months of transition, businesses would also be required to employ any additional workers through the exchanges or inform them immediately of any labor contracts made without their assistance. In addition, the act would direct workers to register with the local exchange in their last place of employment. Any war bonus or gratuity intended for returning war veterans would be paid through the exchanges. A list of registered workers classified according to their industrial background and the date they registered would be maintained by the exchanges and distributed to prospective employers. Exchanges would also share lists of local labor shortages or surpluses. Pigou did not believe that the institutional arrangements he proposed would eliminate the threat of unemployment altogether. Those who failed to find jobs would receive state-sponsored unemployment benefit paid through the exchanges until the system offered them employment suitable for their skills and at commonly accepted wage rates (ibid., 342-343). At a minimum, his legislative primer gave parliamentarians rudimentary but indispensable ideas they could use in planning how to draft legislation.

A third postwar problem was tied to the generally accepted belief that the war would be followed by "an enormous volume of unemployment." Based on this belief, the public called for the implementation of job creation programs immediately after the advent of peace, to be sponsored by both local authorities and the central government. Pigou thought that a postwar phase of national pessimism and mass unemployment was exceedingly unlikely. Excessive optimism was much more probable, with the potential of "a tremendous industrial boom" and a vast misallocation of resources. In Pigouvian economic logic, postwar enthusiasm to repair and renew assets neglected during the war would create a fleeting but robust demand in engineering and construction. National and local public work projects would exacerbate this demand and attract more men into these lines of work. However, the demand would fall in two to three years, resulting in a "serious slump" for builders, construction workers, and engineers. A "cautious and conservative banking policy" was the more prudent course, forestalling a boom by "mercilessly" deterring "wild-cat schemes." Public economic welfare would be best served by ignoring the "inevitable popular clamour" for public works, delaying them until the boom in the industries affected had evaporated (ibid., 344-345).

Although Pigou offered qualified and contingent policy proposals in his writings and addresses on the economics of the war in 1915-1916, they were ancillary to his main objective: to elevate the level of public economic discourse on the war by engaging audiences with plainspoken argument. He regarded the problems raised by postwar fiscal policy as fraught with dangers. Ill-founded decisions by policy makers acting on misguided public expectations would damage British interests for years by obstructing a smooth transition to a robust peacetime economy. In his speeches and writings on the transition to peace, Pigou addressed both the public and their political representatives in order to illuminate the difficulties that could be anticipated.

4.2. Elucidating Interwar Austerity Policy

In autumn 1931, Neville Chamberlain, British Chancellor of the Exchequer, was struggling with the consequences of the European financial crisis precipitated by the collapse in May of Credit-Anstalt, the largest Austrian commercial bank. In June and July, its failure had caused a run on German banks, which had borrowed heavily from British financial institutions. The judgment in Whitehall was that nationalization of several German banks and standstill arrangements that protected debtors and postponed debt amortization had damaged British finance, resulting in a loss of confidence in the sterling.[8] With a view to reestablishing the standing of the pound, Chamberlain proposed several measures—chiefly protective and preferential tariffs as well as deep cuts in public-sector wages and unemployment insurance—but he declared himself at a loss to know where additional public economies might be found.[9] Existing austerity measures were deeply unpopular. Pensions for war veterans, the aged, and widows were generally regarded as politically untouchable; the same might hold true for health and unemployment insurance. In the end, he registered a vague hope that two government committees appointed to investigate local public works expenditure would shortly determine whether substantial savings in providing local services were feasible (*The Times*, 1932a).

On October 12, *The Times* published a letter from Francis Wrigley Hirst, a free-trade journalist and former editor of *The Economist* (1907-1916). Was it not, Hirst asked, the job of the Chancellor to determine where and how it was prudent to cut expenditure (Hirst, 1932)? Hirst's letter became grist for an editorial leader that same day. In the view of the editors, British public policy, routinely oscillating between indefensible extremes of enthusiasm for state expenditure and zealous advocacy of parsimony, had no basis in careful analysis. They issued an invitation to all economists to specify the circumstances under which expansionary or contractionary measures would benefit the public, hoping that it was "not too late to think out and apply consistently over a period of years a policy combining wise saving with wise spending" (*The Times*, 1932b).

Into the breach created by this challenge stepped Pigou, who drafted a response and contacted Keynes on tactics for recruiting signatories whose endorsement would carry weight, "creating an impression of authoritative opinion." The public, Pigou thought, would see a well-crafted consensus statement made by leaders of the field as incontrovertible. To maximize the public impact of the letter, he suggested several economists of great repute. Edwin Cannan was the president of the Royal Economic Society. D.H. Macgregor held the Drummond Professorship in Political Economy at Oxford, and William Beveridge was director of the London School of Economics (LSE). Robertson was a reader at Cambridge, and G.D.H. Cole held the same position at Oxford. Walter Layton was editor of *The Economist,* and Henry Clay was an advisor to the Bank of England. And of course there was Pigou himself. He also proposed three economists who enjoyed a substantial reputation as "men of affairs:" Keynes, Jo-

[8] On the Austrian, German, and British financial crises of 1931, see Accominotti (2012), Eichengreen and Jeanne (2000), Forbes (1987), James (2002), Schubert (1992), and Williams (1963).

[9] On the British imperial preference system in the interwar period, see Glickman (1947) and Drummond (2006).

siah Stamp, and Arthur Salter. In his thinking, reception of the statement would depend not only on substance, style, and rhetoric. The prestige of the signatories might be paramount. Since men of affairs were well-known, it was best to place the name of Beveridge or Stamp in first place. As for academics, "it is not the names, but the *positions* that would carry weight" (two letters from Pigou to Keynes, October 12, 1932, JMK/CAC/1).

Keynes found Pigou's draft "excellent" and dispatched it to all the economists on his list except Clay, Cole, and Robertson. In the end, Layton, Salter, Stamp, and Macgregor signed (letters from Keynes to Pigou and Cannan, October 13, 1932, JMK/CAC/1). Macgregor's name was placed first, followed by Pigou, Keynes, Layton, Salter, and Stamp. Although the signatories acknowledged that they did not speak for all economists, they doubted that many economists would dispute their position. Noting that during the Great War voluntary reduction in private consumption had released resources that could be spent more fruitfully in waging the war, they argued that circumstances were markedly different in 1932. If households increased savings, resources they released would not be consumed by "an insatiable war machine" or invested in capital construction by either the public or the private sector. On the contrary, a reduction in consumption would exacerbate the pessimism of investors planning to build factories and equipment with the objective of producing consumer goods. The same argument held for local authorities, who generally built swimming pools, libraries, and museums. By foregoing expenditure, those who practiced austerity would become "martyrs by mistake," damaging themselves as well as others. The principal consequence of this error in economic reasoning was clear. "Through their misdirected good will the mounting wave of unemployment will be lifted still higher" (Macgregor et al., 1932a)

The letter, published October 17, 1932, generated considerable controversy. Sympathetic readers made various suggestions for expenditure. Edwin Thompson, who had been Lord Mayor of Liverpool in 1930-31, estimated that half a million British men could afford to buy new suits, hats, or shoes on the following day or at least for Christmas. "What a miniature boom in trade would be created!" Cecilia Boston of Compton, Guilford, in Surrey, proposed that each affluent individual spend modest sums on families who were struggling economically. And Raymond Unwin, an influential architect and social reformer, recommended that local authorities borrow idle bank deposits for building construction to alleviate the perennial British shortage of adequate housing (Thompson, 1932; Boston, 1932; Unwin, 1932).

Pigou's plan also came under attack from both professional and arm-chair economists. Ernest Benn, publisher and laissez-faire publicist, and one W.W. Paine co-authored a response that registered a profound distaste for reasoning by analogy from expenditure by private citizens to expenditure by local authorities. Private spending, if devoted to "fruitful and worthy objects" and not "mere luxuries," was indispensable in creating employment. Expenditure on libraries, museums, and swimming pools, on the other hand, was a futile way to address the nation's unemployment problem. Writing on the assumption that the magnitude of loanable funds was fixed, they faulted the signatories for failing to grasp that all spending for public works inevitably reduced available funds once business confidence returned. At that point, expenditure on plant and equipment would produce "50 or 100 times the amount of employment" that could be expected from public works (Benn and Paine, 1932).

A joint letter from four distinguished economists at LSE—T.E. Gregory, F.A. von Hayek, Arnold Plant, and Lionel Robbins—took essentially the same line, arguing that the analysis of unemployment policy must answer three questions: Was it wise to hoard money? If not, was it preferable to spend or to invest? Finally, were private and public investment equivalent? The LSE answer to the first question was consistent with Pigou's. Hoarding money was deflationary and economically unsound in a depression. There was disagreement on the other questions. Pigou and his co-signatories seemed to think that all expenditure—whether on consumption or investment—was equally productive, a view the LSE economists rejected. The world economy faced the daunting problem of a depression in investment. They argued that buying existing securities, a form of saving, would increase bond prices and, following a time lag, stimulate new issues of securities that would support investment in plant and equipment. It was "little short of disaster" for Pigou and company to suggest that purchasing securities or depositing money in building societies would damage economic recovery. In their view, the most egregious error of the letter of October 17 was its support for deficit spending. Creating additional public debt would increase interest rates and reduce investment. The most effective policy for unemployment lay in eliminating obstacles to "trade and free movement of capital" (Gregory et al., 1932; see also Cannan, 1932).

The LSE letter demonstrated that one of Pigou's cherished convictions about the discipline of economics was naïve at best. There was, he thought, a large "central core of economic truth" essentially uncontested by professionals. Disagreements arose at the margins or on issues of relative unimportance, such as the choice of more or less equivalent analytical techniques or terminological preferences. The LSE letter showed that the scope of consensus was much narrower than Pigou had supposed. If that was the case, the project of public economic enlightenment might prove to be contentious and protracted, a possibility he had not anticipated.

In a subsequent letter to *The Times,* Pigou and his colleagues tried to clarify "a fundamental confusion" that could "render discussion futile and paralyse remedial action." The confusion lay in an implicit but decisive assumption underpinning the objections of critics: the premise that the economy was always at full employment. If that were the case, increased expenditure on public pools and museums would indeed reduce funds available for private investment. However, the premise was catastrophically mistaken. As "conclusive evidence of unemployment statistics" demonstrated, current resources were far from being fully employed. It followed that under prevailing conditions, deployment of idle resources would increase national income and hence the funds needed for private investment. The assumption of full employment in an era of unemployment, Pigou and his colleagues wrote, "misses the whole point of our contention" (Macgregor et al., 1932b).

In "Economy and Waste"—a public lecture delivered at LSE in 1934—Pigou examined the implications of the above arguments for austerity. Confusions and misunderstandings, in his view, had belabored an essentially straightforward matter, with "disastrous consequences" for policy. The controversy over austerity, therefore, gave Pigou an ideal occasion to make a case for public economic enlightenment: "the need for popular expositions of very simple truths, about which among serious students there is little or no dispute"—a curious observation in light of the joint LSE letter two years earlier (Pigou, 1935, 26). Pigou hoped to clarify the issues at stake by a series of rudimentary, step-by-step analyses. He began by identifying land, labor, and capital as productive resources. In a market economy such as Britain, resources were allocated by millions of independent decisions made by private economic actors as well as public authorities. Although the outcome of these decisions was clear, the process that led to them was not. It was the complexity of the process of resource allocation that led to confusion. Once this process began, "the fog of misunderstanding" enveloped not only resource allocation decisions, but "the simple fundamental facts as well" (ibid., 31).

The effects of an economizing campaign depended on the state of the economy. Pigou asked his audience to distinguish a long-run economy, defined by full employment, from an economy in the short-run, in which unemployment is a distinct possibility. In the long run, or during a war, there were three types of waste: (1) technical inefficiencies due to incompetence; (2) allocation of resources to sectors that employ them less productively than they could be used elsewhere; (3) and allocation of resources that responded to the demands of "plutocrats," neglecting the needs of the poor. Assuming full employment and no waste, a governmental economizing campaign would allow the private sector to employ more resources and increase production. In the short run, on the other hand, the economy could easily experience a fourth type of waste: unemployment. In that case, an economizing campaign would have quite different consequences. Cutting public expenditure by reducing either public borrowing or taxation would increase the size of idle balances. Because the funds released would not be used by the private sector, resources—especially labor—would become idle. Pigou believed that the case against economizing in the Great Depression was as clear as the argument in its favor during the Great War. Increasing public expenditures in recessions would create economic benefits as long as their rate of return was higher than zero (ibid., 36, 48).

If Chamberlain's austerity campaign was so obviously wrongheaded, how had it become official policy? Pigou blamed the highly complex nature of the Depression, the consequences of which were magnified by a government deficit, a run on the pound, and a political crisis. The austerity campaign began when the government attempted to establish fiscal discipline, balance the budget, and restore confidence in the sterling—all necessary to maintain the gold standard. Although economizing at the local level had no bearing on this objective, it was quickly adopted; nor did it end in 1931, when the gold standard was abandoned and the need for balanced budgets disappeared. A simple confusion had led to a deeply flawed policy. Policy errors, economic damage, and incalculable human suffering could have been avoided if political leaders and the public had achieved a proper understanding of basic economics. "Our national education in elementary economics," Pigou concluded, "is still incomplete" (ibid., 49-50).

4.3. A Public Tutorial on the British Economy following World War Two

In the 1930s, Pigou wrote chiefly about unemployment, which ranged between 8.5 and 17 percent. For most of the decade, inflation was insignificant, and he ignored it. The economic landscape of the decade following World War II differed dramatically, with the average unemployment rate a mere 1.63 percent and the actual rate never exceeding 2.2 percent. These historically low rates can be explained by a number of factors, including the commitment of the government to maintaining full employment. The average inflation rate, on the other hand, was over 5 percent during the same decade. In February 1948, Sir Stafford Cripps, Chancellor of the Exchequer, announced a policy of wage restraint that enjoyed trade union support and stabilized the inflation rate for two years. However, that policy could not withstand the cost pressures created by the 1949 devaluation of the sterling by 30 percent. After their full impact on the economy, the inflation rate rose above 9 percent for two consecutive years (1951-1952). Pigou's worries over the conjunction of a policy of full employment, wage increases, inflation, staggering balance of payment problems, and further damage to the country's currency seemed to have been confirmed.[10]

In 1949, Pigou delivered the Stamp Memorial Lecture at LSE, choosing as his theme "Wage Statistics and Wage Policy." Taking note of trends in wages over the previous seven decades, he explored two questions with his audience of economics students and members of the public: Under what conditions could workers increase their wages without creating adverse economic consequences? And what could be expected if these conditions were not met (Pigou, 1949b, 26)? In considering the first question, he employed standard neoclassical reasoning. If markets were imperfect and labor was exploited—wages falling below the value of the marginal product—higher nominal wages would increase real wages without creating unemployment. In perfectly competitive markets, a nominal wage increase would have the same effect, at least on the assumption that the wage increase was followed by a proportionate increase in labor productivity. In all other cases, a real wage increase would lead to higher unemployment rates.

In 1949, Britain was in a liminal state, executing a protracted transition from total mobilization for war to a peacetime economy. Gaining new powers during the war and energized by the monumental victory of the Labour Party in the general election of July 1945, workers had strengthened both their absolute and relative economic position through large increases in real wages (Pigou, 1949b; Bowers, 1985; Rollings, 1988). And yet higher rates of unemployment were not in sight. How could this apparent anomaly be explained? Pigou believed that the explanation lay in political expectations of the public. The postwar British citizen had imposed a "primary duty" on the government to avert high rates of unemployment. However, this expectation entailed dangers that had not been understood. Without the deterrent of unemployment, a wage-price spiral could ensue, resulting in uncontrolled inflation that would punish people on fixed incomes and damage creditors. Such an eventuality would also make British exports more expensive, exacerbating balance of payments difficulties that threatened to reduce Britain to penury (Pigou, 1949b, 30-31). The Stamp Memorial Lecture was only one entry in a public tutorial that Pigou conducted in lectures and in print during the years following the war. His theme was to explain how wages, inflation, and balance of payments were connected. The public had not grasped the risks inherent in these connections, which were invisible in the political discourse of the time. However, they could be exposed by elementary economic arguments.

[10] On the economic history of Britain in the interwar years and after World War II, see Matthews (1968); Welles (1950); iCalculator (2009-2018); and Social Democracy for the 21st Century (2013).

In 1948, Pigou had addressed these problems in *The Economic Journal* by considering food subsidies and the question of their elimination.[11] Between November 1947, when Cripps became Chancellor, and July 1948, the estimated annual cost of subsidies had risen by 17.5 percent to a sum of £470 million (*The Times*, 1948). What, Pigou asked, "ought to be done about these subsidies now" (Pigou, 1948, 204-205)? He claimed that economists generally agreed that food subsidies had no place in "normal peace-time policy." Firstly, they were a mode of income redistribution; but there were more effective methods for transferring income from the rich to the poor—allowances for children, health insurance, and old-age pensions among them. Secondly, they misallocated resources, drawing them into a sector that became spuriously profitable. However, the decision on whether to retain food subsidies did not rest on an assumption of economic normality. Under the extraordinary circumstances of postwar Britain, the chief question to consider was the consequences that would follow if the subsidies were eliminated or substantially reduced (ibid., 205).

In answering this question, Pigou examined two policies: reducing both subsidies and taxes, and reducing subsidies and using the proceeds to increase the state budget surplus (ibid., 206-207). Assuming a fixed exchange rate and no demands for wage increases following the reduction, Pigou analyzed the consequences of both policies. By cutting taxes, the government would weaken the disincentives of a steeply progressive tax system that had benefitted workers enormously at the price of penalizing investors. Workers, who stood to gain from higher economic growth, could tolerate higher food prices. On the other hand, if the government used its savings to increase its budget surplus, a "considerable disinflationary effect" would follow. Consumers would not dramatically reduce their consumption of food, a necessity for survival. Instead they would cut discretionary consumption, thereby reallocating resources to the export sector and alleviating the current-account deficit (ibid., 208). Thus each policy had merits.

In Pigou's analysis, the crux of the policy decision was not a choice between cutting taxes and increasing the budget surplus. On the contrary, it was the question of how workers would respond to the withdrawal of subsidies. If they acquiesced in a policy of wage restraint, food subsidies could be cut immediately regardless of how the savings might be invested. But if they demanded generous wage increases to cover higher food prices, he was reasonably certain that the weight of public opinion would support them. In light of the prospect of worker intransigence, the prudent course was to retain subsidies because of their anti-inflationary effect (ibid., 209).

[11] Although Pigou's article "The Food Subsidies" was initially published in *The Economic Journal* (1948), it was reproduced in his *Essays in Economics* (1952), a compilation intended for the general reader.

In "The inflationary Gap," an article Pigou wrote in 1951 and published in *Essays in Economics* (1952), he considered how the war and its aftermath had transformed the office of the Chancellor of the Exchequer. Before the war, he claimed, the primary obligation of the Chancellor was to forecast government expenditures and ensure that revenues sufficient to cover them would be in place. Following the war, the job had become much more complex, requiring forecasts of the magnitude of national income and foreign loans as well as their allocation among private and public consumption and investment. In addition to meeting the expenses of the state, the Chancellor was responsible for preventing three economic perils: mass unemployment, sustained high inflation—which could end in monetary collapse and socioeconomic chaos—and continuous balance of payments problems on a scale that would place the nation "under the continuing threat of a large crisis" (Pigou, 1952, 167-169). Pigou ruled out the possibility of mass unemployment on the grounds of "a general conviction" that it was "an intolerable social evil" (ibid., 168). Thus his focus on inflation and current-account deficits.

In Pigouvian economics, an inflationary gap appeared when aggregate demand consistently outstripped aggregate supply. Two forces could create such a gap: chronic increases in government spending that were not offset by reductions in private expenditure; and large increases in nominal wages in the absence of rising productivity or a threat of mass unemployment (ibid., 170-171). The Chancellor, who assumed that government expenditure was the real cause, faced several strikingly unattractive options. Reductions in public expenditure on education, housing, the civil service, or the judiciary would "arouse a violent outcry" (ibid., 174). The public would also strenuously oppose cuts in transfer payments such as retirement benefits, food subsidies, or health expenditures for the poor. Finally, a monetary policy that cut private spending by raising interest rates would have the unpalatable consequence of increasing the cost the Treasury incurred for borrowing. If the inflationary gap was caused by wage policy, the Chancellor's options were no better. He could try to contain wage increases by persuasion—essentially bargaining with trade union leaders. Although the Chancellor's 1948 policy of wage restraint had been supported by trade unions for a few years, Pigou regarded this tactic as unreliable, particularly when wage pressures were caused by factors over which workers had no control such as higher costs of food due to bad harvests or higher prices of imports (ibid., 167-177). Suppose that the Chancellor attempted to appease workers by means of a *quid pro quo* agreement of wage restraint in exchange for higher transfer payments or reduced tax rates. Pigou had no confidence here either, since workers regarded the latter benefits as "their due in any case" (ibid., 178-179). A more radical measure would force wage rates down by increasing unemployment, a hopelessly unrealistic idea. "In the present climate of opinion a Chancellor who brought this about would soon lose his office" (ibid., 179-180). Pigou, therefore, guided readers through a thicket of modestly difficult arguments, each of them suggesting that current inflationary problems were essentially irresolvable. Pigouvian public economic enlightenment could obviously lead to cheerless results. In his view, the postwar British state had created an institutional structure and validated public economic expectations that made the execution of sound economic policy impossible.

Pigou's contemporary reputation is based largely on his analyses of circumstances under which the state can improve on market outcomes. In writing for the public on how to think about policies intended to improve economic welfare, he invariably employed the case-by-case logic that forms the methodological basis of his academic economic analyses, arguing that a policy that might succeed in some historical conditions would be likely to fail in others. This historicist premise and its commitment to the contingency and relativity of economic life are evident in what he wrote on Chamberlain's economizing campaign in the 1930s. He was convinced that the immanent dynamic of markets operated on a long-run, self-correcting mechanism. Thus policies that he believed might undermine the efficient operation of this mechanism were never on his agenda. However, he was also convinced that the conditions under which markets could be expected to self-correct varied with historical circumstances. Policies favorable to self-correction in peacetime might fail badly in wartime. The same consideration held for the efficacy of policies in periods of high and low unemployment. The latter conviction was prominent in his account of the dangers of a post-1945 wage-inflation spiral. If Britain allowed political management of economic policy to override the inner logic of market mechanisms, elimination of the threat of unemployment would destroy the ability of markets to self-adjust. In that event, economic havoc would ensue.

5. Public Economic Enlightenment and the Principle of Nonpartisanship

Our analysis explores Pigou's conception of the responsibility of economists to educate the British public on the fundamentals of economic policy. However, he also considered a larger question regarding the role of economists in public life. The British polity, as Pigou understood it, was a sphere of perpetual conflict in which political parties contended for ascendancy on issues of both principle and power. In the Pigouvian project of public enlightenment, what was the proper role of the economist in this struggle?

In "An Economist's Apologia," one of the public lectures Pigou gave at LSE in 1934, he noted the increasingly important role that economics had come to play in political controversy—"partisan political debate," as he called it. If he took a jaundiced view of this phenomenon, it was because he believed that politicians first decided on a course to pursue, only then considering arguments that were favorable to their position. British politicians, it seemed, did not employ economic reasoning as a way to arrive at the truth but as "a kind of brickbat useful on occasion for inflicting injury on their opponents." Pigou counseled economists not only to establish distance from political controversy, but to cultivate a "detached mind." Young economists ambitious to play a role in public affairs should not be tempted to trim their conclusions in order to conform to the interests of a political party. Borrowing from the biblical story of Jacob's older twin brother Esau, who traded his birthright to Jacob for a bowl of lentils, Pigou's lesson was severe: the economist who yields to this temptation commits "an intellectual crime" by selling "his birthright in the household of truth for a mess of political pottage" (Pigou, 1935, 8-9). This uncompromising ethic was reaffirmed in the lecture "One Way of Looking at Economics," delivered at the University of London in 1950. Here he insisted that the economist not become an advocate of political ideology or an apologist for a political party, faction, or movement. Economists were bound by "one clear duty": commitment to truth, an unconditional imperative demanding "single-minded veracity." Above all, "they must not look about for arguments designed to support some particular set of politicians." Thus the Pigouvian prescription against political partisanship on the part of economists. Because the economist was a "servant of society," he "must own no unconditional allegiance to any party" (in Pigou, 1952, 82, 84).[12]

Can Pigou's principle of nonpartisanship accommodate the project of public economic enlightenment? Is public economic enlightenment situated beyond political values, transcending all interests that might jeopardize a commitment to the truths of economic science? Partisan-

[12] Is it paradoxical that Pigou had full confidence in the British state but was skeptical of the competence of British politicians and not averse to cutting observations on their powers of reasoning and integrity? Can his celebration of the British polity be reconciled with the disdain he sometimes expressed for its politicians? Before convicting him of inconsistency on this point, we should consider that Pigou made an implicit but unequivocal distinction between the institutions of political power and the persons who held political office. He had no doubts about the soundness of the British political order. After centuries of evolution, its structures and performance had improved immensely, especially since the Victorian era, producing corresponding benefits for the public. However, he believed it was a mistake to conflate political institutions with political actors, which he seems to have regarded as a fallacy of composition. The British state set international standards for expertise and probity. British political leaders, on the other hand, were susceptible to commonplace human frailties—incompetence, indifference, avarice, and venality. Although this distinction seems facile and may be indefensible, it is Pigou's distinction, and it explains his firm belief in British political institutions even as he sometimes found their personnel wanting.

ship is an epistemological concept, and its roots lie deeper than the policies of British political parties. As a method for enlightening the public, Pigouvian economic reasoning is an assessment of policy. An assessment presupposes an epistemic locus or premise from which it is produced and its merits judged. In his work on the economic dislocations following the Great War, the austerity policy of the 1930s, and wage increases and inflation following World War II, Pigou's premise was always the British social order of the day and the welfare of the British public. In his view, the existing regime of established institutions could not be uncoupled from public well-being: the latter was anchored in the former. This was not a politically neutral or nonpartisan position. The merits of the policies that Pigou assessed could have been evaluated from other perspectives that were not only independent of the established order but inconsistent with it. Consider economists who yielded to the temptations of the sirens of power and prestige and sold their place in the household of truth. What was the epistemic locus of that household? Even if the basis of Pigouvian nonpartisanship were granted—the economist as servant of society—there is no politically neutral conception of the British social order of his era. It can be understood from a variety of divergent positions, each of which is arguably consistent with the facts of British life. Should British institutions be conceived from the standpoint of the New Liberalism or the Fabianism of Pigou's early career? Toryism in its various incarnations? The Labour Party of the 1920s, the shop-floor socialism of the Trade Union Congress, or the political philosophy of the welfare state? There are other possibilities. Each potentially legitimate but contestable conception of British society defines a political space in which the work of public economic enlightenment can take place. But none of these positions is politically neutral.

The principle of nonpartisanship seems to entail two possibilities for publicly engaged Pigouvian economists, and neither is appealing. Either economists who labor in the household of truth serve some version of the established order, in which case they violate Pigou's principle of nonpartisanship. Or they serve in some politically transcendent world, occupying a household of truth situated in a metaphysical sphere beyond partisanship. In the latter case, they are mysterious godlike analysts, "detached minds" hovering over the contingencies of economic and political life. If this argument is sound, Pigou has dug an epistemological pit and fallen into it. His conception of public economic enlightenment ends in the choice: partisanship or metaphysics.

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Wisconsin Institutionalism, Public Persuasion, and Public Science

Marianne Johnson*

This paper makes use of the wealth of materials left by Wisconsin institutionalists to consider how they thought about economics as public science and as public persuasion. Considered is how the philosophy of pragmatism and an emphasis on empiricism manifested in economics practice at Wisconsin. To understand why the empirical method—encompassing field studies, data collection and organization, and case studies—was so important to the Wisconsin institutionalists requires recognizing that their work was empirical in a very specific way. The Wisconsin economists chose their studies with definite reform goals in mind—reforms that could be achieved either through regulatory changes or by a change of law. They engaged in constructive research—research specifically designed to identify problems and potential solutions. That the Wisconsin institutionalists generated substantial amounts of materials that repeatedly demonstrated the same findings was an artifact of what they wanted to accomplish.

Keywords: Wisconsin institutionalism, Commons (John R.), Ely (Richard T.), field work, persuasion, policymaking, public engagement, public science

L'institutionnalisme du Wisconsin, la persuasion et la science publique

Cet article profite de la richesse des archives des institutionnalistes du Wisconsin pour étudier leur conception de l'économie comme science publique et comme outil de persuasion publique. Dans leur pratique de l'économie se manifeste un usage de la philosophie pragmatique avec un accent sur l'empirisme. Afin de comprendre la centralité de la méthode empirique – études de terrain, collecte et organisation de données, études de cas – pour ces auteurs institutionnalistes, il est nécessaire de reconnaître la spécificité du caractère empirique de leurs travaux. Les économistes du Wisconsin choisissaient leurs études en ayant déjà en tête des objectifs de réformes précis, et qui pouvaient prendre la forme de modifications réglementaires ou légales. C'est dans cette optique qu'ils s'intéressèrent à la « recherche constructive », une recherche conçue pour l'identification des problèmes et des potentielles solutions. Le fait que ces institutionnalistes aient généré des quantités importantes de documents, qui démontraient toujours les mêmes conclusions, indique que ces études constituaient un artefact de ce qu'ils voulaient réellement accomplir.

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Mots-clés : institutionnalisme du Wisconsin, Commons (John R.), Ely (Richard T.), travail de terrain, persuasion, politique publique, engagement public, science publique

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Wisconsin Institutionalism was always part political economy and part public persuasion.[1] How they persuaded is a sweeping story that covers more than sixty years, from Richard T. Ely's admonishment to "look and see, ask, listen and learn" (Morehouse, 1969, 18) to Edwin E. Witte's dismay over economists who "think, talk, and write" but whose "participation and influence is quite limited" (1957, 2). Rising in concert with the Progressive movement, Wisconsin Institutionalism articulated an ambitious program of economic and social reform, underpinned by 'the new economics.' Defined by its empirical focus, pioneering statistical data collection, and the use of case studies and legal-historical analyses, Wisconsin Institutional economics "had a strong empirical bent, rating experience above abstract theory, favoring first-hand investigations and staring with the concrete, practical, important near-at-hand" (Groves, 1969a, 4). Wisconsin's approach to economics was deeply intertwined with the 'Wisconsin Idea'—the belief that university-produced knowledge should be used to solve problems and improve the lives of citizens of the state (McCarthy, 1912). An important feature was a close relationship between the university and the government. Wisconsin's economists leveraged their expertise to enact legislation and regulatory policy. Though primarily associated with labor reforms, they also advocated for social welfare legislation, progressive tax reform, government land-use management, and public ownership of utilities. In this "the school was distinguished as much by its attitudes and methods of investigation as by its doctrine. It was imbued with a sense of moral purpose and aimed at improving the quality of American life" (Groves, 1969a, 4).[2]

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1 Prior to the 1940s, American economics was theoretically and methodologically diverse. Institutionalism constituted one important approach, with variations centered at Columbia University and the University of Wisconsin, as well as that which was associated with Thorstein Veblen but locationally disperse. Institutionalism generally has been characterized by (1) emphasis on institutions and institutional change, (2) rejection of utility maximization in favor of social psychology, (3) empiricism, (4) emphasis on social control, and (5) rejection of traditional theories of value and efficiency (Rutherford, 2011). Though Institutionalism was only so named in 1918, there is enough similarity in method and approach to include Ely and those at Wisconsin during the Progressive era and 1910s as proto-Institutionalists. John R. Commons, who would undoubtedly qualify as an Institutionalist, arrived at Wisconsin in 1904.

2 Witte cataloged his fellow Wisconsin Institutionalists "among university professors … Harry Mills, Ira Cross, Theresa McMahon, Willian Haber, Ellison

A particular feature of Institutionalism was the volume of research materials generated.[3] The sheer quantity lead Ronald H. Coase to describe Institutionalism as "a mass of descriptive material waiting for a theory, or a fire" (1984, 230). Rather than Coase's fire, I attempt to make sense of these materials as public science. Public science has two defining aspects. The first is that the research conducted amongst the public, sometimes called participatory action research. This manifested at Wisconsin in voluminous case studies, field researches, interviews, and onsite data gathering. The Institutionalists believed the laissez-faire approach that dominated economic theory and practice during the previous century had led to vast injustices. Yet, they had very little reliable evidence that could confirm convictions or guide reform.[4] They responded by elevating practical problem solving as the central focus of economics study. Rather than be concerned "with the explanation of all economic phenomena," they instead chose to focus on "the solution of particular economic problems of immediate significance" (Witte, 1954, 133). Wisconsin's economists believed they were called to actively "do something toward directly the great forces shaping our lives, and directing them in such a way as to bring improvement" (Ely, 1938, 155-156). To do so, they engaged in "constructive research" that would contribute to "constructive democracy" (Commons, 1932). Within this public science framework, the "mass of

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Chambers, Selig Perlman, Don Lescohier, Elizabeth Brandeis, Kenneth Parsons, and Harold Groves … of those whose careers were mainly in the public service Arthur Altmeyer, William Leiserson, Katharine Lenroot, Ewan Clague, Paul Raushenbush, Maud Swett, and Meredith Givens." A third generation included Theodore W. Schultz, Walter Heller, Warren J. Samuels, C. Lloyd Francis, John Gronouski, and Robert Lampman (Witte, in Lampman, 1993, 116). One should add Wisconsin faculty Thomas S. Adams and Martin Glaeser and students John B. Andrews, Irene Osgood Andrews, J. Roy Blough, Florence Peterson, and Helen Sumner Woodbury to the list. Historians Charles McCarthy and Frederick Jackson Turner and sociologist E. A. Ross also made substantial contributions. Not everyone who trained or taught at Wisconsin should be classified as an Institutionalist; exceptions include Charles Bullock, Balthasar Meyer, Allyn Young, Max Lorenz, Ethel Dietrich, and Alvin Hansen.

[3] Ely published more than 324 articles, books, editorials, and book reviews; he left 198 boxes of archival documents to the Wisconsin Historical Society (WHS). Groves left 48 boxes; Witte left 276 boxes. Altmeyer deposited 36 boxes, and Commons 17 boxes. Nearly all of the economists listed in the previous footnote left ten or more boxes. Documents include government reports, case studies, field research reports, journals, notebooks and histories as well as speeches, editorials, journal articles, and correspondence. Ely (1938), Commons (1963), Groves (1969b), Lescohier (1960), McMahon (undated; in Theresa Schmid McMahon Papers), Ross (1936), and Witte (1963) wrote autobiographies. Because of the volume of materials, the approach taken here is necessarily prosopographic.

[4] Data was desperately needed. For example, while working to improve living conditions in tenement housing through minimum regulatory standards, Commons bemoaned the lack of "any authentic standards of food and prices, housing and rents, that would disprove [erroneous] claims" (1908, 319).

descriptive material" can be understood as the scientific knowledge needed to motivate socioeconomic reforms.

The second aspect of public science is outreach education. The Wisconsin economists understood the importance of this and devoted much energy to it. They believed the study of economics would improve the ability of citizens to participate in the democratic process. Their work with Chautauqua, the University of Wisconsin Extension, labor unions, and civic groups, as well as their drafting of civil service and anti-corrupt practices laws, worked to empower the "average voter" (McCarthy, 1912, 100). The Wisconsin Institutionalists' "mass of descriptive material" thus includes copious public lectures, syllabi and texts for workers schools, and curricula for extension programs. Combined with empirical research, the materials can be seen as an articulation of how social science should influence politics—knowledge leading to action, experts showing the way to the public. In this, science and persuasion were not wholly separate.

In the next section, I consider how the philosophy of pragmatism and an emphasis on empiricism manifested in economics practice at Wisconsin. The ways in which empirical studies were used to stimulate legal and regulatory changes is considered in the following section. The remainder of the paper examines how the Wisconsin Institutionalists commingled public education and public persuasion to achieve their political goals and how this can be understood through their vision of economics as a public science.

1. Knowledge, Science, and Expert Authority

Several masterful studies have documented the rise of Pragmatism and the preference for empirically validated knowledge at the end of the 19th century in the United States (Dorfman, 1969; Furner, 2001; Leonard, 2016; Ross, 1991). Influenced by Pragmatic thinkers such as Charles Peirce, William James, and John Dewey, Institutionalists eschewed the natural laws of classical political economy and the deductive mathematics of neoclassical economics. Instead, they emphasized scientific investigation as the basis of logical reasoning combined with evaluation and re-evaluation of the consequences. Institutionalists such as Morris Copeland and Walton Hamilton emphasized that knowledge construction was a process; institutions and laws were changeable and indeed should be reconsidered and reformed as needed (Rutherford, 2011). Hamilton, in particular, placed enormous emphasis on problem solving and producing students who knew how to go about solving problems (Rutherford, 2011).

Wisconsin's John R. Commons explained that it was not the case that "the individualistic philosophies and economics were untrue—

they were [just] inadequate" for modern industrial society (1939, 32).[5] Eschewing economic treatises in favor of practical evidence, the Wisconsin Institutionalists saw field reports, case studies, legal histories, and statistical summaries as constituting confident scientific knowledge (Mitchell, 1924; Samuels, 1991). Though Commons left more room for theory than other Wisconsin economists, his approach relied on facts to drive action: "theories are broken down into hypotheses for particular problems; the hypotheses are tested by experiments to see which of them best fits the facts. If all who investigate and are competent can verify the experiments, their agreement is a 'science' … science itself grows to fit the changes and discoveries in the facts" (Commons, 1939, 31).[6] Institutionalists believed their approach to economics was therefore more scientific than that adopted by deductive economists (Clark, 1927, 221; 271).

A legacy from the Progressives who venerated science as a mechanism to improve all aspects of human life, one particularly appealing aspect of Pragmatism was the belief that knowledge should be useful (Commons, 1939). For the Wisconsin economists, the starting point of analysis was the identification of a problem or problem situation. This was followed by investigation of the problem and the proposal of a solution—what they called "action research" (Raushenbush and Raushenbush, 1979). Both the initial investigation of the problem and the experience implementing the solution could produce additional knowledge that would lead to a refinement of either the solution or the understanding of the initial problem. Thus, both the ends and the means were subject to reappraisal as the result of the problem solving effort. This sort of thinking led Witte to conclude that Wisconsin Institutional economics was "not so much a connected body of economic thought as a method of approaching economic problems" (1954, 133). While the approach was not unique to Wisconsin, being widely

[5] Commons was the defining individual of Wisconsin's Institutionalism. As the epicenter of the department for nearly thirty years, he oversaw an expansive research agenda and orchestrated nation-wide political advocacy. While Commons is perhaps best remembered for his theoretical work, at the time he was an active social reformer and nearly all of his students worked on empirical problems. His empirical bona fide and his commitment to the study of legal precedents cannot be doubted. He was however distinct from other Wisconsin Institutionalists in that he "cherished a deep interest in, a certain reverence for" economic theorizing. "No economic system was complete in his eyes until it is tied into a system of concepts related organically to the reinterpreted concepts of the theorists;" this combination of practical study and theory made Commons "a bewildering person" (Mitchell, 1924, 240).

[6] The focus of this paper is understanding the volume of Wisconsin Institutionalist empirical work as public science. Therefore no consideration is given to Commons' theoretical work (e.g. Commons, 1912), which had little contemporary influence. Wesley C. Mitchell argued that even Commons' theories had to be understood in the context of a "historian, reformer, teacher turns theorist" (1924, 240).

shared by the different variants of Institutionalism, what differentiated Wisconsin was an emphasis on 'scientific' administration as a solution. Commons argued that "the pragmatic application" of the social sciences was "in the new field of Administration" (1939, 33). This "fourth branch of government" (ibid) could be more easily be adjusted than could legislation and may have been one reason so many Wisconsin-trained economists were attracted to administrative positions in government.[7]

Institutionalists envisioned that expert administrative management, informed by scientific study, could improve living standards and create a more harmonious society than that which would arise under laissez-faire (Furner, 2011; Leonard, 2016). At Wisconsin, E. A. Ross (1916) invoked the idea of social engineers. Frederick Jackson Turner, a student of Ely's from Johns Hopkins and his colleague at Wisconsin, similarly claimed "general experience and rule-of-thumb information are inadequate for the solution of the problems of a democracy … the very discoveries of science … have made it necessary to depend upon the expert" (in McCarthy, 1912, 125). The University of Wisconsin quickly became a leading center in the training of such experts. Ely joined the faculty in 1892 as the head of the School of Economics, Political Science, and History; his hiring of Commons in 1904 and Ross in 1906 launched the Institutionalist era. Wisconsin maintained a position of national importance through the 1940s, operating the fourth largest doctoral program in the country, emphasizing pragmatic action research.[8]

"Look and see" first manifested in Ely's Tuesday-night round table for graduate students, where he encouraged them to take up historical and investigative studies rather than theoretical subjects (Ely,

[7] "To the young Wisconsin Institutionalist … a position in government likely seemed more exciting and important than it would have seemed to a graduate student trained in a more orthodox program" (Biddle, 1998, 113-114). This was particularly true for Wisconsin's women economists. Katherine Lenroot was Chief of the Children's Bureau, and Helen Witmer was the Director of its Division of Research. Elizabeth Paschal was the first female division chief at the Social Security Administration. Florence Peterson was the director of industrial relations at the Bureau of Labor Statistics. Gertrude Schmidt Weiss served at the Department of Labor along with Ruth Scandrett, who was their senior industrial economist. Wisconsin economists also had a high profile at the U.S. Department of Labor, the Bureau of Labor Statistics, and the Social Security Administration as well as at the Industrial Commission of Wisconsin (Johnson, 2018).

[8] Ely's clever phrasing of "look and see" has obscured the fact that many of the 19th century laissez-faire economists also engaged in data collection and statistical study (Maas and Morgan, 2012). The extent of empirical analysis among different schools of economic thought does not obviate the uniqueness of the Wisconsin approach; for this group the collecting and recording process was fundamental to theory and practice, not ancillary or expository.

1923, 12).[9] "While we appreciate the work of former economists … [we] look not so much to speculation as to the historical and statistical study of actual conditions of economic life" claimed Ely (1909, 49). Wisconsin's faculty thus sought to train experts who had "been tried the laboratory of public life;" they required the "study of actual problems rather than study of theory" (McCarthy, 1912, 189). Doctoral dissertations from the early Wisconsin period reflect this focus on fact-finding as did course work.[10]

As early as 1901, the department offered courses where "the statistical method will be applied to the treatment of selected economic and social problems … Students are required to do a thorough piece of statistical investigation" (University of Wisconsin Bulletin, 1903-1904, 105). A course in field work appeared in the curriculum from 1902 to 1905; beginning in 1921, the topic was offered regularly as Technique of Field Investigation. More generally, field work was embedded throughout the curriculum, reflecting the departmental belief that "continuous study, followed by field work, yields the best results" (University of Wisconsin Course Bulletin, 1903-1904, 107-108). Current events and popular social movements were seen as fundamentally important to the study of economics at Wisconsin. Academic economists were expected to take a stand on contemporary issues, addressing policy and practice in the classroom and in public (Kiekhofer et al., 1935). "Theories that do not influence action" were considered "arid and useless cerebration" (Arthur Altmeyer Papers, 7 May 1954, Box 10).

The earliest Wisconsin economists were preachers who believed that experts should not only instruct on how to achieve society's goals, but on what the goals should be. Experts possessed the "divine spark" of science, and therefore were uniquely loyal and incorruptible (Ross, 1916). These Progressives cum proto-Institutionalists claimed not only scientific knowledge, but scientific virtue. This shifted in the years following the First World War. The religious drive paled and was replaced by a more conventionally technocratic con-

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[9] "Ely made sure that the students at Wisconsin were exposed to exactly the opposite type of training [of students at the University of Chicago]. By building a staff of former students loyal to his discipleship … he could be certain that the instruction at the school was of a reformist type" (Lampman, 1993, 53). "Institutional economists have always been very much concerned with the discovery and presentation of facts. Institutionalists have a great regard for statistics and field studies … Institutional economists have relied far more on direct observations than model building" (Witte, 1954, 135).

[10] In Lampman (1993), see Balthasar Meyer's *Railway Legislation in Wisconsin* (1897), Albert Jenks' *Wild Rice Gathers of the Upper Lakes* (1899), George Ray Wicker's *Financial History of the New York Colony* (1900), B. H. Hibbard's *History of Agriculture in Dane County* (1902), Raymond Phelan's *Financial History of Wisconsin* (1906), and Benjamin Rastall's *Labor History of the Cripple Creek District* (1906).

ception of the economic expert. This can be seen as Ely's Round Table gave way to Commons' Friday Nighters. The emphasis remained on pragmatic, investigative work. Commons "had all of his graduate students work on some aspects of these [labor] problems … [and] inspired work on the practical questions" (Witte, 1954, 131). Even through the tenure of Witte in the 1950s, graduate training centered on "a thesis devoted to a practical public policy problem" (1954, 140). Field work was a common component of dissertation research; the process was highly empirical, "collection, classification, and interpretation of the facts" (Furner, 2011, 14).[11] The emphasis on field work grounded in the historical and contextual evolution of institutions sometimes meant that Wisconsin economists were sometimes loath to generalize. New situations required new data to correctly formulate ameliorative policy; this contributed to the volume of empirical work generated.

Wisconsin's action research frequently combined field work and social reform.[12] Commons argued that unlike natural scientists, "economic and social scientists cannot be disinterested" (1939, 2). Helen Page Bates, Irene Osgood Andrews, Jean Scobie Davis, and Theresa Schmid McMahon worked in settlement houses where the data collected was used to argue for social reform, and the inhabitants trained to advocate for change. Harold Groves' work with education unions and Don Lescohier's efforts organizing stove workers were undertaken with similar goals. Selig Perlman (1928) maintained that the only way to make progress in labor reform was to understand the psychology of the laborer; this could only happen through field research and personal interaction. For Perlman, the expert "educated nonmanualists" were "most useful when investigating specific subjects, which have definite and calculable bearings upon the workers' welfare" (1928, 280).

To understand why the empirical method was so important to the Wisconsin Institutionalists requires recognizing that their work was empirical in a very specific way. The Wisconsin economists chose their studies with definite reform goals in mind—reforms that could be achieved either through regulatory changes or by a change of law. Commons' constructive or action research was specifically designed

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11 In Lampman (1993), see Frederick Deibler's *Amalgamated Wood-Workers International Union* (1909), Thomas Crafer's *The Administration of Public Poor Relief in Wisconsin and Minnesota* (1910), Alex Johnson's *Unemployment in Milwaukee During 1908-1909* (1912), Alonzo Cox's *The Milltown Agricultural Community, Polk County, Wisconsin* (1920), Hirim Jome's *Radio Industry* (1925), Harold Groves' *Machinist in Industry: A Study of His Craft* (1927), Edward Morehouse's *Study of the Rochester Clothing Market, 1919-1922* (1927), and Arthur Altmeyer's *Industrial Commission of Wisconsin: A Case Study* (1931).

12 This is the tension that Furner (2001) identified between advocacy and objectivity, or between economists crusading activism and the necessity of scientific, professional standing.

to identify problems and potential solutions. "We must bend our energies as directly as possible toward such studies and investigations as will bring about the changes in laws and enforcement that are obviously needed" (O. R. Lovejoy to H. Sumner, 18 July 1911, Helen Sumner Woodbury Papers, Box 2, Folder 11). Commons distinguished this action research from academic research which sought truths but had no concern for practical application and from journalistic research which identified problems but did not consider solutions (Chasse, 2017, 135). That the Wisconsin Institutionalists generated substantial amounts of materials that repeatedly demonstrated the same findings was thus an artifact of what they wanted to accomplish.

2. Institutions of Change

2.1. Regulatory Administration

The Wisconsin economists were elitists rather than social radicals. "The equality of men is a chimera" Ely argued; only a few have "extraordinary capacities" as experts for socio-political leadership (1886, 97).[13] These "Christ-like men" with their "all-encompassing love for humanity" had a duty to educate and care for "those beneath them in their intellectual, ethical, and social natures" (Ely, 1886, 161). This required that the state actively work to correct injustices: "the position of the strong and the weak must be equalized by a powerful state intervention" (McCarthy, 1912, 46). The necessity of state intervention carried over into the Commons' era, though the motivation shifted from the sectarian to the bureaucratic. For Commons, the solution lay in "'Administration' … the meeting place of social philosophy and the collective action that distinguishes present-day economics from the nineteenth century abstract philosophies" (1939, 38). Regulatory agencies and commissions staffed by experts provided a way to rectify the injustices that arose under laissez-faire. Commons referred to this as "the fourth branch of government … an investigational branch … [whose] investigations are not the mere search for truth, they are designed to improve the conditions within the field" (1939, 38). For, as Commons claimed, "administration is investigation" (Commons and Andrews, 1916, 416).

The success of Commons' Industrial Commission of Wisconsin (ICW) provided a roadmap for state and national administrative reform. Prior to 1911, various state agencies had existed to oversee Wisconsin's labor laws, but enforcement was inconsistent and many aspects of working conditions went uncovered. Under Commons' leadership, the ICW became the dominant labor relations institution in the

[13] See Commons (1939, 38) on why experts should not be elected by popular vote.

state, its frequent interventions informed by extensive scientific studies. Empirical research, often undertaken by Commons' students, lead to worker safety regulations, limited working hours for women and children, and the Workmen's Compensation Act. The ICW served as the basis of the U.S. Commission on Industrial Relations, which was well staffed with Wisconsin economists throughout its first decade. Later, as American politics became more conservative, regulatory administration was used to protect Progressive reforms.

Wisconsin-trained economists were disproportionately represented at all levels of government (Biddle, 1998; Johnson, 2018; Rutherford, 2011), as the Wisconsin Institutional method was well-suited to the day-to-day work of government economists. Many of the economists who trained at Wisconsin started their careers as government researchers, hired based on their field work experience. Katharine Lenroot and Emma Lundberg oversaw extensive surveys of the juvenile court system for the Children's Bureau. Lundberg's *Public Aid to Mothers with Dependent Children* (1928) collected data on women and children enrolled various government programs. Her study laid the ground work for the Social Security Administration's provision of cash benefits to children. Florence Peterson wrote the definitive history of strikes in the United States, chronicling more than 80 separate incidences for the Bureau of Labor Statistics (1938); her study established the BLS policy on strikes during the subsequent decade.

Field research was considered particularly persuasive because "most of the work they [policy makers] do makes little use of abstract economic theory" (Witte, 1954, 138). The Institutionalists' government reports often included copious tables summarizing quantitative data gathered through various types of field research. "Scorecards" of questions, along with training and the use of consistent instructions helped to reduce the discretionary influence of field agents (e.g., Commons, 1908). Standardization and uniformity lent the impression of objectivity. From such surveys, statistical measures were generated which helped "to understand the most important economic relations—the relative importance of the parts in making up the whole" (Commons, 1970, 188). Meta studies collated 'typical' activities and/or categorized findings by 'type.' Economic policies were therefore to be based on "accurate observation and reasoning from observed facts" (Witte, 1957, 12).

The Wisconsin economists were "studying facts, not for their own sake, but to solve problems and to make this a better world to live in" (Witte, 1954, 132). This was achieved by strategically pursuing regulatory changes at the state and federal levels. Roughly half of Groves' archives are devoted to expert reports and testimony for government agencies, including commissions on the health needs of the nation, rural schools, teacher federations, regional accounts, and environmental conservation. Also included are reports for the U.S. Department of Commerce, the Department of Agriculture, the Department of Health, Education, and Welfare, the Department of Housing and Urban Development and the Secretary of State. Nearly all of Altmeyer's archival boxes contain government reports, speeches, testimony, data, case studies, proposals, and actuarial reports; the same is true for the Sumner Woodbury and Glaser papers. Government work also constitutes substantial portions of the Ely, Commons, Witte, and Lescohier papers, a reminder that much of the empirical research produced by Wisconsin economists was meant to achieve specific regulatory outcomes.

2.2. *Change of Laws*

Ely's vision for a documentary history of labor began with the premise that laws must adapt to historical circumstance and hence were changeable. Studies by Ely, Commons, and their students suggested that new laws, changes in laws, or changes in the court interpretation of laws were more effective strategies to achieve labor reform than radical unionization. Legal changes and legislative amelioration of social ills were fundamental to the Wisconsin Institutionalist reform efforts, epitomizing Commons' constructive research and the Institutional emphasis on working from within the system. Wisconsin's Institutionalists placed great value on studying law and jurisprudence as a way to anticipate and precipitate social change. "In many of his historical studies and in all of his reformist campaigns, Commons had to consider what the judges decided or what they would decide under given circumstances. The study of legal precedents became as much his business as the making of economic analyses" (Mitchell, 1924, 240).

One powerful tool developed and deployed by the Institutionalists was the Wisconsin Legislative Reference Bureau, a forerunner of the Congressional Research Service. Operating in part as a research library, the bureau also assisted with drafting legislation, working to improve both the speed and quality of proposals. A partnership between the bureau's chief, Charles McCarthy, Commons, and the Progressive Governor, Robert LaFollette, produced Wisconsin's Civil Service Law (1906) and the Public Utilities Act (1907). Additional legislative reforms included workers' compensation, limits to the working hours of women and children, minimum wages, and the first modern apprenticeship law. Groves, Raushenbush and Brandeis Raushenbush wrote the nation's first unemployment insurance program, the Wisconsin Unemployment Reserves Act (1934), with help from the bureau. Numerous Wisconsin graduate students in economics, history, and political science worked for the bureau, including Groves, Brandeis Raushenbush, Selig Perlman, David Saposs, Peter Speek, and Witte. The bureau's bill drafting service produced so many legislative items, that they were accused of being a 'bill factory' for the Progressive Party. Bureau alumni also contributed significant pieces of national legislation; perhaps most notable, Witte crafted the Social Security Act and Lundberg added the child welfare provisions.

Some of the Wisconsin Institutionalists took the study of legal reform a step further, requiring their students to conduct research specifically in support of new legislation and to testify at local or state hearings. Brandeis Raushenbush required students to "attend hearings and legislative sessions and follow the progress of bills dealing with labor issues." Schmid McMahon and Lenroot did as well.[14] Groves wrote "I early had hit upon the idea of undergraduate papers featuring field work and a geographic orientation. The favorite subject was 'the tax problem in my home town'" (1969b, 146). Courses in Commercial Law and Labor Legislation and Administration were offered regularly as part of the Wisconsin Economics Department curriculum from 1903 onward; in political science, McCarthy taught courses on practical bill drafting and the theory and practice of legislation (Rutherford, 2011).

Commons and John Andrews' *Principles of Labor Legislation* (1916 and four subsequent editions) best captured the Wisconsin Institutional approach to reform through legislation. The book was "undoubtedly the most notable work upon its subject;" it seriously "analyzed innumerable laws and their working and compared them with their counterparts abroad" (Foerster, 1916, 566). A textbook in the study of writing and enacting labor legislation, the book exemplified the action-research paradigm of the Wisconsin Institutionalists. Developed from their work for Ely's American Bureau of Industrial Relations (ABIR) and its labor histories, the book was reviewed by all the major economics journals, becoming "the American standard" (Montgomery, 1928, 746). Despite repeated accolades for its comprehensive listings of labor laws many reviewers were critical of its "meagre" treatment of the theoretical "principles of labor legislation" (McCabe, 1916, 411). The last chapter of the book illustrates how its purpose was not theoretical, but constructive. The book reflected the Wisconsin view that "administration" included "investigating, drafting, and adopting enforceable laws," sorting and determining facts, and "getting and keeping competent officials" (Commons and Andrews, 1916, 416). Commons and Andrews argued that investigation of the facts was the cornerstone of the democratic functioning of government (ibid); legislatures and the courts should accept such data and follow the recommendations of experts (McCabe, 1916, 412).[15]

[14] See Raushenbush and Brandeis Raushenbush (1979, 15), the Theresa Schmid McMahon Papers (Box 1, Folder 1) and the Biographical Note of the Katharine Lenroot Papers.

[15] Much of this practical thinking on legal change of law was reconceived by Commons in his theoretical *Legal Foundations of Capitalism* (1924).

Much like Wisconsin's work on administration, contributions to legislative reform propagated voluminous investigative researches.

3. Public Education and Public Persuasion

The Wisconsin Institutionalists were nationally renowned economists. They regularly presented papers and participated in discussions at the annual meeting of the American Economic Association (AEA).[16] Prior to 1940, the department ranked seventh, nationally, for publications in leading journals (Backhouse, 1998). They held important positions at the National Bureau of Economic Research and on governmental commissions. Much of this activity was designed to influence their peers and high-ranking government officials. It also credential their legal testimony and their outreach to the public. Their effectiveness persuading politicians has been well considered (Johnson, 2018; Kaufman, 1993; Rutherford, 2011). The focus here is on how their volume of work can be understood to have influenced the public. Wisconsin Institutionalists segmented the public into various groups as a way of facilitating their reform program through a combination of education and persuasion. Considered in turn are the strategies employed to reach the educated public, the general population, the working classes, and 'inferior' groups.

3.1. The Thinking Public

The Wisconsin Institutionalists used their position as academic experts to convince the "thinking public" of the necessity of a broad range of regulatory and legal reforms.[17] They targeted this public primarily through textbooks and other academic publications.[18] The writings evidence their belief that data, histories, and field work were persuasive: "something more than abstract economic theory be included in our economics courses in colleges" (Witte, 1954, 139). Ely's *An Introduction to Political Economy* (1889) "probably outsold all competitors combined until well into the thirties" (Rader, 1966, 160). The book was popular for its "lucid style, graphic illustrations, and sympathies for the underprivileged" (ibid). Initially prepared for use in the Chautauqua Summer School, the text was not exclusively targeted

[16] Ely helped found the AEA in 1885. Commons served as president in 1918 and Witte in 1956.

[17] King wrote to Sumner Woodbury: "I am anxious to get out a volume that will place before the thinking public of this country the very best facts and thoughts in the solution of labor problems" (L. King to H. Sumner, 11 Sept. 1916, Sumner Papers, Box 2, Folder 14).

[18] While it is likely that the thinking public also read academic journal articles published by the Wisconsin Institutionalists—e.g. especially those in the legal profession—these are less transparent in their efforts to identify a specific audience to persuade and do not fit the goal of "public science" as cleanly.

at college students but was intended to reach the broader intelligent public. Similarly, Commons and Andrews' *Principles of Labor Legislation* (1916) was "intended partly for the citizen" (Foerster, 1916, 567), as well as "for college students and the general reader" (McCabe, 1916, 411). Ely's *Outlines of Economics* (1893; revised Ely, Adams, Lorenz, and Young, 1908 and subsequent editions) sold upward of one million copies and was used by more than 250 colleges and universities. Arguing for social reform over socialism, the textbook reflected Ely's historicist, proto-institutional approach with chapters on the "Evolution of Economic Society" and the "Economic Development of the United States." The book also offered a typically Institutionalist "collection and critical examination of statistics" (Ely, 1893, v). As such, "*Outlines* continued to embody the most progressive views of any text in the field" (Dorfman, 1969, 256-257).

The most popular labor textbook during this period was *Labor Problems* (1905) by Wisconsin's T.S. Adams and Helen Sumner, going through nine editions by 1920. An "excellent textbook," it covered women and child labor, immigration, poverty, unemployment, strikes, cooperatives, and labor laws (Cummings, 1906, 396) and did much to advance the Wisconsin Institutionalist position on labor reform. Florence Peterson provided an updated version in her *Survey of Labor Economics* (1947). By "historically and descriptively" treating the institutions of labor, the book was an "outstanding success" (Kirkaldy, 1948, 200). The historical approach of Martin Glaeser's *Outlines of Public Utility Economics* (1927) "reveals at all points the author's broad experience" outside the classroom and "deals with the more recent trends in public policies;" the most "distinctly original feature of the book" was its case study of Milwaukee (Armstrong, 1928, 121-123). Harold Groves' *Financing Government* (1939) was "progressive" (Arant, 1939, 625); it "was an institutionalist's study [that] became the top seller in the field and went through six editions" (Groves, 1969b, 14), though dense with tables of data and case studies.

Beyond textbooks, the Wisconsin Institutionalists were sensitive to what the intelligent public would willingly consume. Early in his career, Ely embraced rapid and frequent publishing, believing "it is a fatal mistake to wait too long" (in Dorfman, 1941, 280).[19] His approach became the *modus operandi* of the Wisconsin economists. Commons knew that the "nineteen volumes of the Industrial Commission's hearings could never be read by the people at large. What

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[19] "I recognized this as good counsel [from Cornell President Andrew D. White], and I followed it. Some may say that I followed it too unreservedly, but, at any rate, I transformed my various ideas into numerous books and articles. They have been criticized, and justly so … But I believe that in writing them I have served, even if in small measure, as a clarifying influence on economic thought" (Ely, 1938, 59).

was needed was a one-volume resume of the testimony of witnesses" (1963, 79). Ely served as general editor for a series of Macmillan social science textbooks as well as for their *Citizens Library*, the latter designed to provide "information on topics of importance to every citizen."[20]

The character of the writers and the management of the Library will be such as to inspire confidence. The utmost pains will be taken to secure the greatest possible accuracy in all statistical tables and statements of fact and theory, and no partisan bias will disturb the conclusions. It is the conviction of the Editor that scientific work in the field of the humanities may generally be made interesting to intelligent citizens. (Ely, 1900, ix-xi)

Ely's ABIR viewed its labor histories as another way to influence contemporary labor debates. "A true history, such as we hope to write, will disclose the lines of constructive effort and encourage movement along these lines" (Ely, 1904, 12). And Commons promised in the introduction to *A Documentary History of American Industrial Society* that "an accurate and precise knowledge will help forward the better forces" (1910, 31).

3.2. The Broader Public

The expert's responsibility to public education is a reoccurring theme in the work of the Wisconsin Institutionalists. To meet their obligation, they employed a variety of public education programs designed to influence a much wider audience than the elite intellectuals or intelligent citizens associated with the universities. The Wisconsin economists maintained voluminous correspondences. The Wisconsin Historical Society archives are replete with requests for reports and data and contain the detailed responses provided. "In almost every major American city and hundreds of smaller ones, Ely corresponded with reform-minded citizens. He presented the arguments favoring municipal ownership and, perhaps more important, the facts and figures from the experience of other cities" (Rader, 1966, 90).

The belief that facts and educational materials would persuade the population to accept reforms manifested in various types Institutionalist projects. If people properly understood the nature and scope of problems, then "vital public education … [would] render rapid progress in social and other important legislation possible" (H. Sumner to J. King, 24 October 1914, Sumner Woodbury Papers, Box 3, Folder 4). As such, Sumner Woodbury contributed to legislation to fund the publication and distribution of campaign bulletins by state govern-

[20] Irwin Collier's *Economics in the Rear-view Mirror* webiste. Available at : http://www.irwincollier.com/citizens-library-economics-politics-sociology-richard-t-ely-ed-1900/

ments. While the ostensible purpose of the bulletins was educational, she also thought they would facilitate reform legislation.

It will mean a public and impartial channel of communication, uninfluenced by the forces which control the privately owned press, and by bringing an adequate presentation of the issues to be decided by the ballot directly to the attention of each voter, will not only vastly improve representative government, but will render possible and practical a great extension of direct legislation, national as well as state (H. Sumner to J. King, 24 October 1914, Sumner Papers, Box 3, Folder 4).

Additional efforts included editorial writing for popular publications such as the *New Republic* or the *New Review* (e.g., Sumner Papers Correspondence, Box 2, Folders 12-14). Public education was often conflated with public persuasion, as the Institutionalists attempted to gain support for specific policies. For example, in 1934, Groves relied on his bill co-authors, Brandeis Raushenbush and Raushenbush, to organize the public hearings and town hall meetings necessary to generate public support for the Wisconsin Unemployment Reserves Act (Groves, 1969b, 122). The next year, Witte relied on public hearings and "much explaining and much patience" to sell the Social Security Act (Perkins in Witte, 1962, ix).

The Wisconsin Institutionalists spoke at churches, student clubs, union meetings, lodges, and women's clubs with the deliberate goal of persuading the public to support and effect change. Morehouse (1969, 16-17) lauded Ely as "unique in the extent to which he went off-campus for public, university extension programs, or Chautauqua lecturing." Commons gave hundreds of public lectures, most designed to educate and persuade the public on labor problems, social insurance, and health reforms (J.R. Commons Papers, Box 13, Folders 5 and 6). Witte evinced the same commitment to public education. He "thoroughly enjoyed lecturing and was willing to talk 'to everyone everywhere;'" he accepted nearly every opportunity to meet with people simply "because they asked me" (in Lampman, 1962, xvii).

3.3. Working Classes

Labor education predated Institutionalism at Wisconsin, arriving with Ely and his Social Gospelism. Progressive economists like Ely had embraced a responsibility to organize labor. For them, the education of the working class provided both moral conditioning and a mechanism for social control. "Unions can be organized by right-thinking individuals who, by using persuasion, will inspire individual workers to improve their ethical behavior" (Ely in Kapuria-Foreman and McCann, 2012, 505). The stated goal was "Christian civilization" and the "full and harmonious development in each individual of all human faculties" (Ely, 1886, 3). The unstated goal was social stability and gradual change as a remedy to the revolutionary and anarchical approaches of the more militant labor unions. It was incumbent on laborers and their leaders to improve "character, to practice temperance, to eschew politics, to reject violence, to work within the law, and to refrain from demands for equality" (Kapuria-Foreman and McCann, 2012, 508). The last was not trivial, but rather was an essential feature of Ely's elitism.

Commons and Selig Perlman divorced the religious motivation from Ely's labor theory, replacing the moral reformer with expert intellectuals who would "direct the manual workers away from the strict and narrow interest of wage-earners as a class, and to lead them towards affiliation with other classes" (Commons, 1918, 19). In this, the Wisconsin Institutionalists saw themselves as the intellectual leaders of the working classes—not in the mold of labor intellectuals, but rather as academic intellectuals, informed by research and data (Commons, 1963, 87-88).

Under Commons' leadership, the University of Wisconsin offered a variety of adult education programs. The most notable was the University of Wisconsin Extension and within that, the School for Workers. The worker schools were designed to both educate workers in fundamentals and foster a working knowledge of labor laws and worker rights. The first program was a school for 'working girls,' a six-week summer program for factory workers beginning in 1926 with the collaboration of the YWCA. The original curriculum included courses in economics, history, physical education, and health. Men were admitted in 1928, at which time the objectives and functions of the school underwent rapid change. More utilitarian courses were developed, including those specific to collective bargaining and labor-management relations, designed to equip workers with the tools necessary to incite and support reform. Field study synopses, union and shop histories, and statistical summaries informed much of the curriculum (D. Lescohier Papers, Box 1; see also Bauder, 1929). Students studied their unions and factories and produced reports. As the program evolved, special sessions were added to train union managers and empower unions as institutions for social change (Schwarztrauber, 1950).

3.4. The Defective, the Criminal, and the Pauper Classes

Wisconsin Institutional economics as a public science embraced "the use of belief … for purposes of social control, to either retain or change institutional arrangements and practices" (Samuels, 1991, 51). As Leonard writes of the Progressives-later Institutionalists generally—and which was certainly true of the Wisconsin Institutionalists—they "saw the poor as victims in need of uplift but also as threats requiring social control" (2009, 109). Ross (1991) viewed immigrant education as a means to instill control over the new, diverse populations; education could substitute for the control that had been previously provided by homogeneity of religion in the United States. Commons advocated for the Americanization and assimilation of immigrants through educational programs. A worker should not be "taught only their mere trade but also some essentials which will prepare him for life and a place in the civic body" (McCarthy, 1912, 143). Numerous units on Americanization were offered as part of the University of Wisconsin's summer school for workers throughout its history (Schwarztrauber, 1950). In all, the Wisconsin Institutionalists believed that "government has an over-riding responsibility to promote the general welfare … democratic government must control anti-social conduct and affirmatively promote social action" (A. Altmeyer Papers, 7 May 1954, Box 10).

Yet, significant illiberal and discriminatory views were institutionalized in course work at the University of Wisconsin well through the 1920s. Commons' *Races and Immigrants in America* (1907) and Ross (1901) illuminate the extent of prejudices. These works strikes the modern reader as at odds with the institutional emphasis on education, outreach, and social reform. However, it is important to note that bigotry does not preclude the possibility of interacting, even amicably, with individuals of despised groups. And though Commons' work was full of negative stereotypes, he regards nearly all as being ultimately capable of adopting 'American' ideals and of being assimilated into American life. The Wisconsin Institutionalists also evidenced varying degrees of intersectionality, as race, ethnicity and gender created overlapping subgroups of different statuses among the researchers and the publics. Perlman, for example, wrote of Yellow Hordes despite being discriminated against as a Jewish immigrant. Sumner Woodbury accused women of undercutting the wages of men and of strike breaking. Schmid McMahon argued for lower minimum wages for women on the basis of the "family wage." Nearly half of the proposed dissertations by women during the Commons' era were at the intersection of eugenics and social policy.[21] Many were based on field work and direct interaction with the relevant populations. This fit well with action research that demanded measurement and empirics and lent the label of scientific to the subsequent eugenic, social, and labor reform proposals. Field work and interaction were therefore a necessity. Through 1929, Economics remained combined

[21] From lists of doctoral dissertations in progress from the *American Economic Review*: Caroline MacGill on Unpaid Services (1910), Roberta Pritchard on Heredity in Relation to the Control of Defectives (1910), Rhonda White on Morality of the City Population (1910), Emma Lundberg on Personal Inefficiency as Related to Family and Social Conditions (1911), Roberta Hodgson on Types and Traits of Negros of Athens, Georgia (1911), and Katharine Lumpkin on Social Situations and Girl Delinquency (1928). While a handful of topics chosen by men during this period reflect eugenic views, these are nowhere near as prominent. See Johnson (2018) for more details.

with Sociology and had significant overlap with social work, thus promulgating research related to social biology, degeneracy and criminality. However, eugenic ideas dropped out of the Wisconsin program fairly quickly after the retirement of Commons in 1932.

Leonard (2016) makes apparent the extent to which eugenic beliefs and racism permeated the academy in the United States before the Second World War. The appeal of eugenics to the Wisconsin Institutionalists shared much with the appeal of empirical research generally: it conformed to their view of modern science, it assumed a prominent role for government activism, it relied on experts, and it necessarily called for new social legislation. The Wisconsin Institutionalists segmentation of the public into intelligent citizens, the working and immigrant classes, and delinquent classes for the purposes of education and social control illustrates the extent to which Institutionalism operated as a program of public persuasion as well as a public science.

4. Conclusions

The story of Wisconsin Institutionalism as public science reflected the sweeping changes in social science theory and practice from the 1890s through the Second World War. This paper makes use of the wealth of materials left by Wisconsin Institutionalists to consider how they thought about economics as public science and public persuasion. I argue that the volume of research materials generated by the Wisconsin Institutionalists reflected a desire for confident, scientific knowledge to underpin their program reform. Influenced by Pragmatism, their work was necessarily empirical because it was meant to be constructive—it was research designed to identify specific problems and suggest specific regulatory or legislative solutions. It was public because the research was conducted within the community they hoped to serve; research included case studies of individual firms, unions, schools, and city offices as well as survey data, field researches, and interviews. The "mass of descriptive material" that irked Coase (1984) was thus an inescapable by-product of what the Wisconsin Institutionalists wanted to accomplish.

The Wisconsin Idea demanded that science should be used to improve the lives of the people of the state, and Wisconsin's economists embraced the mandate. Indeed, the "studious economist and statistician," informed by research and study, was obligated to address injustices, improve the conditions of the laboring poor (Commons, 1963, 87-88). With such high stakes, the Wisconsin economists did not stint at employing economics as persuasion to convince intellectuals, government officials and politicians, the working classes, and inferior populations of the necessity of reforms. They therefore produced and disseminated vast quantities of data, case studies, and histories to inform legal and regulatory changes. They provided policy advice and copious public commentary. They developed extension and outreach programs, bringing scholarly and practical knowledge directly to the people. Of course, this could mean delivering to citizens what they wanted and lacked. But, it could also mean giving citizens what the experts think they should want. Thus despite the publicness of their science was in tension with their view that the extremely complex problems of government could not be left solely to the people. A government of experts was need to provide guidance, to educate and to persuade the public to the best course of action (Van Hise, 1913, 473).

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An Agenda without a Plan. Robert E. Lucas's Trajectory through the Public Debate

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This article explores Robert E. Lucas's policy agenda and his engagement with the public debate between the 1970s and early 1980s. It investigates how he interacted with the public debate by envisioning key principles of his macroeconomic theory and methodology, and how he promoted his policy agenda. An exploration of Lucas's personal and professional archives sheds light on his participation in policy debates after the publication of his works, illustrating how Lucas built a discreet and cautious way of engaging with the public. Lucas did not propose a detailed program to implement his policy agenda, nor was he actively promoting his policy agenda. The article suggests that Lucas's originality compared to his contemporaries was his belief on the ability of macroeconomics to scientifically devise binding policy rules that could be integrated in an economic constitution.

Keywords: Lucas (Robert E.), Lucas critique, monetary policy, fiscal policy, tax policy, policy rule

Un programme sans plan.
La trajectoire de Robert E. Lucas à travers le débat public

Cet article analyse le programme de politique économique de Robert E. Lucas et l'engagement de ce dernier dans le débat public entre la fin des années 1960 et la fin dans les années 1970 et au début des années 1980. L'article s'interroge d'abord sur l'interaction entre le contexte du débat public et les principes méthodologiques et théoriques de la macroéconomie de Lucas; puis, nous explorons la manière dont Lucas promeut son programme de politique économique. Grâce à l'exploitation des archives professionnelles et personnelles de Lucas, nous pouvons éclairer sa participation aux débats de politique économique qui suivent la publication de ces travaux; émerge un portrait d'un Lucas prudent et discret dans ses interactions avec le public. Lucas ne défend aucun agenda

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concret pour la mise en place de ses préconisations de politique économique, et ne fait aucune promotion active de celles-ci. Enfin, nous suggérons que l'originalité de Lucas par rapport à ses contemporains réside dans la conviction que la macroéconomie puisse développer de façon scientifique des règles de politique économique qui pourront être ensuite intégrées dans une constitution économique.

Mots-clés : Lucas (Robert E.), critique de Lucas, politique monétaire, politique fiscale, règle de politique

JEL: B22, B31, B41, Z18

In 1988, Alan Blinder accused the New Classical economics of representing the "triumph of conservative ideology over liberalism" (Blinder, 1988, 278). Like many at the time, Blinder associated Robert E. Lucas's work with "right-wing ideology" and "*laissez-faire*" (Ibid., 286), relating the success of New Classical economics to the conservative turn in the United States at the end of the 1970s. Our article explores Robert E. Lucas's political vision and his interventions in the public sphere, shedding light on his links with the economic policy debates of the 1970s and early 1980s.[1] Even though Lucas built his reputation from his theoretical and methodological contributions to macroeconomics, this article reveals less-known aspects of his writings. Relying on a specific view of the functioning of market economies, he offered some considerations on economic expertise and core policy recommendations that followed his methodological and theoretical framework.

Our work bridges a gap between two separate types of literature. On the one hand, the history of economic thought focuses on Lucas theory and methodology, depicting him as the intellectual leader of a fundamental change in macroeconomics (Hoover, 1988; Vercelli, 1991; Backhouse and Boianovsky, 2013; De Vroey, 2016). On the other hand, the literature discussing the role of free-market advocates such as Milton Friedman (Cherrier, 2011; Burgin, 2012), Friedrich Hayek (Caldwell, 2008; Burgin, 2012) or James Buchanan (MacLean, 2017) in the public debate grants a minor role to Lucas. Despite his links with these authors and with the Economics Department of the University of Chicago, Lucas's thought and participation in the public debate has been ignored by both kinds of literature. Thus, this article draws a broader portrait of Lucas as an economist in the public debate.

Instead of focusing on Lucas's theories, the article pursues an investigation of his trajectory through the "lens of practice" (Stapleford, 2017), i.e. exploring how he was "doing economics" (Ibid.), through an analysis of his discourse, his policy recommendations and the use

[1] Our goal is not to argue that Lucas's macroeconomic work was influenced by ideology and political considerations, but rather to show that it was not limited to theoretical and methodological considerations.

of economic concepts in various contexts. Therefore, our original sources include both academic and non-academic published writings, as well as unpublished materials from Lucas's archives—constituting an essential source to unveil on Lucas's engagement with the public debate.[2]

First, we show that during the 1970s and early 1980s, Lucas developed a well-defined vision of macroeconomic policy issues, addressing policy recommendations for the U.S. economy. We will refer to these recommendations as his "policy agenda". We illustrate how Lucas's agenda consistently relied on his own peculiar set of political beliefs, as well as on his theoretical and methodological stances. This led him to criticize both the "Keynesian" regime of expertise, as well as Arthur Laffer and the "supply-siders". We then connect and contrast Lucas's views with the ones addressed by Friedman, Hayek, and Buchanan, highlighting the originalities of Lucas's thought.

Secondly, we show that Lucas was *not* actively promoting his policy agenda: he did not act to implement successfully his policy recommendations.[3] In comparison to other major macroeconomists of the 1970s, such as Karl Brunner, Milton Friedman, Lawrence R. Klein, Franco Modigliani or Robert Solow, his interventions on policy issues remained scarce. He was not a predominant figure in the press nor in the political public debate; similarly, he was not actively contributing to policy-making institutions, government bodies, lobbies or think tanks. Nevertheless, thanks to archival evidence, we shed light on his discreet and cautious way of engaging with the public debate: Lucas followed closely the policy and political debates of the time (especially antagonizing Ronald Reagan's policies), corresponded with politicians, delivered few interventions in the press, and animated the debate with his peers who were working in policy-making institutions.

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[2] Archives are essential because, given the discretion of Lucas's engagement with the public debate, it would otherwise be impossible to detect it from other sources. However, an important caveat to be raised about the use of archive research of a living scholar is the possibility of a sample bias. Put differently, the sample of documents can be subject to an intended selection process in order to create a specific character, or aspirational self. This problem is inherent to the use of any archive and, more broadly, to a historical reconstruction relying on the sole writings of the author. Conscious of this, our work also uses other sources (academic papers, press, and congressional records) to build a consistent investigation of Lucas's thought and action.

[3] Our work discusses Lucas's interactions within the public sphere, not his influence. In other words, we focus on Lucas's writings and practices, and not on the influence on (or reception by) others of his contributions. For instance, Lucas's (1976 [1973]) famous Critique lived "a life of its own and means different things to different people", as emphasized by Lucas (2012) himself: the reception of this idea is then beyond the scope of our paper (for an account of the reception of the Lucas Critique, see for instance Goutsmedt et al., 2019). We also do not refer to the interaction of the public with the broader stream of ideas coming from Lucas's closest co-authors (Thomas Sargent, Neil Wallace, Edward Prescott).

1. Lucas's Policy Agenda

Lucas developed and expressed a well-defined vision of macroeconomic policy issues, as well as policy recommendations for the U.S. economy, in several articles (1977, 1978, 1979, 1980a) and in particular in "Rules, Discretion and the Role of Economic Advisor" (1980b). Lucas rejected what he called "meticulous day-to-day management" of economic policy (i.e. devising immediate and temporary action for current problems) advocated by Keynesianism as well as by "supply-side" economics that inspired the Reagan administration.[4] Instead, Lucas urged for a long-term vision relying on "institutional design" of binding rules for economic policy. This agenda relied on his belief in market stability, as well as on rational expectations.

1.1. Fighting the Keynesians and Supply-siders' Policy Agendas

Lucas suggested that macroeconomists had been historically addressing two types of policy agendas, which he called "day-to-day management" and "institutional design". For him, early business cycle theorists of the beginning of the 20th century (such as Hayek and Wesley Mitchell) conceived macroeconomics as devoted to "institutional design": that is, "[identifying] institutional sources of instability" in order to mitigate economic fluctuations by "appropriate institutional changes" (Lucas, 1977, 8). For Lucas, this view was overshadowed by the *General Theory* and its subsequent developments, which brought a "sharp change in the nature of the contribution to policy which economists hoped to offer and which the public has come largely to accept." (Ibid.) This change stemmed from the "belief that policy could affect immediate, or very short-term, movements of the economy from an undesirable current state, *however arrived at*, to a better state" (Ibid., Lucas's emphasis). Instead of aiming at mitigating fluctuations, this new policy agenda focused on the concept of "involuntary" unemployment. This implied that economic policy "can and should be directed at the attainment of a particular, specifiable *level* of the measured rate of unemployment" (Lucas, 1978, 353).

The debate between these two policy agendas had, for Lucas, deeper roots in a divergent set of political beliefs: they resulted from

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[4] Note that, in the 1980s, the label "supply-side economics" could refer to different groups. It could refer to the study of the effects of tax policies on supply—to contrast with the Keynesian focus on demand—as in Feldstein (1978) and Boskin (1978). Lucas (1990) refers to this latter when using this label—and claiming his role as a forerunner of this approach (Lucas and Rapping, 1969). Outside academia, the label came to designate the idea (popularized by Laffer and his curve) that decreasing taxes will increase government revenue. Today, though Feldstein and Boskin both advised Reagan's administration (Campagna, 1994), the label is mostly associated with Laffer. In our article the label refers to this second, contemporary meaning.

another long-standing and "never changing" conflict between "mercantilism and government intervention vs. laissez faire and free market" (Lucas in Levy, 1993, 3). In a draft to his review of Tobin's *Asset Accumulation and Economic Activity* (1980), Lucas argued that "two schools of macroeconomic (and perhaps all) social policies" existed, and proposed different policy agendas. Those aiming at "[keeping] the power of government to injure" (*sic*) would be inclined to endorse institutional design; those aiming at "exercise [power] more effectively" would adopt a day-to-day management (RLP, Box 23, Folder "Tobin"). As Lucas further asserted, the inner division between the two policy agendas followed the belief (or the lack of faith) in the self-regulating ability of market economies. Therefore, choosing between institutional design and day-to-day management equated to decide whether "the role of government in stabilization policy should be to reduce its own disruptive part or actively to offset private sector instability" (Lucas, 1981a, 235).

According to Lucas, the rise of Keynesian macroeconomics and its day-to-day management policy agenda intertwined with an overall shift in U.S. political beliefs towards more government intervention. Keynesian macroeconomics rather "*rationalize[d]* this activism" (Lucas, 1979b, 165, Lucas's emphasis), which was established by the Employment Act of 1946:

> [Keynesian macroeconomics] defined itself to be that body of expertise the existence of which was presupposed in the Employment Act, and its practitioners devoted themselves to the development and refinement of forecasting and policy evaluation methods which promised to be of use in the annual diagnosis-prescription exercise called for by the act. (Lucas, 1980b, 201)[5]

For Lucas, the Employment Act also fostered a change in the role of the macroeconomist in the public sphere and her/his relationship with policymakers. Academic knowledge would then be devised to support economic expertise, "equipping" experts with tools for "operational guidance" on a daily basis:

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[5] Lucas's claim that Keynesian macroeconomics is defined by The Employment Act is controversial. The Act—an "American version" of Britain's 1944 White Paper (Employment Policy White Paper. London: Ministry of Reconstruction, 1944, Cmd: 6527)—resulted from the efforts of Alvin Hansen (a Federal Reserve Board consultant at the time), other Harvard economists (Richard Gilbert, Walter Salant, Gerhard Colm) and U.S. decision-makers from the Federal Reserve Board and Budget Bureau to call for a formal governmental commitment to full employment. It emphasized economic stabilization, which included attacking both deflation (one of Hansen's concerns) and inflation, as well as stimulating aggregate demand not only via government spending, but also through changes in tax structure to spur private investments. Given Hansen's specific understanding of Keynesianism, there is some controversy on the role of the Employment Act as a benchmark to Keynesian macroeconomic policy in the postwar (Guizzo, 2016).

> Within the existing institutional framework, the role of the economic expert as day-to-day manager expanded rapidly, and the role of the academic macroeconomist became that of equipping these experts with ideas, principles, formulas which gave, or appeared to give, operational guidance on the tasks with which these economic managers happened to be faced. (Ibid., 202)

The postwar expansion seemed to justify the day-to-day management policy agenda supported by Keynesian macroeconomics and fostered by the Employment Act—though "it is impossible to distinguish good luck from good policy" (Lucas, 1977, 10). But it faced a crisis with the 1970s stagflation, which for Lucas resulted from policy mistakes in the 1960s (Goutsmedt, 2017). Therefore, during the early 1980s, Lucas relentlessly blamed the persistence of this specific policy agenda despite its apparent failure. U.S. institutions, academics, policymakers, and the general audience still demanded *immediate* action on current economic problems. For Lucas, the mass media played a major role in devising "new" problems and in urging "new" theories for policy-making:

> To the journalist, each year brings unprecedented new phenomena, calling for unprecedented new theories (where "theory" amounts to a description of the new phenomena together with the assertion that they are new). (Lucas, 1980a, 697)

According to Lucas, the 1973 oil shock aftermath fueled the development of new *ad hoc* models for day-to-day management:

> This is the legacy of stagflation: a general loss of confidence, whether scientifically warranted or not, in the formerly accepted framework guiding discretionary economic management. Since the demand for discretionary policies remains strong, we are seeing the proliferation of new "solutions"[6] to "short-run" policy problems, defended by the promise of particular results but without basis in either theory or historical experience." (Lucas, 1980b, 204)

In Lucas's view, the same attitude remained widespread among macroeconomists, both in policy-making institutions and in academia. As an illustration, he targeted Paul McCracken *et al.*'s (1977) OECD report "Towards Full Employment and Price Stability".[7] Lucas (1979, 162) attacked such kind of "vacuous" patchwork of "ambiguous and unsupported opinions" that exemplified the crisis of day-to-day management. The report proposed a "list of issues which have been defined in popular debate as 'policy problems'" and associated to these problems a "treatment by government action" without any "consistent set of economic principles underlying either the choice of questions to be addressed or the policy stances which are recom-

[6] Here, Lucas targeted specifically Laffer and Arthur Okun (see Lucas, 1980b, 204).

[7] McCracken has also been chairman of the Council of Economic Advisers (1969-1971) under Nixon.

mended" (Ibid.). Lucas thought most academics shared the same unfortunate attitude. At the National Bureau of Economic Research (NBER) Bald Peak conference (October 1978), Stanley Fischer asked Lucas, William Poole, and Solow to prepare a discussion of "what policy should have been in 1973-75" (Fischer, 1980, 2-3). In his speech, Lucas objected:

> Economists who pose this "What is to be done, today?" question as though it were somehow the acid test of economic competence are culture-bound (or institution-bound) to an extent they are probably not aware of. They are accepting as given the entirely unproved hypothesis that the fine-tuning exercise called for by the Employment Act is a desirable and feasible one. (Lucas, 1980b, 208)

When commenting on Tobin (1980), Lucas explicitly raised the question of alternative policy agendas:

> Does [Tobin] think that our economic authorities should continue to formulate monetary and fiscal policy on a year-to-year basis, as unconstrained as they now are by legislative or constitutional limits on what policies may be selected, or does he see our task as that of designing new rules of the game, and conceiving institutional frameworks capable of enforcing them? (Lucas, 1981d, 564)

Lucas considers that having followed this day-to-day policy agenda for years had proven to be eventually catastrophic during the 1970s, and the time had come to promote a change:

> The capitalist democracies have paid dearly for their neglect of this question over the past decade. If we continue to evade it, as I read Tobin advocating we do, we are in for a good deal worse. (Ibid., 566)

The "culture-bound" or "institutional-bound" made the day-to-day management agenda so persistent and widespread that both Keynesian and non-Keynesian macroeconomists were perpetuating this way of thinking. In an opinion column in *The New York Times Magazine*, Lucas also argued that supply-side economics and Keynesian economics represented two sides of the same coin:

> Today, deficit spending is rationalized by the novel doctrines of supply-side economics. Yesterday, the same policies were defended by the logic of Keynesian economics. (Lucas, 1981c)[8]

Lucas believed that changing this state of affairs required a transformation of macroeconomics that would result in a change in the con-

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[8] Lucas was scathing not only against Laffer's "*ad hoc*" theory (see above), but also against other supply-siders. One of the targets of Lucas's criticism was Jude Wanniski, a *Wall Street Journal* columnist, influential advocate of supply-side economics, and author of *The Way the World Works* (1978). Contacted by the Olin Foundation, George Stigler asked Lucas for his opinion about the book. Lucas considered that Wanniski's book did not worth "occupying the time of any contemporary critics" (RLP1, Folder 1980 3/3).

duct of economic expertise.[9] The rise of Keynesian ideas promoted and rationalized a specific policy agenda for macroeconomics, based on day-to-day management; similarly, the transformation in macroeconomic theory and methodology Lucas was devising would have led to another policy agenda.

1.2 Lucas's Policy Agenda: Macroeconomics as Institutional Design

Lucas's policy agenda changed the scope of macroeconomic policies from involuntary unemployment to the business cycle. Without any "coherent idea as to what full employment means or how it can be measured" (Lucas, 1978, 353), it made no sense to devise monetary and fiscal policies to tackle this imaginary involuntary unemployment—this is even "real and dangerous hypocrisy", and it "does no service to unemployed people to talk about it as though it were" (Lucas, 1987, 105).[10] Lucas's arguments mirrored one of Friedman's (1968, 10) arguments that targeting unemployment was purposeless since there is no way of measuring full-employment or the natural rate of unemployment.

The level of unemployment (that is, the "equilibrium" or "natural" level of unemployment) was still a relevant policy issue to Lucas; however, he considered it to be an issue for public finance and welfare economics, whereas macroeconomics should be concerned solely with business cycles. Then, Lucas saw two separate approaches in policy-making—each one dealing with one specific policy issue:

> The policy problem of reducing business cycle risk is a very real and important one, and one which I believe monetary and fiscal policies directed at price stability would go a long way toward achieving. The problem of finding arrangements for allocating unemployment risks over individuals … is also important, and can be analyzed by the methods of modern welfare economics. (Lucas, 1981a, 246)

Welfare economics can deal with unemployment "in total ignorance of the nature of business-cycle dynamics", while "the discovery of

[9] He recognized that promoting such a change was difficult, at least as long as "the economic manager responsible for advising … the size of the coming fiscal year deficit [will be] uninterested" in listening to it (Lucas, 1980b, 201). However, he saw an "encouraging" signal in the adoption of Resolution 133—integrated in the Federal Reserve Act in 1977 (*Ibid.*, 208). The resolution committed the Fed to maintain the long run growth of monetary supply consistent with the economy's long run potential growth (Weintraub, 1978).

[10] This idea echoed Lucas's theoretical and methodological project for macroeconomics (see De Vroey, 2016, chapters 9-11). One of the distinctive assumptions introduced by Lucas (Lucas and Rapping, 1969) is that unemployment always results from workers' choices. Workers decide to supply hours of labor according to the optimal (utility-maximizing) intertemporal allocation of their time between leisure and consumption; as wages and prices are always instantaneously converging to their equilibrium levels, no involuntary unemployment is possible.

better business cycle theories will contribute little or nothing" to the understanding of welfare issues such as social insurance or income distribution (Lucas, 1987, 105).[11] Further, macroeconomics cannot provide any relevant policy insight about reducing the unemployment level. For instance, since market economies are assumed to converge towards the equilibrium level of unemployment, aggregate demand policies cannot affect durably the level of unemployment.

Lucas emphasized that macroeconomic policy should focus exclusively on mitigating business cycles; or, put differently, to reduce the variance of macroeconomic aggregates, primarily of the price level. This agenda, similarly to the day-to-day management approach, had deeper roots in the "never-changing" dilemma between the "two schools of macroeconomic policy" that differed on interventionism. As previously mentioned, whether "the role of government in stabilization policy should be to reduce its own disruptive part, or actively to offset private sector instability" (Lucas, 1981a, 235). Lucas never hid his preference for the first school and his faith in the self-regulating abilities of market economies.

Then, the role of macroeconomists is to "design institutions" ensuring a stable environment for economic activity. By "institutions" Lucas meant binding policy rules for the government to follow ("institutional arrangements which bind us to follow them", Lucas, 1981b, 564). In "Principles of Fiscal and Monetary Policy" (1986), Lucas clarified: "[t]he most useful way to think about government policy is as a choice of rules of the game to which government is committed for some length of time" (Ibid., 104).

This form of commitment is already valid for other, non-economic domains of public action: ensuring commitment to rules is simply the reason "why democratic governments have constitutions that are difficult to change and legal systems that respect precedents and 'due process'" (Ibid.). The same should be true for macroeconomic policies, and such rules need to encompass all governmental institutions involved.[12]

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[11] For instance, welfare theory will discuss the level of unemployment compensation, which determines the natural rate of unemployment. "Severe penalties" for unemployed could for instance "reduce unemployment rates to any desired level", and also output (Lucas, 1981a, 246); whereas a generous compensation scheme would "involve a subsidy to being unemployed" (Ibid.), but, by ensuring a sure current income, it could encourage risk-averse workers to seek a new job.

[12] As emphasized by Lucas's criticism of Reagan's tax policy (see *infra*, 2.3), the monetary and fiscal authorities should both commit to mutually consistent rules: "it is not within the abilities of any central bank to make things work out right in a society that insists that the real resources spent by its government can exceed, on a sustained basis, the resources that government extracts from the private sector via taxes." (Lucas, 1981a, 30)

Then, Lucas endorsed Buchanan and Wagner's (1977) idea of enforcing an "economic constitution":

> We need, in Buchanan and Wagner's useful terminology, an "economic constitution" and we are at last beginning to develop the economic theory that will be helpful in designing it. (Lucas, 1987, 104)

In Lucas's view, two reasons justified the superiority of a policy agenda based on institutional design over that based on day-to-day management: optimality and scientificity.

Lucas (1986) used *optimality* (or also, in his words, "efficiency", or: "for each citizen, attaining the highest welfare level", 129) as the criterion to decide among alternative economic policies.[13] There, he presented a simple general equilibrium model to deduce "the neoclassical welfare-economic principles that bear on the efficient conduct of national, or aggregative, monetary and fiscal policy" (Ibid., 117). The model emphasized how *only* policy rules can be optimal in terms of welfare. A crucial principle in supporting this argument was the notion of time-consistency (forcefully argued by Kydland and Prescott, 1977). As for designing institutions of macroeconomic policy, a general equilibrium model is essential to the extent it allows to "quantify the welfare cost of simple (and non-optimal) rules for fiscal and monetary management" (Lucas, 1986, 132).

In a nutshell, Lucas anchored his policy agenda about rules and institutional design in his theoretical and methodological view of macroeconomics: it presupposed that the macroeconomist should formulate a model with a theoretical framework consistent with what he identified as "general equilibrium" (meaning the Arrow-Debreu neo-Walrasian approach). This encompassed a set of distinctive assumptions: individual optimizing behavior, market clearing, and rational expectations. A macroeconomic model microfounded on this basis would, therefore, enable to deduce welfare functions to assess which rule would be optimal.

However, for Lucas theoretical general equilibrium models that deal with optimality were not enough to justify a policy agenda scientifically. As emphasized by De Vroey (2011), Lucas was concerned with the inevitable intertwining of theory and political beliefs.[14]

[13] Although the discussion of optimality of policy rules could be found already in Lucas (1972b, section 7), where he discussed Paretian optimality of a Friedman-type monetary policy rule over other monetary policy rules.

[14] According to De Vroey, Lucas claimed that, in practice, "ideology" (a set of political beliefs about how society works or should work) could hardly be separated from science. Macroeconomists (like any citizen) hold ideological views, and then most theoretical propositions in macroeconomics are intertwined with ideology. Thus, policy conclusions derived from theory are not ideology-free; on the contrary, they are also embedded with the implicit ideology in the premises of a theory. For instance, Lucas (1977, 25) argued that assuming market clearing logically implies that countercyclical policies will be of limited use;

Therefore, he considered that policy prescriptions drawn from theories can be translated into policy agendas *if and only if* they relied on an empirical basis.[15] Macroeconometric models devoted to this task: providing scientific (empirical) assessment for alternative policies.

Lucas's emphasis on models did not display originality, given the well-established macroeconometric tradition since the 1960s. He indeed recognized that advances in model-building were the most positive contributions to economics made by the Keynesian day-to-day management era (Lucas, 1980a, 701). Nevertheless, in his famous Critique (Lucas, 1976 [1973]), he rejected the possibility that such models would be able to provide any reliable quantitative evaluation of discretionary policy. He aimed precisely at demonstrating that:

> the ability to forecast the consequences of "arbitrary", unannounced sequences of policy decisions … appears to be beyond the capability not only of the current-generation models, but of conceivable future models as well. (Lucas, 1976 [1973], 280).

The Lucas Critique argued that only rules can be assessed with "*scientific* quantitative policy evaluations" (Ibid., 279, Lucas's emphasis), i.e., by using macroeconometric models. For Lucas, policy evaluation with macroeconometric models should rely on a description of the way economic agents would react to alternative policies. The analytical tools available made only possible to model such reactions for rules, but not for discretionary policies. The theoretical argument about optimality then became secondary:

> The preference for "rules vs. authority" in economic policy making suggested by [my] point of view is not … based on any demonstrable optimality properties of rules-in-general … The point is rather that the possibility [that discretion can lead to superior economic performance] cannot <u>in principle</u> be substantiated empirically. (Ibid., 279, Lucas's emphasis)

Lucas also recognized that, in practice, the development of such model-based quantitative assessment of policy rules remained unsatisfying (Lucas and Sargent, 1978, 62-63). Despite not being able then to determine scientifically what the optimal policy rule should be, Lucas still considered that there was enough support for, on the one hand, an immediate abandoning of day-to-day management, and, on the other hand, implementation of some "good approximation" of the optimal rule. Lucas considered Friedman's four percent rule of money growth as a "good approximation" of an optimal rule for monetary policy. Even if it "would have welfare consequences differing

therefore, one can conclude that the market clearing assumption is ideologically biased.

[15] Put differently, ideology cannot be separated from macroeconomic theory, but it can be "neutralized" with empiricism—it is only by neutralizing the ideological bias that theories can provide scientific policy prescriptions.

trivially from the optimum policy", "[it] would be easy to spell out and monitor" (Lucas, 1986, 132-133).

When addressing the specifics of the policy rules that an "economic constitution" should enforce, Lucas did not really differ from Friedman. In *The New York Times Magazine* (Mermelstein, 1979, 32) and in his academic article for the NBER Bald Peak conference (1980b), Lucas supported Friedman's "A Monetary and Fiscal Framework for Economic Stability" (1948) and *A Program for Monetary Stability* (1959). Lucas's policy prescriptions corresponded to the following rules: 1) a 4% annual rate of growth of M1; 2) a cyclical federal government spending and tax rates 3) a balanced federal budget; 4) no government intervention to fix wages and prices.[16] These four measures would "*fully* protect the economy against sustained inflation" and "entirely eliminate erratic monetary and fiscal shocks as independent sources of instability" (Lucas, 1980b, 207), in order to provide "a stable, predictable environment for the private sector of the economy" (Ibid., 210).[17]

Lucas's defense of rules and their constitutionalization establishes common ground between him and the main advocates of free markets and government limitation in the 1970s in the U.S. First, with Hayek's *Law, Legislation and Liberty* (1978), which proposed to integrate into the constitution the prohibition of progressive income taxation. Second, with Buchanan: as we saw, Lucas praised several times Buchanan and Wagner's idea in *Democracy in Deficit* of an economic constitution aiming at, among other things, limiting fiscal deficits (see Lucas, 1980b, 209; 1986, 132; 1987, 104).[18] Third, and more importantly, Lucas agreed with Friedman's views on economic policy, especially those he formulated with Rose Friedman in *Free to Choose*. There, constitutionalization of economic policy was described as "the equivalent of the First Amendment to limit government power in the economic and social area—an economic Bill of Rights to complement and reinforce the original Bill of Rights" (Friedman and Friedman, 1980,

[16] This last point is rather inspired by Lucas's own opposition to Nixon wage-price control (*cf. infra*).

[17] Another kind of binding rules seemed appealing to Lucas. He appeared enthusiastic about the tax revolts of 1978 in California that led to an amendment to the Constitution of the State, the Proposition 13, which established a limitation to property taxation (Lucas, 1980b, 204).

[18] Esteem was mutual. In a letter dated from August 7th 1980, Buchanan confessed that he liked Lucas's "Death of Keynesianism" (1980c), a strong piece against Keynesian economics presented in 1979 in Chicago's Graduate School, and that he agreed "with almost all of what [Lucas] sa[id]". Buchanan claimed that he was optimistic for the years to come as it "must be the time for more widespread discussion of constitutional reforms, not only in monetary matters, but generally" (RLP1, Folder 1980 1/2).

299).[19] An important part of this new "Bill of Rights" should be a rule that "require[s] the monetary authorities to keep the percentage rate of growth of the monetary base within a fixed range."[20] (Ibid., 308)

However, despite this proximity on the issue of economic rules and constitutionalization, Lucas's thought on economic policy and its elaboration carried some originality. Notably, his firm belief in the ability of mathematical models to estimate empirically the optimality of policy rules anchored him in a form of scientific positivism, which certainly distinguished him from Hayek and Austrian economics (Hoover, 1988, Chapter 10). His commitment to the neo-Walrasian general equilibrium model contrasted with Friedman's preference for Marshallian partial equilibrium model (Hoover, 1984; De Vroey, 2011).

These differences are neither minor nor anecdotal. Lucas's methodology for macroeconomics went hand in hand with his considerations on economic policy and the role of economists in it. To a large extent, his policy agenda relied on macroeconometric modelling—macroeconomists must find optimal rules—while being in the same time independent of it—models were not yet ready to perform this task, but it did not prevent Lucas for defending rules.

The connection between Lucas's political beliefs and his methodological and theoretical considerations appears in a conference he gave in New York in March 1977.[21] Lucas explained in the introduction that he regarded as peculiar to be asked to talk about "New Ideas on economic policy" since what he defended—"stable monetary growth and balanced government budget"—was not new and was close to the thought of "Coolidge or McKinley" (RLP39, Folder Mitchell, Hutchins Conference).[22] He added that his reasons "for favoring such 'passive' policies" were not "more sophisticated than ideas current in Coolidge's day", that is to say "a belief that if government and the Fed can keep their own affairs in order, proceeding smoothly and

[19] In a letter from January, 22 1980, Lucas thanked Friedman for having sent him a copy of *Free to Choose* and explained that he jumped to the Chapter 10 as he was particularly interested by the issue of the constitutional approach to monetary growth (RLP1, Folder 1980 1/2).
[20] These strong similarities on the issue of rules and constitutionalization shall not make forget the potential differences that exist between New Classical Economics and Friedman, stemming from the use of rational expectations. It has some importance for instance on the path to choose for disinflation policies, as what is primordial with rational expectations is the credibility of the policy rather than the money stock variations. But these differences with Friedman and monetarism are much visible in Sargent's work than in Lucas's (see Goutsmedt, 2018).
[21] Lucas was invited to present on "New Ideas on economic policy" by Mitchell, Hutchins Inc., a Wall-Street-based financial firm selling securities research services.
[22] William McKinley was the 25th President of the U.S. from 1897 to 1901, and Calvin Coolidge the 30th from 1923 to 1929.

predictably, the private sector will take reasonably good care of itself" (Ibid.). However, he then proceeded to convince people that do not have yet this belief—like him "ten years ago"—based on his theoretical analysis of Keynesian policy agenda and the impact of rational expectations for economic policy.

However, despite a clear policy agenda, neither Lucas committed himself fervently to defend economic rules and their constitutionalization, nor did he engage in any modelling work for public or private policy institutions. Whenever he carries some involvement in the public sphere, it seems to have been always unintended and in the margin.

2. Lucas's Trajectory through Public Debate

Lucas's intervention in the public domain appeared more discreet than those of other prominent macroeconomists of the time, such as Brunner, Friedman, Klein or Solow. It nevertheless reveals his view of current events; more importantly, Lucas's interventions consistently echoed his policy agenda. Lucas's activity took place in the U.S. context of the 1970s and early 1980s, which saw radical changes in economic policy (Nixon's wage-price controls, the Humphrey-Hawkins Act, the tax revolts, Volcker's disinflation, and Reagan's tax cut plan). We claim that Lucas got involved in these debates, but without actively engaging to promote his policy agenda and impose his views. On the contrary, most of Lucas's interactions with the general audience seemed unintended or passive: Lucas was solicited by others to express or clarify his views about policy issues. This resulted in an engagement with the public that was cautious and discreet—and outside policy-making institutions.

2.1. Searching for New Theoretical Perspectives: Lucas at Carnegie, 1966-1969

During his first years as an associate professor at the Graduate School of Industrial Administration at Carnegie Institute of Technology (Carnegie hereafter), Lucas worked, with his colleagues, on an empirical research agenda (Lucas, 1967a; 1967b; McGuire et al, 1968).

However, by the end of the 1960s, Lucas progressively shifted his research focus. The blooming of new ideas at Carnegie fostered the development of his distinctive approach to macroeconomics, based on rational expectations and general equilibrium. The influence of senior faculty members (e.g., John Muth and Herbert Simon) is widely acknowledged, both by Lucas himself (Lucas, 1996) and by recent historical works (Darity et al., 2004). Co-writing with young scholars at Carnegie, as Edward Prescott, also influenced Lucas's new approach to macroeconomics (da Silva, 2017).

During these years, Lucas's participation in the public debate or in policy-making expertise remained quite limited, except from 1966 to 1967, when he worked as an external consultant for the Bureau of Budget to assess the impact of changes in taxation on firms' investment (RLP39, Folder Bureau of Budget). In 1969, the U.S. Department of Health, Education and Welfare offered him a position in their research department. Lucas, however, turned down the offer: "I'm afraid I am not willing to spend time away from my research during the next year or so" (RLP1, Folder 1969).

Nevertheless, Lucas considered that discussing political issues was part of economists' job. In 1968, Lucas wrote an open letter to Carnegie's President Guyford Stever to express his support for political discussions within the faculty.[23] Lucas argued that it would be "difficult and dangerous" to draw a clear line between "scholarly and political activity", and pledged in favor of policy-oriented academic research:

> most research [in economics] is quite explicitly directed toward improving public economic policy. … it would seem to me to be altogether appropriate to advocate these policies [produced by my research] via letters to newspapers, to congressmen, and so forth, in addition to describing my results in academic journal articles. I regard both types of activity as part of my professional life, equally entitled to the support of school services. (Ibid., Folder 1968 1/1, Lucas to Stever, 01/02/1968)

However, Lucas did not seem to write any "letters to newspapers, to congressmen" during this period, although he supported his colleague Leonard Rapping in doing so. Rapping wrote to Congressman William S. Moorhead, a democratic representative for Pittsburgh district: "[Myself] and three of my colleagues [at Carnegie] (Professor Martin Geisel, Professor Robert Lucas and Professor Richard Roll) would be willing to serve as unpaid consultants" (RLP1, Rapping to Moorhead, 21/05/1969). Rapping supported Moorhead's motion to cut military spending (CR, Vol. 115, 25/04/1969) and his "attempt … to take on the Military and its numerous supporters". Rapping suggested that his role would be to help the Congressman overcome his "substantial disadvantage vis-à-vis the Defense Department", given that the latter disposes of "incredible resources, both in terms of money and manpower" (Ibid.).

Overall, the first period of Lucas's career seems to have been dominated by his academic work and the early development of his new approach to macroeconomics. However, Lucas did not overlook political and policy issues.

[23] Following the circulation at Carnegie of different materials against the Vietnam War, President Stever had blamed, in a letter to the faculty (11/01/1968), the use of the university's resources ("mails, mimeograph service") to express "personal thinking on controversial public issues".

2.2. The Years of "High Theory": Lucas at Carnegie, 1969-1973

Between 1969 and 1973, Lucas wrote the path-breaking articles that became his most famous contributions to macroeconomics. His work during this period was driven by requests or funding originating from policy-making institutions or policy-oriented solicitations.

The period between June 1969 and the end of 1971 was crucial. Lucas spent the summer at the NBER (1970) and received a fellowship from the Brookings Institution (1970-1971; RLP1, Folder 1969, Folder 1970 1/2). In June 1969, the Federal Reserve Board invited Lucas to write a paper about the "econometric testing of the natural rate hypothesis", to be presented by November 1970 at a Fed conference about "The Econometrics of Price Determination" (Ibid.). This commissioned paper became "Econometric Testing of the Natural Rate Hypothesis" (Lucas, 1972a), further published in the proceedings of the conference (Eckstein, 1972). In the same period, Lucas completed his "Expectations and the Neutrality of Money" (1972b).

Lucas also contributed to the new series of macroeconomics conferences, the "Carnegie-Rochester Series on Public Policy", organized by Karl Brunner and Allan Meltzer. For the first meeting, Lucas had agreed in December 1972 to write a "literature review on the studies on the Phillips curve" (RLP1, Folder 1972): this paper became "Econometric Policy Evaluation: A Critique" (1976 [1973]).

Earlier in 1972, Brunner wrote to Lucas a letter on a related matter (RLP1, Folder 1972, Brunner to Lucas, 14/01/1972). Brunner asked him to join a group with other 30 U.S. economists to cooperate in order to gain influence on the public debate about economic policies.[24] Brunner argued how media coverage was biased ("one-sided reports") toward the "dominant vision" supporting "much and better regulation" (Ibid.). According to Brunner:

> It is time that economists with professional record and some reservation about the general propensity to find "solutions" in more controls, or larger budgets, assert themselves more effectively in public policy discussion.[25] (Ibid.)

With Brunner's office serving as a "clearing house", the group could easily "distribute the cost of attending repetitively and somewhat systematically to important issues" and provide "an established organization to prepare and launch statements" (Ibid.).[26] Lucas answered

[24] Brunner presented the idea as "originating from discussion with several friends last summer in Europe", an almost certain reference to a meeting of the *Mont Pèlerin Society*.

[25] A reference to Nixon's wage-price controls policy (August 1971).

[26] Brunner did not limit the group functions to "launching statements" but also envisaged assuring that "at least one of our group is invited to important

enthusiastically: "Yes, I would like very much to be a part of the group you describe … I would like to help in any way I can" (Ibid., Lucas to Brunner, 19/01/1972). However, such a network group was never implemented: instead, in 1973, Brunner initiated with Allan Meltzer (Carnegie) a smaller group focused on monetary issues, the "shadow open market committee" (SOMC), to which Lucas did not take part (Meltzer, 2000).

2.3. The "New Guru" from Chicago, 1973-1986

The publishing of "Econometric Policy Evaluation" (as a working paper, in the Fall 1973) symbolizes a turn in Lucas's career and a new phase of his engagement with the public. In 1974, Lucas decided to move back to the University of Chicago after the Economics Department had sent him a full professorship offer. He spent the rest of his professional career, also serving as vice-chairman (1975-1983) and then chairman (1986-1988).

From the beginning of 1974, Lucas received many letters asking for a copy of the Critique. William Poole reported to Lucas: "my copy of [your paper] is wearing out from people reading it, unstapling it, Xeroxing it, and restapling it" (RLP1, Poole to Lucas, 01/11/1975). Lucas's paper disseminated to a larger and larger audience after its publication in the *Carnegie-Rochester Series on Public Policy* (1976). Media coverage on Lucas (and, more broadly, on "rational expectations" macroeconomists) gained momentum: between 1975 and 1981, articles about Lucas appeared in *Newsweek, The Wall Street Journal, Fortune, Business Week, The New York Times Magazine*, and, in Europe, *The Economist* and *Der Spiegel*.[27] Probably in response to this coverage, the University of Chicago (through its Office of Public Information) released a press résumé about Lucas, emphasizing the policy implication of his work:

> [the theory of rational expectations adds] some potent fuel to the argument long associated with Milton Friedman that government attempts to regulate economic activity are not beneficial. … government economic policies are a waste of time and effort.[28] (RLP1, Folder 1977 2/2)

Congressional Hearings" or bringing "our case to a wider attention by means of Press Conferences or television interviews" (Ibid.).

[27] For instance, *Business Week's* (8/11/1976, 74-75) headline was: "How Expectations Defeated Economic Policy". The article presented Lucas and Sargent as "ivory-towered economists" providing "solid theoretical base" to Friedman's policy assertions and going "even beyond": "no systematic policy can be devised that is affecting anything other than the inflation rate". *Der Spiegel* (29/11/1976) gave a similar interpretation: "for Lucas, the best stabilization policy … is to do nothing" (our translation).

[28] However, the text clarifies below that Lucas "disagree[s] with Friedman" on altering the money supply to stabilize the economy (Ibid.).

The same year, Republican representative John Rousselot used the Lucas Critique as a backbone argument for criticizing the federal budget before the Congress:

> Mr. Speaker, the following [statement] provides a concise and effective critique on the reliability and worth of econometric models. In that, the figures we are debating today and tomorrow are based on the calculations and results of these Keynesian models. I think it is helpful to understand the faulty assumptions on which they are based. (CR, vol. 130, 22/02/1977)

The statement introduced by Rousselot was actually written by Paul Craig Roberts, a Republican economic advisor.[29] The statement belonged to a broader strategy for defending the Kemp-Roth bill (which aimed at a massive cut on households' income tax): jointly with the use of the Lucas critique to criticize the CBO model, Roberts also presented alternative results using another econometric model. Afterwards, Roberts corresponded with Lucas, soliciting his advice on the matter:

> I have seen your critique of econometric policy evaluation. The subject has now been officially raised in the U.S. Congress [by Rousselot], and I believe your comments on the enclosed exchange [CR mimeo] might be a positive contribution to public economic policy. (RLP1, Roberts to Lucas, 21/03/1977)

The discussion initiated by Rousselot went on during the session of the Joint Economic Committee of the Congress (CR, vol. 130, 24/06/1977). The *Wall Street Journal* (18/04/1977, 29/06/1977) covered both debates, further amplifying the echo of Lucas's idea in the public debate.

The media success of the Lucas Critique made it particularly appealing to people *outside* academia, including researchers in private corporations (Monsanto, Merrill Lynch) and policy-making institutions. Dozens of letters to Lucas asked for a copy or send him enthusiastic appreciation (RLP1, Folder 1978 1/4 to Folder 1978 4/4).[30] By the end of the 1970s, Lucas enjoyed then a well-established reputation and fame going beyond the academic circles, a reputation that will stand during the 1980s. For instance, when invited to give a confer-

[29] Professor at George Mason (alongside with his former PhD supervisor Buchanan; MacLean, 2017, 181-82) Roberts also contributed from the beginning to the redaction of the Kemp-Roth bill. Roberts was hired by Representative Jack Kemp in 1974, and he built (with Norman B. Ture) an econometric model to support the bill and to undermine CBO's results (Blyth, 2002, 163). Roberts later played a key role in Reagan's campaign and administration (Crouse, 2018, 217).

[30] The public also consulted Lucas about other topics. For instance, Stephen Neal (a Democratic representative) consulted Lucas about the idea of publishing minutes from the Federal Open Market Committee. Lucas praised this suggestion, which will enhance transparency and predictability (RLP1, Folder 1976 2/2).

ence at Ohio State University in 1983, the organizer wrote to Lucas: "[attending your lecture], in addition to faculty and graduate students, there will be numerous undergraduates and curious people from the business community who wants the views of the "new guru" from Chicago" (RLP13, Folder "Lectures Notes 1979-1980", William Dewald to Lucas).[31]

During this period, Lucas also wrote two academic articles (1977; 1980a) that clarified and systematized his views. Additionally, he edited two books of collected writings, one on his own (1981a) and another co-edited with Sargent (1981). Perhaps the most representative piece of this period is another article with Sargent, "After Keynesian Economics". Presented at a conference organized by the Federal Reserve Bank of Boston in 1978, the paper was a "frankly rhetorical piece" as the authors themselves described it (RLP, Box 19, Folder "After Keynesian Macroeconomics 1978-1979", Lucas to Sargent, 09/02/1978).[32]

Besides this academic-oriented effort to disseminate his work, Lucas engaged with the public to clarify his views, which shows that Lucas's academic production aligned with his increasing engagement with the public. He continued to correspond with politicians, such as, for instance, Congressman Phillip Crane.[33] In these letters, Lucas clarified to Crane some of his views on economic policy that the Congressman held from a recent article published by *Newsweek*:

> My work has not focused on particular policy issues … Much of it has been devoted to explaining why our econometric models cannot be used to "fine tune" the economy. (RLP1, Folder 1978 4/4)

During this new phase of his interaction with the public, Lucas seemed more inclined to speak in the media about policy issues.[34] He also publicly criticized Reagan's administration. In two columns pub-

[31] Also, this reputation travelled outside the U.S. Lucas received also a significant number of letters from German and Japanese economists, and *Models of Business Cycles* (1987) was immediately published in a Japanese edition (RLP13, Folder "Models of Business Cycles").

[32] On this episode, see Goutsmedt (2017). Lucas also drew from this piece to give a talk at the Graduate School of Chicago's Annual Management Conference in 1979, called "The Death of Keynesian Economics" (see DeVroey, 2016, 210).

[33] Crane was a prominent GOP representative and chairman (1977-1979) of a powerful conservative lobby, the American Conservative Union. He later ran for the nomination for president in 1980, against Reagan.

[34] Lucas was for instance interviewed on BBC2 program "The British Economy" (RLP, Box 5, Folder 1982 2/2). However, Lucas felt sometimes that media coverage was not faithful to his ideas. In a letter to a journalist of *The New York Times Magazine* (RLP13, Folder "Directions of macroeconomics", Lucas to Mermelstein, undated 1979), Lucas complained harshly about his views being "paraphrased by journalists with different background and objectives than mine". We can also add to the list of Lucas's interviews his conversation with Klamer (1984), even though it was intended for an academic audience.

lished in *The New York Times* (26/08/1981, 28/08/1981), Lucas discusses the lack of long-term consistency of the Economic Recovery Tax Act, arguing that it was "discouraging", as it would lead to higher deficits.[35] To make his case, Lucas drew a rhetorically strong parallel between his stance and Alexander Hamilton's "Reports on the Public Credit" (1790-1795), presented before Congress as Secretary of the Treasury. By paying a tribute to Hamilton and his foresighted management of the public debt, Lucas attacked Reagan's administration for following the opposite path. For Lucas, Hamilton's central argument "was the recognition that a policy-decision taken today is, like it or not, an announcement of general principle by which analogous situations are to be treated in the future." (1981b) Conversely, Reagan's administration implemented inconsistent decisions to attain an equilibrated budget: on the one hand, tax-cuts; on the other, a monetary policy promising price stability. Combined, these decisions lacked credibility, as their objectives were "obviously inconsistent" (Ibid.). Rational expectations constituted the theoretical underpinning of Lucas's opposition to Reagan's policy: if public deficit soared, households and firms would fear debt financing by money creation, what would counter the monetary policy implemented by Paul Volcker since October 1979. More generally, through his participation to the public debate, Lucas seemed to hold the laymen in higher esteem than policymakers. Most of his policy agenda relied on the "virtues" of the common people, namely their capacities to pursue their own interest in a consistent and forward-looking way—in other words, their economic rationality. This underpinned Lucas's faith in the self-regulating abilities of market economies and the negative view of government discretionary intervention.

Lucas's columns did not go unnoticed and led GOP Senator Ernest Hollings to ask his advice about a plan for reducing deficits he had just proposed before Congress. Lucas agreed with Hollings' "emphasis on fiscal discipline" and that "the Reagan-Kemp-Roth tax cut was a mistake" (RLP1, Folder 1981 1/2). Lucas's policy agenda pushed him to fight against the supply-siders-inspired policies. That is why Lucas appeared reluctant to be assimilated to a certainvision of U.S. conservatism associated with Reagan's administration, which he publicly criticized:

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[35] The act was the fulfillment of the Kemp-Roth project. Lucas had been opposed since the beginning to this project: he received the evaluation of the results of the tax cuts, which relied on econometric simulation of the Chase Econometric Forecasting Model---the model was managed by Michael K. Evans, who was convinced of the relevance of Laffer and supply-siders' ideas (Blyth, 2002, 163). Lucas rejected the simulations, regarding them as "just pulled out of the air" (RLP1, Folder 1979 2/4). He considered that they should contact Martin Feldstein or Robert Barro, if they wanted "competent quantitative evidence on fiscal policy".

> It's hard to be a conservative with the Reagan administration turning to fine-tuning, which seems insane to me. So, if being conservative means liking their economics, I guess I'm not. (Lucas in Klamer, 1984, 51)

3. Concluding Remarks

This article has drawn a broader portrait of Lucas, emphasizing the connections between his worldview, his methodology for macroeconomics and his policy recommendations. These aspects of Lucas's work relied on his belief in rational agents, self-stabilizing markets and the likely harmfulness of government interventions. Lucas's policy agenda, as it appears in his writings, exhibited many similarities with some recommendations made by free-market advocates of that time. Nevertheless, Lucas's originality lied in the importance given to macroeconomics: he believed in the scientific elaboration of binding rules, which would be part of an economic constitution, as well as in the necessary methodological transformations for the discipline, aiming at building new models able to assess "scientifically" optimal rules.

The weight he granted to macroeconomics when dealing with policy issues could have explained his discretion in the public sphere, and why his acknowledgments were mostly academic. Indeed, it is possible that Lucas's form of engagement with the public debate could have resulted from personal reasons. Following his own justification, this could relate to individual characteristics: "I don't think I personally have any particular talent or liking for [advice-giving]" (Lucas in Snowdon and Vane, 291). For Lucas, the most important issue was to push for the development of new practices in macroeconomics that would encourage and facilitate the kind of policies he envisioned. Adopting a discreet and cautious way to deal with public debate would have the advantage of strengthening his scientific legitimacy and protecting him (to a certain extent) from being accused of ideological commitments.

Such a strategy complied with what Lucas called a "division of labour" (Ibid.) among his colleagues.[36] For instance, Sargent completed Lucas's work by developing a more concrete "Rational Expectations Theory" of inflation, thus proposing a New Classical explanation of U.S. stagflation (Goutsmedt, 2018). However, the subsequent spread of New Classical ideas outside academia and their influence in policy-making institutions remains largely to be recounted. In this story yet to build, the Federal Reserve Bank of Minneapolis could constitute an important step in a larger channel between academic and policy: not only Sargent and Prescott were employed by the Bank as researchers, but also its president (Mark Willes) publicly defended the relevance

[36] And then he adds: "I am glad that other people do [take] the role of advice-giving" (Ibid.).

of rational expectations to understand inflation and monetary policy. In this sense, the use of the Lucas Critique in the Congress and the adoption of rational expectations by the supply-siders behind Reagan (Blyth, 2002; Greider, 1982) could have played a significant role.

Therefore, Lucas's interaction with the public sphere differed from the other economists discussed in this special issue: Lucas was not an official (or informal) advisor to politicians or policymakers, counselling and eventually changing their mind about concrete policies (such as Walter Heller, or Albert Hirschman); he was not intervening in the public debate through the medias, popularization books or conferences to persuade or educate the laymen (as did Arthur Pigou); he was not a member of any consultative body to policy-making institutions, producing technical advice and guidance to the conduct of economic policy (such as Modigliani or Klein). Nevertheless, his own way to intervene in the public debate raised questions about the different channels by which economics and economists could influence public reason.

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How to Write a Memo to Convince a President: Walter Heller, Policy-Advising, and the Kennedy Tax Cut

Beatrice Cherrier*

Walter Heller's success in convincing JF Kennedy to pass a "tax cut" when he was chairman of the Council of Economic Advisors in the 1960s is often heralded as the poster child for economists' policy influence, yet also sometimes seen as a lost golden age. The purpose of this paper is to reinvestigate how Heller channeled his expertise into policy, and what lessons he drew on how economists should engage with public reason. The paper first zooms onto the historical "footsteps" of Heller's CEA tenure: his memos. I show that Heller considered himself as "an educator of presidents," but that in educating, he was also led to commission some academic work that altered the science he was trying to disseminate. The underlying emphasis, thus, is not just on how economic knowledge affects public reason, but also how public reason shapes economics science. I then analyze how Heller "theorized" his and his colleagues' practices in the late 1960s, in particular what stance he took on three contentious issues: the place of science and persuasion in advisers' interaction with their publics, how much normative values are involved in advising, and whether advising should rely on a disciplinary consensus. I conclude that the institutional and personal context of the 1960s entailed a highly personalized vision of advising, at odd with the tool-based vision underlying the subsequent "economicization" of economic policy in the following decades.

Keywords: Heller (Walter W.), fiscal policy, tax cut, Keynesianism, Tobin (James), Kennedy (John F.)

De l'art de murmurer à l'oreille du prince: des « memos » du conseiller économique Walter Heller aux reductions d'impôts de JF Kennedy

L'un des exemples les plus donnés pour illustrer l'influence des économistes sur la politique publique est celui de Walter Heller, président du *Council of Economic Advisors*, qui réussit à convaincre J.F. Kennedy, de mettre en place une réduction d'impôts massive dans les années 1960. Cet article documente la manière dont Heller a transformé son expertise économique en politique publique, et les leçons qu'il en a tirées sur les interactions entre experts et décideurs. Pour ce faire, j'analyse la vision de l'économiste comme éducateur qui se dégage de ses « mémos », et

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j'explique que ce n'est pas seulement la recherche économique qui nourrissait les débats de politique publique, mais que sa volonté de convaincre le président conduisit Heller à superviser de nouvelles recherches macroéconomiques. J'étudie enfin la place qu'attribuait Heller à la science et à la rhétorique dans les interactions entre les conseillers économiques et leurs publics, l'inévitable dimension normative et l'importance de rechercher et de rendre visible un consensus disciplinaire en économie. Je conclue que cette vision très 'personnalisée' du conseil aux décideurs contraste avec les modes technocratiques et anonymes par lesquels les économistes ont plus récemment influencé les politiques publiques.

Mots-clés : Heller (Walter W.), politique fiscale, réduction d'impôts, Keynesianisme, Tobin (James), Kennedy (John F.)

JEL: A10, A13, A14, B20, B29, B31

> Today's talk of an 'intellectual revolution' and a 'new economics' arises not out of startling discoveries of new economic truths but out of the swift and progressive weaving of modern economics into the fabric of national thinking and policy (Heller, 1966)

As macroeconomist Jim Tobin reflected on the legacy of Walter Heller, the famed chair of John Fitzgerald Kennedy's Council of Economic Advisors (hereafter CEA), he wrote: "the most important memos were for JFK. Walter knew how to get them read. He made friends with Ken O'Donnell, gate-keeper to the Oval Office, who would slip Walter's memo into the weekend Hyannisport briefcase. Walter had made it easy to read—short, pointed, colorful, and studded with the figures of speech that were the Heller trademark. The Treasury's thirty pages of bureaucratic prose were no competition" (Tobin, 1991, 105). The quote illustrates how crucial documenting seemingly anecdotal aspects of economists' work is to understand the scope and nature of their influence on public reason, a topic currently drawing historians and sociologists' attention and economists' anxiety.[1]

[1] Berman and Hirschman (2014) survey hundreds of work documenting economists' influence on policies. Economists in the US and Europe alike have recently published dozens of worried columns on their loss of influence. Examples include: "Economics Gets a Presidential Demotion," 02/14/17 (https://www.bloomberg.com/view/articles/2017-02-14/economics-gets-a-presidential-demotion), "Why the Public Has Stopped Paying Attention to Economists" (06/28/16, http://www.thefiscaltimes.com/Columns/2016/06/28/Why-Public-Has-Stopped-Paying-Attention-Economists), "The Public Trusts Academic Economists But the Media are Losing Interest" (http://www.res.org.uk/view/art3Jul16Features.html), "Why Voters Don't Buy it When Economists Say Global Trade is Good" (https://www.nytimes.com/2016/07/31/upshot/why-voters-dont-buy-it-when-economists-say-global-trade-is-

That Heller was successful in influencing economic policies is quite uncontroversial. He was instrumental in putting a *War on Poverty* on the presidential agenda (Haveman et al., 2015) and in turning human capital theory into an argument in favor of federal funding for education (Holden and Biddle, 2018). Most famously, he managed to convince Kennedy and Lyndon B. Johnson to implement a massive income and business tax cut. The facts are well known: Eisenhower's legacy was a sluggish decade, with growth stuck at 2,5% per year and unemployment at 8%.[2] A recurring budget deficit, which topped 12 billion in 1959, impeded much-needed defense, education and welfare expenditures. Kennedy's campaign was consequently focused on the promise of restoring growth, of "get[ting] this country moving again." The candidate had nevertheless straightforwardly rejected the fiscal stimuli proposed by those economists, including Paul Samuelson, who had participated in his Democratic Advisory Committee. Kennedy came to the oval office with the notion, inherited from his father, that the budget should be balanced and the money supply tightly controlled. Kennedy gradually became more favorable to sustaining a budget deficit, and by early 1963, he had submitted to Congress the largest peacetime *voluntary* budget deficit: $12 billion. He proposed to reduce income tax rate from 20-91% to 14-65% and corporate income tax rate from 52 to 47% and to abolish loopholes and preferential deductions to enlarge the tax base. He promised that, should the Congress pass his tax cuts, the 1965 budget would be equilibrated. The proposal was finally enacted in 1964, under Johnson. 1965 saw the smallest Federal deficit of the decade (1 billion), strong growth and unemployment down to 4%.[3] The trend persisted throughout the decade, with inflation pressures gradually building in response to Johnson's *War on Poverty* and the Vietnam War.

Though protagonist histories developed by Herbert Stein (1969) and backed by Collins (1981) have suggested that the fiscal revolution of the 1960s was shaped by the business community, the pivotal role of Heller in swaying Kennedy has since been documented by Michael Bernstein (2001), Irving Berstein (1991) or James Hyllier (2018) among

good.html), "Brexit Voters are Ignoring Experts" (07/01/16, https://www.project-syndicate.org/commentary/brexit-voters-ignoring-experts-by-jean-pisani-ferry-2016-07?barrier=accessreg). See also Benassy-Queré, Blanchard and Tirole (2017).

[2] This quick chronology is based on Bernstein (2001, chapter 3). See also references in footnote 3.

[3] The extent to which the tax cut fueled this period of prosperity, and subsequent imbalances, is still fiercely debated. For a positive evaluation of their legacy, see Collins (2000) and Bernstein (2001). For a more critical assessment, see De Long (1997), Romer (2007), Kudlow and Domitrovic (2016). On how the new economics CEA raised the prestige of economists, see Bernstein (2001), Okun (1969, 14), and *Business Week* (1966, February 5, 125).

others.[4] A professor of public finance at the University of Minnesota, Heller has contributed to shift economists' image from ivory tower technicians to useful experts and to strengthen public trust. A testimony to his public visibility, he made *Time*'s cover twice in two years. No other CEA chair made the cover of the magazine before late 1976, and none ever made it twice as CEA chair. While his peculiar status as the "economic experts' expert" and the *scope* of his influence have been documented, its *nature*, channels, and consequences on the body of knowledge produced by economists are less so.

The purpose of this paper is thus to use Heller's successful attempts to persuade Kennedy as a case study to reinvestigate the interactions between economic knowledge and public reason. My goal is not to perform comparative analysis, and to figure out when Heller succeeded and when he failed, of whether and why he was more influential than his predecessors. While previous accounts of the Kennedy CEA have emphasized the 1962 *Economic Report*, I focus on the more personalized, and high-frequency material Tobin acknowledged has been Heller's preferred weapon, his memos. I show that they reflect Heller's vision of himself as "an educator of president," but that in *educating*, he was also led to commission some academic work that altered the science he was trying to disseminate. The underlying emphasis, thus, is not just on how economic knowledge affects public reason, but also how public reason shapes economics science. I then analyze how Heller "theorized" his and his colleagues' practices in the late 1960s, in particular what stance he took on three contentious issues: the place of science and persuasion in advisers' interaction with their publics, how much normative values are involved in advising, and whether advising should rely on a disciplinary consensus. I conclude that the institutional and personal context of the 1960s entailed a highly personalized vision of advising, one that is less emphasized in the many recent histories of the tool-based "economicization" of policies in the last decades.

1. "The President's Economic Education" and the Art of Memos

The most idiosyncratic aspect of the tax cut episode was probably Kennedy's knack for economics, his willingness to discuss policy as well as theoretical aspects, his eagerness to read and digest memos and newspaper articles. Yale macroeconomist James Tobin remembers telling the president that he may not be the best pick as CEA

[4] Stein (1969) argued that the Committee fro Economic Development he represented developed a 'commercial Keynesianism' supporting active discretionary budget deficit going beyond the then popular use of automatic stabilizers, but Hillyer (2018) documents that Heller's CEA has, in fact, architected and pushed for this policy view earlier.

member because he was a "sort of ivory-tower economist," to which the latter responded: "that's the best kind. I'm a sort of ivory-tower president" (quoted Bernstein, 2001, 267, fn. 54). Yet, that Kennedy was drawn to economics did not make Heller's job easier. Not only was the president surrounded by advisors with conflicting economic policy views, not least among interventionist economists, but it was not clear, back then, that the role of the CEA as defined in the 1946 Employment Act was to promote specific policies. First CEA chairman Edwin Nourse and Eisenhower's chairman Arthur Burns conceived their role as being mere advisors to the president, providing technical reports and private forecasts and refraining from making public statements or testifying before Congress. The only exception was Truman's second chairman, Leon Keyserling, whose more activist stance created a stir (see Bernstein, 2001, chapter 4). It was nevertheless one more congenial to Walter Heller's vision of the role of the economists within society.

The son of a civil engineer committed to public service, Heller was, by his own admission, one of those children of the Great-Depression who turned to economics because "explaining why [the economy flat on its back] and try to do something about it, seemed a high calling."[5] Economists from the University of Wisconsin, where Heller got his PhD, boasted a strong record in successfully influencing Wisconsin's policy-making, not least his PhD advisor, fiscalist Harold Groves (Johnson, 2015). Heller's wartime contribution as a Treasury tax expert, his participation into the Marshall Plan and his lobbying for federally funded education in the late 1950 strengthened his identity as a "policy-oriented economist," a "do-something-about-it economist." As he was nominated CEA chair, he was ready, not only to provide forecasts and technical advice, but also to promote the policies he believed were supported by good science, to convince the president, to testify before Congress, to engage the media and the public. He also encouraged his two fellow CEA members to do the same. Tobin and budget specialist Kermit Gordon fully shared Heller's conception of the role of an economic expert, as did those economists who either work as CEA staff economists, Robert Solow and Arthur Okun, or who were close shadow advisors, like Paul Samuelson.[6] In a 1961 *Time* article, the 3 CEA frontiersmen thus described themselves as "pragmatists." Promoting the tax cut was a team effort. All 3 council members had extensive discussions with Kennedy on policy as well as on the common theoretical foundations they had borrowed from the *New Economics* articulated by Paul Samuelson at MIT.

[5] Quoted in the article "The Pragmatic Professor" published in *Time,* Friday March 03, 1961. See also Pechman (1987) and Tobin (1991).

[6] Samuelson and Tobin's vision of the role of science and advocacy in public-advising is detailed in Romani (2018).

That Heller primarily conceived his mission as educating the president was pervasive in his favorite tool: his memos. While communicating with presidents through memos was a standard practice already, Kennedy received more than 300 from the CEA (Heller, 1967, 29). Some were written by Heller's colleagues, in particular Tobin, some were collective and aimed at discussing the economic outlook, specific events, or outlined rebuttals of newspaper opinion columns.[7] Heller's ones, always signed, were short, devoid of technical jargon but not of figures, with a clear and apparent structure, and main arguments systematically underlined. They usually began with a quantified depiction of the economic situation, a brief policy proposal, and extensive response to possible counterarguments. Though Heller's ability to discuss technical issues in simple term was certainly not unusual among economists and policy advisors, Tobin (1991, 103-104) nevertheless explains that Heller had "an unmatched talent for finding the revealing examples, instructive jokes, and colorful metaphors that made his points succinctly, convincingly, and accurately. Heller's memos were so convincing that, he remembers, president Johnson once held up one of his memos at a Cabinet meeting and said "Here's one of Walter Heller's memos. See how it's set up? That's the way I want you all to write your memos" (quoted in Crichton, 1987).

Below is one of the memos that convinced Kennedy to endorse the 1963 Economic Report and the Special Message to the Congress on Tax Reform Heller had contributed to draft, as attested by the almost verbatim use of some arguments in Kennedy's speeches. By mid-1962, Kennedy had already agreed to run discretionary budget deficits, but, as detailed in the next section, his advisors fiercely disagreed on what these deficits should fund.

Excerpt of a "Memorandum for the President" by Walter Heller, December 16, 1962.[8]

Subject: Recap of Issues on Tax Cuts (and the Galbraithian alternative)

A. The Economic Case for Fiscal Action

1. The cost of a slack economy
a. The $30-40 billion loss of potential output in 1962 alone is
—8 times our total foreign aid,

[7] See for instance "US-European Budget Comparisons as Seen by the Post," June 4, 1962, Heller to President, https://www.jfklibrary.org/Asset-Viewer/Archives/JFKPOF-074-008.aspx. Unless otherwise mentioned, all archival material has been retrieved from the Digital Collection of the John F. Kennedy Presidential Library and Museum. Rather than providing boxes and folder references, then, I will provide web link throughout the paper.

[8] Retrieved at https://www.jfklibrary.org/Asset-Viewer/Archives/JFKPOF-063a-009.aspx.

—equals total public and private expenditures on health and medical care
—well exceeds total expenditures on education
—is almost equal to the total GNP of Italy
b. Similar losses have occurred in each of the past five years. Next year, without a tax cut, we would face a loss of the same order:
—Normal growth of the labor force plus growth in productivity add more than $20 billion to our productive potential next year
—Optimistic forecasts of actual GNP growth for 1963 without a tax cut is of roughly this magnitude
c. We do not predict a recession in the first half of 1963, but there is still one chance in four or five that it will occur. And as expansion continues at a slow pace, the chance of a recession steadily increases.
d. These are avoidable losses. Economics is no exact science; but economists are almost unanimous in holding that an active fiscal policy can prevent this waste. And experience in other countries, where popular and parliamentary devotion to outworn fiscal doctrine is less rigid, provides impressive evidence to support them.

2. The danger of too little and too late
a. This is a big country. For example: A budget deficit of $15 billion:
—would be about 3% of potential GNP in 1963.
—Is equivalent to a deficit of $1-1 ½ billion in 1933 (when GNP was 1/10 of its present level).
—Is less as a percentage of GNP than Ike's record deficit of $12.5 billion, which translates into $16.5 billion in today's GNP
Our economy is basically healthy, but one doesn't treat an elephant earache with an eyedropper. 'This metaphor has not been certified by Galbraith.)
b. Fiscal medicine is reasonably sure in its effects, but it takes time to work …

B. The Political Case for Fiscal Action

1. Congress may be lukewarm, but powerful groups throughout the country are ready for action. When the Chicago Board of Commerce, the AFL-CIO, the CED, and the US Chamber are on the same side—when repeated editorials in Business Week are indistinguishable from those appearing in the Washington Post—the prospect for action cannot be wholly dim. Can 3000 members of the NY Economic Club be wrong?

2. …

3. Our world leadership—brilliantly asserted only a few weeks ago in the political field—would be strengthened by vigorous expansion of our economy. Continued economic slack saps our prestige and weakens the dollar. One looks for economic miracles today not to the homeland of revolutionary economic expansion, but to Western Europe and Japan. A

booming US economy can do more to cure economic sickness in Latin America—and other producing areas—than all our foreign aid …

C. Why Cut Taxes Rather THAN Go the Galbraith Way?
…

1. But how could we spend an extra $9 billion in a year or two? This would be a 40 percent increase over FY 1963 Federal non-defense expenditures (excluding interest, agriculture, and social security) … Attempts to enlarge spending at the rate required to do the economic job would lead to waste, bottlenecks, profiteering and scandal.

2. Politically, the case for tax rather than expenditure action is strong:
—An expansion of spending would bring all of the charges of "fiscal irresponsibility" that attach to tax cuts—after all, deficits would be practically the same either way.
—But on top of this would be all of the opposition to expansion of government, to over-centralization, to a "power grab" and a "take-over" of the cities, the educational system, the housing market.

3. Tax-cut-induced deficits are also far more acceptable to the world financial community than expenditure-induced deficits, ie, far less likely to touch off new gold outflows …

In these memos, Heller rolled a peculiar argumentative style out. He usually began by explaining how the tax cut was consistent with Kennedy's overarching policy ends, that is, national defense and growth (it was an argumentative strategy he had already successfully wielded on education funding, Holden and Biddle (2017) argue). This is why the above December 1962 memo began with "top of economic agenda—must match our progress in foreign policy and defense with a restoration of full vigor of our domestic economy." This strategy was taken up by Kennedy in the first sentences of his Special message to the Congress a month later:

> the most urgent task facing our Nation at home today is to end the tragic waste of unemployment and unused resources—to step up the growth and vigor of our national economy—to increase job and investment opportunities—to improve our productivity—and thereby to strengthen our nation's ability to meet its worldwide commitments for the defense and growth of freedom.[9]

Having argued that his proposed economic policy was in line with the President's broader aims, Heller proceeded to frame complex policy choices in simple economic terms: it was all about bridging "the gap." Already in memos issued early 1961, Heller hammered that the

[9] "Special Message to the Congress on Tax Reduction and Reform," January 24, 1963, http://www.presidency.ucsb.edu/ws/?pid=9387.

key question was "how do we close the gap between existing and potential levels of employment, production and income." He used the term so much that after a 1961 hearing Joe Pechman told him "gee, you ought to stop talking so much about the gap because it just isn't doing any good."[10]

Though Heller refrained from using technical terms in his memos, he did not shy away from quantification. At the end of 1961, he sensed that he needed a better picture of how increasing the capacity of production utilization could help "bridge the gap." He therefore asked CEA staff economist Arthur Okun to quantify this "output gap." The resulting paper (Okun, 1962), which introduced the famous "Okun law," illustrates the influence of policy concerns on economic research. In the introduction, he explained that "if programs to lower unemployment from 5 ½ to 4 percent of the labor are viewed as attempts to raise the economy's "grade" from 94 ½ to 96 [use of production capacity], the case for them may not seem compelling. Focus on the 'gap' helps to remind policy-makers of the large reward associated with such an improvement." Using 3 different techniques to estimate the relationship between unemployment and real GNP, he unequivocally concluded that each extra percentage point in the unemployment rate *above four percent* has been associated with about a three percent decrement in real GNP.

Setting the "full employment without inflationary pressure" target at 4% was a key assumption of the paper, though Okun explained that another target would only change the figures, not the method. It reflected, in his own word, a "subjective judgment" by Heller and his council economists (Okun, 1969, 18). "I remember the general judgment that that's about where the public's tolerance of inflation would give out. Nobody at that time would have thought that 3 or 4 percent inflation would be an acceptable situation in the American economy. That's really a judgment about what kind of public reaction you get to the tradeoff between consumer prices and unemployment rather than the question of what the real terms are on which the tradeoff operates," Okun (1969, 19) later explained. It was not the only case where Heller's quest for sound theoretical and empirical basis for the policies he was advocated stimulated new research. At about the same time, he asked Burton Weisbrod, senior staff economist at the CEA, to expand his quantitative analysis of the external benefits of education (Holden and Biddle, 2017).

The last paragraphs of Heller's memos were usually aimed at dedramatizing the consequences of a tax cut, namely budget deficits. He did so by showing that countries exhibiting a more rapid growth than the US, such as France, Italy or Germany, were not shy of running

[10] Transcript of CEA Oral History Interview – JFK#1, 08/1/1964 (https://www.jfklibrary.org/sites/default/files/archives/JFKOH/Council%20of%20Economic%20Advisers/JFKOH-CEA-01/JFKOH-CEA-01-TR.pdf), 293.

deficits to support aggregate demand. He also followed a gradual approach, first convincing Kennedy *not to* raise taxes to fund the additional $1 billion military expenses needed to face the building of a Berlin Wall in the summer of 1961 (see Okun, 1969, 12-13). He also set to counter the "fiscal irresponsibility" argument, occasionally going downright political: "under present programs and outlook, a deficit in fiscal '62 is already in the cards," he wrote in March 1961. "Once fiscal virginity is lost, the size of the deficit matters very little to the critics of 'fiscal irresponsibility.' The Eisenhower $12 billion deficit should restrain the stone-throwing of Republican critics. Our deficit would be less, and it would come at the right time."[11]

2. Educating (or Neutralizing) the Whole Decision Chain

2.1. Persuading the Executive Branch

Educating the president was only part of Heller's job. The whole decision chain had to be persuaded, in particular skeptical presidential advisors and dissenting voices had to be silenced. In those years, macroeconomic expertise within the executive branch was scattered across the CEA, Douglas Dillon and Robert Roosa's Treasury, David Bell's Bureau of Budget and the Federal Reserve Board, whose chair, William McChesney Martin, served from 1951 to 1970. Their task was to provide forecasts, advice and coordination, and prepare the budget. Beyond routine disagreement on forecasts, these economists held divergent visions of the major economic threat Kennedy had to deal with. Dillon, Roosa and Martin were worried about the growing imbalance in foreign payments and the associated risk of gold drain, and Martin also closely monitored the deterioration of the value of the dollar. They also believed that the high level of unemployment was the consequence of the "changing structure of the labor force" rather than of slacking demand.

To dismiss "the official Republican diagnosis (or excuse) is that growing unemployment is due to changing structure of the labor force", Heller claimed that science was on his side. An early 1961 memo accordingly contrasted "the '*correct*' analysis … would be that most of our unemployment would respond to over-all measures designed to stimulate demand and investment … would call for substantial additional spending, tax cuts and deficits" with "the '*incorrect*' policy position that most of the unemployment and under-

[11] Council of Economic Advisors, "A Second Look at Economic Policy in 1961," March 17, 1961, https://www.jfklibrary.org/asset-viewer/archives/JFKPOF/063a/JFKPOF-063a-007.

capacity operation are the result of structural factors."[12] Heller also emphasized the non-partisan character of his policies by providing long lists of individuals and organizations across the political spectrum that he had managed to convince that a tax cut was the best policy. A December 1962 briefing book listed the Committee for Economic Development, the AFL-CIO, New York Governor Nelson Rockefeller, the National Association of Business Economists, and, ironically, most of Eisenhower's CEA members.[13]

Heller copied those memos to Kennedy's closest policy aids. Ted Sorensen, Myer Feldman ad Richard Godwin, who had fiercely opposed budget deficits during the campaign, came to agree with the CEA, as did Treasury and Bureau of Budget officials. Heller invited them to meet with Fed chairman Martin on a monthly basis. He closely monitored the agenda and exchanges of these "quadriad" meetings (Ackley, 1974, 21). Through his memos, Heller even managed to defeat an alternative proposal to replace the $10 billions tax cuts with a $9 billions expenditure increase. The idea was carried by Kenneth Galbraith, who since their Harvard students' day was much closer to Kennedy than Heller, Tobin or Gordon were. Galbraith, like Sorensen, was more concerned than Heller with the structural nature of unemployment, as well as with the political feasibility of the stimuli and its long-term economic effects. He thus favored public spending and education investment over a tax cut. Though he was then Ambassador in India, he was around Washington in the summer and actively fought Heller's proposal (Parker, 2005, chapter 16). In a June 1962 memo to Kennedy, he explained: "I do not think the country is ready for it … We cut taxes but do not pass an education bill. Not good … The psychological effect of an expansion drive of this sort [a program to make jobs] will be just as great as a tax cut."[14] In response, Heller added a "Why cut taxes rather than go the Galbraith way?" section to the December 1962 memo reproduced above: "how could we spend an extra $9 billion in a year or two?," he wrote. "Attempts to enlarge spending at the rate required to do the economic job would lead to waste, bottlenecks, profiteering and scandal." Moreover, extra spending would make the government vulnerable to suspicions of "over-centralization, power grad of the cities, the educational system." Tax-cut-induced deficit was more acceptable to the world financial community, he added, "ie, far less likely to touch off new gold outflows."

[12] Memo from Heller to president, 02/24/61, "'Blue Ribbon' Advisory Committee on Full Recovery" (https://www.jfklibrary.org/Asset-Viewer/Archives/JFKPOF-063a-007.aspx).

[13] Heller, "Brief Book on Economic Matters," 20 December 1962 (https://www.jfklibrary.org/Asset-Viewer/Archives/JFKPOF-063a-009.aspx).

[14] Memorandum from Galbraith to President on "Tax Reduction," June 6, 1962 (https://www.jfklibrary.org/Asset-Viewer/Archives/JFKPOF-056-010.aspx).

2.2. Neutralizing the Fed

Neither was Heller shy to testify before the Joint Economic Committee of the Congress, in an attempt to win support for the forthcoming bill. In the end, the only enduring resistance came for Fed chairman Martin. The longstanding fight for influence between Martin and Heller was not restricted to the tax cut issue. Martin was not trained as an economist, and was therefore impervious to Heller's arguments. He took office in March 1951 just after negotiating, as assistant secretary of the Treasury, a landmark agreement between the Treasury and the Fed (Hertzel and Leach, 2012). The 1951 accord exempted the Fed from the interest rates pegging meant to support the government war debt financing, and he was therefore eager to reassess the Fed's newfound ability to pursue independent monetary policy. When Kennedy was elected, he did not offer his resignation, as was the practice in those years. To counter the deteriorating balance-of-payment, stabilize the value of the dollar and contain the inflationary pressures which he believed would derive from a tax cut, Martin intended to raise interest rates. In the early months of the presidency, he made it clear that he did not see fit to offset the upward pressures on the interest rates associated with the fledging recovery.

Heller's counter-attack was multifaceted. He asked Tobin, whose command of monetary policy was unrivalled, to write detailed and technical notes for the president. In his own memos, the chair took a broader view, emphasizing that the success of the tax cut required the implementation of an appropriate "mix." He was walking a tight rope: "monetary policy should be used, as needed, for balance-of-payments or price stability reasons," he conceded, "<u>but don't offset the expansionary effect of tax cuts,</u>" he immediately underlined.[15] He argued that monetary policy should be discussed within quadriad meetings for the sake of "economic policy coordination," and suggested to fill the board of directors of the 12 district Banks with New Frontiersmen like Tobin or Solow. He repeatedly tried to convince Martin that, while short-term interests rates should be raised as needed to avoid a gold drain, the Fed should buy long-term bonds so as to keep long-term interests rates low ("buying long"). This would stimulate investment and risk-taking, he argued. Heller also brought their disagreement to the media, an unusual practice in these years: in the 1961 *Time* article, he declared: "high interest rates and budget surpluses are incompatible: an Administration has to choose one or the other. Since both tend to hold down demand, tight money and budget surplus acting together have a gravely depressing impact on the economy."

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[15] Heller, "Memorandum for the President," January 27, 1963, Heller papers, box 19, JFK Library, online copy: https://fraser.stlouisfed.org/archival/1197/item/3565.

Sensing that he would not convince Martin, Heller labored toward proposing alternatives to control inflationary pressures. In the 1962 CEA report, he therefore advocated wage and price guideposts whereby wage increases should be guided by expected gains in productivity. And in the Spring of 1962, he and other advisors convinced Kennedy to oppose price increases in the Steel industry. He also sought to alleviate the balance-of-payments constraint. The gold drain had been accelerating since the beginning of 1962, with the consequence that Martin was taking measures to raise the short-term interest rate. Heller convinced Kennedy to make a public statement to restore faith in the dollar. “The United States will not devalue its dollar … I have confidence in it, and I think that if others examine the wealth of this country and its determination to bring its balance of payments into order, which it will do, I think that they will feel that the dollar is a good investment and as good as gold,” Kennedy declared during a transatlantic TV broadcast on July 23 1962.[16] Heller never succeeded in bringing Martin into line, and the Fed rates doubled during Kennedy's presidency. He nevertheless felt he had avoided more dramatic hikes on short and, more important for the policy mix, long term rates.[17]

2.3. Engaging the Public

Heller's final target was the lay public. In the early months of his tenure, he wrote in a memo to Kennedy that “a committee could contribute to public education on … “modern” solution such as deficit financing and expanded government programs, thus overcoming in part the results of eight years of miseducation and retrogression in economic thinking under the Eisenhower Administration (see footnote 13).” Heller devoted considerable energy to give talk to citizens, labor and professional organization, and also seized the opportunity to preach the Gospel through the media. He, Tobin or Samuelson, who had refused to chair the CEA but kept an eye on its progresses, regularly published popularization articles in *Business Week*, *Time*, *Life*, *Business Insider*, and so forth. In a December 1962 memo, he explicitly outlined why educating the public was both crucial and difficult, in terms that resonate today:

> Problem of public attitude greater here, perhaps because of greater public participation in government decisions; Also, Americans are more prone to a tendency of ‘each man his own economist.’ In other countries, they're

[16] See https://www.armstrongeconomics.com/research/the-president-kennedys-telstar-news-conference-of-july-23-1962/.

[17] The 1962 *Economic Report* praised the Fed for its long-maturity Treasury securities purchase program, one aimed at bringing down long-term interest rates.

> more likely to 'leave it to the experts.' And who's to say that our situation is worse, for a democracy?[18]

In his memos, Heller therefore looked for ways to overcome "American people and the Congress's strong aversion to budget deficit."[19] His solution was to "repeat 'deficit of inertia vs creative deficit for expansion" argument," and this was precisely how Kennedy January 1963's message to Congress was framed: "our choice today is not between a tax cut and a balanced budget. Our choice is between chronic deficits resulting from chronic slack, on the one hand, and transitional deficit temporarily enlarged by tax revision designed to promote full employment and thus make possible an ultimately balanced budget," the president asserted.

Heller resigned in November 1964, in spite of Johnson's request that he stayed for another term. He was succeeded by Gardner Ackley, and remained a close advisor to the president. Ironically, he soon found himself on Martin's side. As Johnson proceeded into his *War on Poverty* program, Heller sensed that the overheated economy had to be cooled by a tax increase. Absent such measure in the 1965 budget, Martin was right in warning that he would raise interest rates. This time, Heller failed to convince the president.

3. Does the Advisor Trump the Scholar? Heller's View of the "Political Economist"

After his stint at the CEA, Heller returned to holding a professorship at the University of Minnesota for the rest of his life. Amidst his numerous talks to all sorts of lay and professional audiences, his testimonies, and his introductory economics and public finance courses, he found time to reflect on "Advising and Consensus in Economic Policy Making," the title of the first Godkin lecture he gave at Harvard in March 1966, published the next year. In those lectures, he took strong views on three characteristics of the economist's public role which had been hotly debated before and ever since: the respective role of positive and normative analysis, of science, education and persuasion, and of disciplinary consensus.

First, Heller insisted that "value judgments are an inescapable, obligatory and desirable part of the life of an economic adviser." "Merely selecting objectives for economic policy, as one must, involves us in normative choices," he continued. "'Full employment,' 'high growth,' and 'price stability' may have a hard economic ring, but they are only proxies, if you will, for such social goals as personal fulfillment, a ris-

[18] Heller, "Brief Book on Economic Matters, 20 December 1962, Deficits & Debt #1." https://www.jfklibrary.org/asset-viewer/archives/JFKPOF/063a/JFKPOF-063a-009.
[19] Heller, "Brief Book on Economic Matters, 20 December 1962."

ing quality of life, and equity between fixed and variable income recipients." He even considered that "value judgment are *obligatory* under the Employment Act, which requires the setting of target levels of employment, production, and purchasing power" and that pretending otherwise would make the adviser "unfit to serve." It is therefore the task of the political economist to "press the case" for some measures and against others. Yet, Heller did not believe that in doing so, the economist was engendering his objectivity, scientific credibility and integrity. Those were ensured by "selective silence," by keeping close ties with his professional base, and by returning to academia after a period of service in the government.

Another reason why Heller did not believe his "open advocacy" in favor of a tax cut, a war on poverty or price guideposts endangered his scientific integrity is that he perceived them as directly deriving from ends set by the Full Employment act and the President and those means "correct analysis" were pointing to. More important than analyzing and advocating, therefore, was his *education* mission: "education—of the president, by the President, and for the president—is an inescapable part of an economic advisor function," he wrote. Heller took office with the view that "the major barrier to getting the country's economy moving again lay in the economic ignorance and stereotypes that prevailed in the land" (Heller, 1967, 26). He thus labored so that "the analytical models of the economist" are implanted "in the minds of Presidents, congressmen and public leader." He was confident that economists' conceptual advances and quantitative research would "replac[e] emotion with reason" (Ibid., 9). What he and his colleagues considered dangerous "myths and false fears" included the notion that sound public management required a balanced budget.[20] Even economists had to be re-educated, since, they were unduly focused on mitigating "cycles" rather than "closing the output gap."

The first mind to educate what that of the president, but as Kennedy himself conceived the "White House as a pulpit of public education in economics" (Heller, 1967, 26), education "of" the president turned into education "by" the president. An example Heller, Tobin (1991, 103-104) and Okun (1969, 13-14) often referred to was the commencement address Kennedy gave at Yale in June 1962. The president's speech did not merely closely mirror the arguments found in Heller's memos. Kennedy "wanted a myth-exploding speech," Okun (1969, 14) remembers, "and he ordered that it be focused on economic policy." The resulting discourse was thus explicitly designed to fight myths:

> Today I want to particularly consider the myth and reality in our national economy. In recent months many have come to feel, as I do, that the dia-

[20] Samuelson, quoted in Romani (2018, 10-12) talked about "folklore."

> log between the parties—between business and government, between the government and the public—is clogged by illusion and platitude and fails to reflect the true realities of contemporary American society … The myth persists that Federal deficits create inflation and budget surpluses prevent it. Yet sizeable budget surpluses after the war did not prevent inflation, and persistent deficits for the last several years have not upset our basic price stability. Obviously deficits are sometimes dangerous—and so are surpluses.[21]

Promoting the role of the economist as an educator was however nothing original. In spite of substantive disagreement on both style and substance (see below), Reagan CEA chair Martin Feldstein (1992, 1229) concurred that he had always regarded testimonies to congressional committees, speeches to a wide array of audience, TV and press interviews as "opportunities to teach economics." Nahid Aslabegui and Guy Oakes (2019) document A. C. Pigou's belief that the British public was woefully ignorant of economic affairs. The welfare economist came to understand economists' role as being responsible for "enlightening" the public on how to understand and assess the merits of economic policies so as to generate "assent." He chose to do so through, for instance, writing *The Times* and writing "low and middle-brow" pieces. He also believed in non-partisanship and advised his colleagues to cultivate a "detached mind." The Wisconsin institutionalists who trained Heller "elevat[ed] practical problem solving as the central focus of economics study" Marianne Johnson (2019) explains. They accumulated "practical evidence" with the goal of producing "confident scientific knowledge" meant to persuade policy-makers, and "educate," even "control" laborers and immigrants. One key difference with these economists, however, was that Heller considered those he needed to educate as intellectual equals, not inferiors or ignorants. He considered Kennedy and Johnson "as the first modern economists in the American presidency" (1967, 37).

A final reason why Heller did not feel his role as an advisor threatened his scientific values was his perception of a disciplinary consensus: "The rising star of the political economist is also correlated with growing professional consensus … comparing economists of today with those of twenty-five years ago, I am sure it is fair to say that there is more of both the Keynesian and the conservative in us all … We do agree that the economy cannot regulate itself. We now take for granted that the government must step in to provide the essential stability at high levels of employment and growth that the market mechanism, left alone, cannot deliver." As someone jousting with fellow economists on a daily basis he did not deny that "there is plenty of room for controversy on the degree and form of government action," but consensus on "governing principles" is growing, he never-

[21] "Commencement Address at Yale University," June 11, 1962, consulted on September 9 2018 at http://www.presidency.ucsb.edu/ws/?pid=29661.

theless believed. The political economist was thus tasked with building on that disciplinary consensus to become a "consensus-seeker … carrying the economic gospel not only to the uninformed by to the skeptic and the heathen." Pivotal in Heller's perception of a disciplinary consensus was the institutional unification offered by the 1946 Employment Act, which he systematically referred to when discussing policy-advising. By the early 1980s, Feldstein (1992, 1926) argues, "the professional consensus rejected the premise on which the CEA was originally established: that fiscal policy should be managed to maintain full employment. The emphasis shifted from fiscal policy to monetary policy and from the maintenance of full employment to the goal of price stability."

Heller's depiction of policy-advising as *education* was thus underpinned by his confidence that he was disseminating "correct" economic analysis. To what extent his practice in fact can be described by historians as rhetoric or persuasion is thus a matter of debate. Those terms are often negatively connoted. Romani (2018, 14), for instance, argues that the new economist' attitude was one of "apostolic zeal, overconfidence and insufficient tolerance of rival approaches which suited more an ethical creed than a scientific theory… "belief in the neutrality of their policy theory, coupled with their passion for the public good." Yet, as Deidre McCloskey (1994, 17) argues, "there is nothing shameful in this logic and fact of scientific rhetoric."[22] Her goal was to craft a theory of scientific communication for economics richer than the "sender-to-receiver" one, by taking into account the fact that figures of speech and choices of metaphor matter. Heller himself (1967, 20-28) indeed believed that, beyond education, the political economist should also be involved in "adaptation and translation," which he described as "tak[ing] the highly refined and purified concepts of economics and to convert them into workable and digestible form for service." He was explicit that his team had to devote time not only to develop what was "economically workable," but also what was "politically marketable" (Heller, 1967, 27). Okun (1969, 20) was equally sensitive to the importance of blending analysis and "salesmanship," and sensed Heller excelled at it:

> It was that that put all the emphasis on educating the President, the Congress, the public, making the case publicly--you know, really improving the packaging, the labeling, the palatability of the medicine rather than improving the prescription at that time . Obviously, we did a lot of economic analysis … But I think still you'd find that the largest emphasis of the Council's activity was on the salesmanship of a product rather than on

[22] As Heller's endorsement of the normative aspect of policy-advising shows, the new economists did not believe their theory was "neutral." Rather, they thought it was the right means to promote the ends put forth by the Employment Act, one consistent with their emphasis on unemployment rather than price stability or balanced budget.

> the development of a superior product, because that was what the real need was. And I think it's fortunate historically that Walter's personality and talents fitted in immensely well for that. He's a great publicist; he's a great salesman.

It may not, in the end, make sense to try to disentangle the scientific, the education and the persuasion aspects of economic policy-advising. There are not separate layers, but flavours of the same practice.

4. Conclusion: Questions on Economists and Public Reason

This account of how Heller persuaded Kennedy to implement a tax cut raises highlights several characteristics of the interactions of economists with public reason. First, it challenges the notion of a pipeline that runs from science to expertise and policy-making. The tax cut case shows that knowledge produced in the academia—whether cycles are demand or supply driven and how to offset them—are put to work in the policy arena, but also, that questions emerging from the latter shape economists' work and interest. The "output gap" was Heller's subjective interpretation of the economic situation *before* it was measured by Okun and became a cornerstone of the Keynesian synthesis. Okun's estimation of the employment-growth relationship therefore crucially relied on a collective subjective judgment, that the optimal rate of unemployment was 4%.

Second, it challenges economists' widespread belief that a professional "consensus" is a precondition for their expertise to be successful.[23] The notion that sound science is reflected in consensus has even been built into the legal system. The 1993 US *Daubert Decision*, for instance, stipulates that an evidence used in the courtroom has to go through a peer review process, must display a conventional level of statistical significance, and must be "consensual" within the scientific community it originates from (see Chassonery-Zaïgouche, 2016). While Heller believed the rising prestige of the political economist was tied to some disciplinary convergence, his practice largely consisted in defusing opposition and actively *building* a consensus rather than publicizing one. Also, the existing consensus was engineered as much by the changes in the legal framework, in particular the 1946 Employment Act which set the goals for economic intervention, as by theoretical unification.

[23] Such belief is seen in the advice offered by Benassy Quéré, Blanchard and Tirole (2017, 11) to fix the tensed relationships between French economists and policy-makers: they should "showcase consensus," as American economists do. They thus suggest to "establish a panel of economic experts who are questioned each month on a practical question involving economics or economic policy." What they seek to emulate here is the IGM Economic Experts Panel.

Finally, it shows how "personalized" Heller's practice, as well as his vision of policy-advising was. Though in the Presidential Address he gave to the *American Economic Association* in 1974, he emphasized the strengths of the *tools* developed by postwar economists, he never lost sight that these tools were wielded by persons with specific views. For all its bureaucratic apparatus, economic policies were selected by presidents, and it was the president of the United-States economists needed to educate and persuade, for instance through personalized memos.[24] The completion of the Keynesian Revolution had "put the political economist at the President's elbow," he wrote, adding that "given the uses of political economy as a source of effective Presidential power; given the compatibility, in this context, of power with freedom; and given the statutory responsibility for maintaining prosperity in an economy that, by its nature, cannot be self regulating, one finds hard to imagine a future President spurning professional economic advice and playing a passive voice" (1996, 14-15). Even as the policy consensus he had advertised in the 1960s had evidently crumbled in the 1980s, his lectures retained a focus on Reaganomics or "Reaganology," one architected by his "supply-siders" advisers: "the Super-supply siders who sold Reagan a bill of goods on the basis of flimsy theory and evidence had two main points."[25]

As a result, Heller's influence on American policy was not just one of concepts and tools (like the "output gap"), it was one of substance (which policy to implement). This conclusion contrasts with the consensus that has developed among historians and sociologists in recent years, one that emphasizes that economists' influence was indirect and channeled through the tools they developed. Elisabeth Berman and Dan Hirschman 2014 survey's conclusion is that economists contributed to the "economicization" of public policy mainly through shaping the data that influenced policy decisions—GDP, CPI indexes, unemployment rate—, the range of questions which could be asked—increasingly focused on efficiency—, and the socioeconomic tools to

[24] In his interview with Crichton (1987), Heller emphasized that he developed a distinctive "staccato style" for Johnson, one tailored to his observation that Johnson "had a great I.Q., but he didn't want to go into things in the same depth that Kennedy did."

[25] Econ 1001 lecture notes for November 29, 1983 folder "Fall 1983," and for 3/8/83 folder "Winter 1983" folder box 1, Walter Heller Papers, University of Minnesota. Heller's Econ101 notes, as well as his public lectures, were ripe with sentences like « which, in turns, traces considerably to Carter's decontrol of oil prices, with Reagan just speeding up the last installment of that decontrol» (lecture notes for November 15, 1983) or « covered the Nixon pump up of the economy behind the facade of wage-price controls and the failure of Carter to recognize the excess demand that was building up and take action» (notes for February 28, 1983, folder « Winter 1984 »).

implement and evaluate policies—from cost-benefit analysis to auctions and scoring techniques.

Since the Heller case alone does not allow any generalization, one can only speculate about the gap between the rich and colorful cast of scholar and experts featured in histories of the 1960s US presidencies and the anonymous set of economic tools laying at the core of the histories of the next decades. One possible explanation is that, as economic statistics, quantifications and tools have become more and more influential under new policy-making and public management regimes, economists have become less so. Heller was successful in altering tax policy because he had a clear vision of what the policy decision-chain looked liked, and he was willing to take action at every stage: convincing the president, the quadriad, the Congress, the public. One is therefore left to wonder whether economists have lost the ability to influence these different stakeholders, or whether the decision chain has grown too complex for them to do so, and what exactly is economists' agency and control over the use of the tools they created, be it cost-benefit analysis, scores, auctions, or else. Yet this case study might also point to the benefits of combining tool-based and actors' history, even in those highly technical areas such as monetary or financial regulations: after all, the psychology, rhetoric, style and beliefs of central bank presidents have never been more scrutinized.

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A Night Train in Broad Daylight: Changing Economic Expertise at the Dutch Central Planning Bureau 1945–1977

Tom Kayzel*

The Dutch Central Planning Bureau (CPB) is the most prominent scientific advisory body of the Dutch government on economic issues. By providing a macroeconomic framework the CPB plays an important role in the preparation and coordination of social and economic policy. With the figures and forecasts it offers to national media and politicians, the CPB is also an influential actor in public debates. In both instances, the expertise that the bureau offers is strongly based on the macroeconomic models it employs. By discussing two periods in the history of the CPB, this article will investigate how the CPB gained this important role in Dutch politics and what the relation is between its modelling practices and economic expertise. The first period deals with the CPB's initial attempts of gaining a foothold in policymaking circles from 1945 to 1955. The second period concerns the CPB's interventions in public debates on unemployment and the growth of the public sector in the 1970s. Making use of two theoretical notions from sociology, *policy device* and *public interventions*, I will argue that the introduction of new macroeconomic models was crucial to the impact of the CPB's interventions in both periods. Furthermore, I will argue that by targeting a broader audience in the 1970s, the CPB started to shift the mode of their expertise, from a facilitating role towards a watchdog role.

Keywords: Tinbergen (Jan), expertise, economic policy, economic planning, public economics, public debate

Un train de nuit en plein jour : l'évolution de l'expertise économique au Bureau central néerlandais de planification 1945-1977

Le Bureau central néerlandais de planification (CPB) est l'organe consultatif scientifique le plus important du gouvernement néerlandais sur les questions économiques. En fournissant un cadre macroéconomique, le CPB joue un rôle important dans la préparation et la coordination de la politique sociale et économique. Par les chiffres et les prévisions qu'il offre

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aux médias nationaux et aux hommes politiques, le CPB est également un acteur influent dans les débats publics. Dans les deux cas, l'expertise qu'offre le Bureau est fortement fondée sur les modèles macroéconomiques qu'il utilise. En examinant deux périodes de l'histoire du CPB, cet article examine comment le CPB a acquis ce rôle important dans la politique néerlandaise et quelle est la relation entre ses pratiques de modélisation et son expertise économique. La première période porte sur les premières tentatives du CPB de prendre pied dans les cercles politiques de 1945 à 1955. La deuxième période concerne les interventions du CPB dans les débats publics sur le chômage et la croissance du secteur public dans les années 1970. En utilisant deux notions théoriques issues de la sociologie, à savoir le dispositif politique et les interventions publiques, je soutiendrai que l'introduction de nouveaux modèles macroéconomiques a été cruciale pour l'impact des interventions du CPB dans les deux périodes. De plus, je soutiendrai qu'en ciblant un public plus large dans les années 1970, le CPB a commencé à changer le mode de son expertise, passant d'un rôle de facilitateur à un rôle de chien de garde.

Mots-clés : Tinbergen (Jan), expertise, politique économique, planification économique, économie publique, débat public

JEL : B20, B22, A11, A14, H10, P11

No other scientific advisory body in the Netherlands holds such sway over politics like the economic experts of the Central Planning Bureau (*Centraal Planbureau*, CPB).[1] Deeply embedded in the state apparatus, the forecasts and assessments of the CPB play an instrumental role in the development of new social and economic policies. Researching the influence of economists on government policy in 1984, sociologist Marie-Louise Bemelmans-Videc concluded on the role of the CPB that: "it is where the most important research takes place, and where, and above all, the framework is developed which provides the foundation of policies with a systematic character" (Bemelmans-Videc, 1984, 406).[2]

Outside of policymaking circles, the bureau is an important player in the public debate: providing figures for politicians and journalists; putting issues on the agenda or intervening in discussions through publicly available reports on a variety of subjects, from state pensions

[1] In de 1990s the CPB changed its official English name into *Bureau for Economic Policy Analysis* since the notion of 'planning' in the name of the bureau caused some confusion confusion with regard to the task of CPB outside of the Netherlands. In Dutch the name 'Centraal Planbureau' is still used. Because I want to make the connection of the bureau's origins with ideas on economic planning explicit, I stick to the more literal translation of the name. For a critical account of the large influence of the CPB on Dutch politics see Becker and Hendriks (2008), Hendriks (2010, chap. 5), Klamer and Teule (2014).

[2] All translations of sources in the Dutch language are mine.

to educational policy. Justifying its role in the public debate the bureau has described itself as the gatekeeper of realism, economic feasibility, and sound facts within the public debate; making sure that false promises, misleading rhetoric and falsehoods regarding the economy do not enter the public domain. Or, as former director of the CPB, Gerrit Zalm, formulated this idea in more contemporary buzzwords: "The election of a Donald Trump-type for public office, or a Brexit, could never have happened in the Netherlands. We have institutions like the CPB that can single out and counter the fake news in our political debate."[3]

In the performance of both roles the application of large scale macroeconomic models is central to the bureau's *modus operandi*. It is a model that produces the policy scenarios on which basis policymakers design their measures. And it is the models that allow for strategic oversight of policies, ensuring their systematic character. Likewise in the presentation of their reports the CPB is keen to stress their figures are model-based, sometimes even going so far as presenting the model as a neutral arbiter on economic issues (Boumans, 1990, 51). Analysing the historical development of the relation between macroeconomic modelling and the mode of expertise of the bureau, this article investigates how the CPB came to plays such a prominent role in Dutch politics, and what this role precisely entails.

The CPB's role in policymaking and its role in the public debates did not emerge during the same period. In the 1950s the bureau started to assist public officials in the structuring of policymaking procedures, becoming integrated into the larger network of governmental bodies and advisory councils in the process. It was only in the 1970s that the CPB would fully take on a role in the public debate, adopting more coordinated strategies to get its messages across in national media. In both cases, the introduction of macroeconomic models proved to be crucial to the success of the CPB's interventions in the political sphere. In the first case it was crucial in convincing policymakers to collaborate with the CPB, while in the second, for getting across its message in the public discussion. In the first section of this article, I will discuss the CPB interaction with policymakers in the 1950s; in the second, I will delve deeper into the role the bureau played in discussions on economic politics in the 1970s. As I hope to show, the adoption of a new role did not only entail a shift towards a new audience, but also a shift in the form of economic expertise it provided: going from a facilitating role to policymakers in the 1950s, towards a role of a gatekeeper or watchdog over the public debate.

By discussing the role of models in relation to the influence of the CPB on Dutch politics, I do not only want to focus on the political

[3] In a public interview at the book presentation of Wimar Bolhuis' *De rekenmeesters van de Politiek* (Bolhuis, 2017) on January, 24 2017.

context in which the bureau developed its mode of expertise, but also on the modelling processes itself. In that manner I will explore how these models are in part responses to political needs and how it is partly the design of the models themselves that determines their success in the political sphere. Doing so, I will draw theoretically from two bodies of literature. First from recent scholarship from the History of Economic Thought that make use of practice-oriented accounts and assigns a central role to the application of economics (e.g. Backhouse and Cherrier, 2017; Stapleford, 2017; Halsmayer, 2018). More specifically, I am conceptualising the model as an *artefact* and focus on how it travels from a milieu of academic economics into the sphere of politics. This process entails, as Verena Halsmayer puts it, following "all the shifts and changes in [the model's] meanings, forms, and interpretations. … Even if a model keeps its shape, it still changes when we engage with the narrative practices that accompany it." (Halsmayer, 2018, 632) This also requires attention to the "spaces of speech" and the "inscription devices" that allow the model to travel and which cause shifts in meaning, form and interpretation. In order to better understand the modelling processes of the CPB, I will draw on archive material from the archives of the bureau itself. To see what narratives are constructed around the model, I will furthermore analyse the reports and news outlets containing the figures of the models under discussion.

The second theoretical source is literature from sociology and Science and Technology Studies. More specific, I will adopt two sociological notions to structure the history of the CPB in this article. In the first section, I will analyse the role of the macroeconomic model in terms of what Daniel Hirschman and Elizabeth Popp Berman call a *policy device* (Hirschman and Berman, 2014).[4] Using this notion, the economic model can be seen as a heterogeneous assemblage that enables policymakers to *act on* a domain called 'the economy'. Such assemblages, Hirschman and Berman write, "bring together people, knowledge, and material things in ways that turn the messy, endlessly complex world into a formal, calculative order that can be used productively" (Hirschman and Berman, 2014, 796). To formulate it differently, policy devices are objects that provide frames in which economic issues can be identified, as well as scripts that allow for adequate solutions to those issues (Callon, 1998).[5] The use of these frames and scripts create what Alain Desrosières has called a *cognitive space*, a domain in which economic entities gain coherence and stability, enabling thinking and reasoning about them, and wherein specific types of thinking and reasoning gain legitimacy (Desrosières, 1992).

[4] The notion is a riff on the idea of *market devices* introduced by Fabian Muniesa, Yuval Milo, and Michel Callon (2007).
[5] The idea of frames and scripts is derived from the works of Erving Goffman (1974).

Subsequently, for my analysis of the CPB's role as an economic authority in public debates in the second section, I will utilise the notion of *public interventions* as introduced by Gil Eyal and Larissa Buchholz (Eyal and Buchholz, 2010). The notion of public interventions allows for the description of diverse ways in which experts have an impact on politics, without focussing solely on public debates and the media in which these debates take place. Instead, the focus is placed on the role of epistemic communities, devices, figures and infrastructures that make public interventions by experts possible. Moreover, this framework allows for an analysis of what makes an intervention a success or not. Next to the already identified archival sources and publications, I will base the analysis of the CPB's public interventions on articles in newspapers, magazines and economics journals on relevant economic issues in the 1970s. It should, furthermore, be noted that the two central notions, policy device and public intervention, are not mutually exclusive, but partly overlap and can be, as I hope to show, used as an extension of each other.

Lastly, there already exists extensive body of literature on the expertise of the CPB and its models, especially in Dutch. Moreover, there are some historical accounts that also take similar practice-based accounts of models as a starting point as this article does, although most of them do not go beyond the history of the CPB in the 1950s. For example: Adrienne van den Bogaard takes an Actor Network Theory inspired approach in order to explain how the model-based expertise emerged in the Netherlands; Arnold Wilts discusses the emergence of economic expertise in the Netherlands in relation to the formation of economics as a discipline, making use of Maarten Hajer's notion of *discourse coalition*; and Harro Maas discusses the turn to mathematical modelling techniques in the CPB and the establishment of a new form of economic expertise (Van den Bogaard, 1997; Wilts, 1997, Maas, 2010). The success of the macroeconomic model as a tool for policy is also discussed in a non-historical way by Mary Morgan and Frank den Butter; Annick de Vries, Willem Halffman and Rob Hoppe, who all place emphasis on the *boundary work* that establish a fruitful interaction between economist and policymaker (Den Butter and Morgan, 1998; De Vries, Halffman, and Hoppe, 2010). Building on above mentioned studies, this article attempt to extend a practice-oriented account of the history of the CPB into the 1970s. Furthermore, by making use of the notions of policy device and public interventions, I will explore, to a greater degree than these precedents, how the models of the CPB shaped the cognitive space in which reasoning about the economy took place, both by policymakers and in public discussions.

1. The Emergence of Model-Based Expertise, 1945-1955

Only three months after the liberation of the Netherlands in 1945, the newly appointed minister of Economic Affairs, Hein Vos, instructed his fellow Labour-Party member Jan Tinbergen to start the organisation of a new institute for scientific expertise on economic issues that would carry the name of the Central Planning Bureau. The founding of the CPB was part of the larger effort by Vos and prime minister Wim Schermerhorn to "order the economy". The task of the newly founded bureau in ordering the economy was formulated in the bill *Preparations for the establishments of a National Welfare Plan* from 1946 as follows: "The CPB's task is to design a National Welfare Plan, which will be regularly determined for the benefit of the coordination of governmental economic, social and financial policies."[6] These Welfare Plans became known as Central Economic Plans, published annually by the CPB. Estimating economic development, including the economy's needs and preferences, these plans were intended as the basis upon which economic issues could be discussed and policies could be designed and implemented. For Tinbergen public discussion of economic issues was of great importance for the democratic legitimacy of economic policies, and the availability of reliable numbers crucial for the "rationality" of those discussions (CPB, 1951, 6). In addition to its tasks of monitoring and informing, the Plans also contained policy recommendations. Looking back at the end of his life, Tinbergen formulated this last task as follows: "to scientifically determine [the totality of] preference within society. And on the basis of those preferences, recommending measures that would result in the highest welfare" (quoted in Passenier, 1994, 40).

In order to perform those three tasks, the CPB used a national accounting-like framework to draft their Central Economic Plans, the so-called national budgets. The mutation of each budget item was determined on the basis of time-series data. And these mutations were, in turn, used to produce forecasts of the Dutch economy. In the booklet that would form the actual Central Economic Plan, these national budgets were presented in tables combining the preliminary data of the present year, with forecasts of the following year (see figure 1 for an example). The forecast for the next year given in the tables was actually the forecast of the state of the economy based on the adaptation of all the CPB's recommendations by the government. In this manner the bureau incorporated its recommended measures into

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[6] 'Voorbereiding ter vaststelling van een Nationaal Welvaartsplan', in Handelingen der Voorloopige Staten-Generaal (1945-1946) bijlage 180 1-2 artikel 3.

its forecasts, making forecast and recommendation less distinguishable.

Figure 1. 'Table IV.i. Abbreviated Confrontation between Means and Requirements'

Tabel IV. 1. VERKORTE CONFRONTATIE VAN MIDDELEN EN BEHOEFTEN 1947 [1]), 1948 EN PLANCIJFERS 1949 (in mld gld)

Middelen	1947	1948	1949	Behoeften	1947	1948	1949
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Nationaal product				Gezinnen, consumptie .	9,32	10,17	10,30
(tegen factorkosten):				Bedrijven, netto-investe-			
van bedrijven[2]) . . .	9,70	10,85	11,19	ringen	1,81	2,04	2,23
van de overheid . .	1,58	1,43	1,42	Overheid:			
Kostprijsverhogende be-				netto materiële con-			
lastingen minus sub-				sumptie	0,82	0,80	0,81
sidies	0,67	1,22	1,69	overige consumptie .	1,53	1,43	1,42
Tekort	1,63	1,01	0,61	netto-investeringen .	0,05	0,07	0,15
Totaal	13,58	14,51	14,91	Totaal	13,58	14,51	14,91

[1]) Voor de verschillen met de cijfers van het C.B.S. zie bijlage II.
[2]) Incl. netto-inkomsten uit het buitenland.

An example of an earlier method of presenting the forecasts of the Dutch economy in the Central Economic Plans. The 'Plan-figures' (*plancijfers*) contain a forecast of the economy in a scenario where the government was to adopt all the measures that the CPB recommended. These figures are presented in the columns with the heading '1949' (4 and 8). No other forecasts were provided in the table. From *Centraal Economisch Plan 1949* (The Hague: Staatsdrukkerij Uitgeverijbedrijf, 1949, 20)

The plans were, however, not a success. Ministers were inclined to use the data they received from their ministry, and policymakers were not keen on giving up their data producing activities. Moreover, ministers tended to regard the CPB's recommendations as unwanted interferences in their own policies (Passenier, 1994, 81-99; Camphuis, 2009, 63-65; Don, 2019, 63-65). To make matters worse, the cabinet did not want to publish the Central Economic Plans, as they considered the data in those plans to be politically charged, thus making public discussion on the basis of the figures impossible (Maas, 1986). It was clear that the figures of the CPB were still very much contested, frustrating Tinbergen's ideal of informed public discourse on economic issues. Telling in this case was the decision made by minister of economic affairs Jan van den Brink not to involve the CPB in the preparation and implementation of his industry investment agenda, the so-called Industrialisation memorandum (*Industrialisatienota*), one of the most prominent economic policies of the 1950s (De Hen, 1980, 267-290; De Liagre Böhl, Nekkers, and Slot, 1981, 218-236).

Generally speaking, the political climate was shifting at the end of the 40s. With the immediate economic dangers of the aftermath of

World War Two averted, and the Dutch economy slowly showing some recovery, a strong call for ending state control on the economy became imminent (De Liagre Böhl, Nekkers, and Slot, 1981; Mellink, 2017). After the 1946 elections, Vos lost his position as minister of economic affairs. The new minister, Gerardus Huysmans and his successor Jan van den Brink, both members of the Roman-Catholic People's Party, opted for a different manner of organising the economy. They installed a law on organised businesses and labour organisations in which the coordination of the economy should commence through the deliberation of representatives of both businesses and unions. The central platform for this deliberation was called the Social and Economic Council (*Sociaal-Economische Raad*).[7]

With the founding of the Social and Economic Council in 1950 the Dutch government adopted a series of economic measures that would determine the social economic politics for the coming decade. With the negative impact of the Korean War on the Dutch economy in 1950, the government deemed it necessary to introduce wage-moderation, a measure soon approved by the Social Economic Council, as well as a less rigid system for price-control. Additionally, the Council stressed the importance of full employment. On top of these measures, the government added another three spearheads of economic policy: keeping equilibrium in the balance of payments, keeping consumption relatively low, and introducing an industrial investment agenda. Except perhaps for the measure of wage-moderation,[8] none of the policies were CPB recommendations (Van Zanden, 1998, 120-130).

1.1. Seeing the Macroeconomy, Towards a Model-Based Expertise

With the economic politics of the government set in stone, a strong advisory role of the CPB in terms of policy recommendations seemed no longer viable. Yet, in this new institutional set-up, the bureau was quick in adopting new services to provide, while it succeeded in establishing its figures as authoritative and neutral. Both feats were accomplished by developing macroeconomic models and placing them at the centre of the expertise the CPB was offering. As it turned out, the Social and Economic Council and a newly founded committee for high-level public officials, the Central Economic Committee (*Centraal Economische Commissie*), formed the perfect audience for these models.

Given Tinbergen's reputation as a pioneer in macroeconomic modelling, modelling beyond the simple relations in the national

[7] For more on the founding of the Social Economic Council, see: Camphuis (2009, chap. 1); Wilts (1997, 117-119).

[8] According to historian Peter van Griensven Tinbergen played a vital role in convincing the government in adapting wage moderation policies, see Van Griensven (1993).

budget was remarkably absent in the early years of the CPB. Indeed, scientific employees of the bureau were quite vocal about their hesitance of employing modelling for the drafting of the Central Economic Plan. For example, in a research memorandum from 1948 titled *On the Use of Macroeconomic Calculation for Forecasting,* CPB employee L. Lijklema noted that the use of models had serious drawbacks in "the supposed linear relations" and "the assumption of an economic structure".[9] The measured correlation gave too little evidence for the existence of these relations and structures. And such relations were, according to the author, heavily dependent on "psychological factors, which cannot be put into a mathematical straitjacket". In his critique, Lijklema explicitly references the Dutch economist Jan Goudriaan who had already criticised Tinbergen in 1936 when the latter had presented his first macroeconomic model of the Dutch economy to the Society for Economics and Statistics. Goudriaan unfavourably compared this model to a night train: just as in a night train the traveller cannot see the route the train takes, the model produced results of which the user had no idea how the model had derived them.[10] This critique was approvingly echoed by Lijklema.

It were specific policy concerns of the Social and Economic Council that pushed the CPB towards more model-based work. From 1949 to 1951 there was much talk among political organisations of reorganising the social security system and introducing a system of social insurances (Van Griensven, 1997). The Social Economic Council tasked the CPB with providing an estimate of what the economic impact of such policies could be. It was for these estimates that the CPB decided to employ a macroeconomic model for the first time. The choice was very much prompted by the requests themselves, as the aim of the forecasts was not, like previous CPB policy advice, a correction of the course of the economy, but rather a reaction of the existing system on the introduction of new elements. For such a purpose it was more convenient to work with a model that provided a more or less comprehensive set of relations within the economy, as the influence of the policies on each aspect of the economy could not be calculated independently. Macroeconomic models thus provided the ultimate tool for seeing the economy as an interconnected system, and allowed for a more precise calculation of the effect of government policies. As

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[9] Lijklema, 'Het gebruik van macro-economische berekeningen voor de prognose', September, 1948, found in National Archive, The Hague, Ministry of Economic Affairs: Central Planning Bureau, entrance number 2.06.093, inventory number. 319. Henceforth abbreviated as: NL-HaNA, CPB, 2.06.093.

[10] VSS (1936, 67); Harro Maas notices that Goudriaan's critique echoes that "of his old mathematics teacher in Delft, who compared systems of algebraic equations with the 'night train' as opposed to the 'day train' of geometry." (Maas, 2014, 151).

Tinbergen put it in the introduction of the Central Economic Plan of 1951:

> the usefulness of these figures is … that an expression is given to the … interdependence in the national economy [volkshuishouding]. After all, it is unthinkable that a good understanding of government policy can be obtained if one is not constantly aware of this interdependence (CPB, 1951, 7).

Using small macroeconomic models as policy devices, the policymaker and politician would thus be able to gain "awareness" of the interdependences within the economy which was crucial to adequately judge economic policy. Speaking with Mary Morgan, it can similarly be said that using the tools of the CPB, the policymakers and politicians were able to visualise the macroeconomy (Morgan, 2011). Policymakers, in particular, started to appreciate the figures of the bureau more and more, precisely because it allowed to view the economy as a cohesive whole and in a systematic way. When discussing the influence of economists on government policy, Bemelmans-Videc, concluded that one of the main CPB contributions to policymaking was precisely this. One of her interview subjects put it in the following way: "Relations… is what forms the background, a frame; gradually it becomes a piece of experience. … With the help of techniques and models you could indicate what the development is going to be, where the bottlenecks are" (Bemelmans-Videc, 1984, 376). The models of the CPB thus created a cognitive space in which economic issues could be made visible, became objects of discussion, and in which solutions to these issues could be formulated.

Given that these models were not only intended for economic experts, but also for policymakers and politicians, the CPB attempted to make the use of them as simple and easy as possible. As Tinbergen stated: "the models must be accessible not only to the experts. But also … to those for whom the experts work: members of the executives and parliaments of the countries concerned" (Tinbergen in the introduction of Van Duijn, 1952, 5). In this sense, Tinbergen continued his vision for a broad political function for the CPB, in which economic expertise should first and foremost facilitate a rational public discussion, and the activities of the bureau should be as transparent as possible. It was also a way to circumvent the critique levelled at macroeconomic modelling by Goudriaan. Moreover, since the models were to be kept simple, models had to be issue specific. Which part of economic reality had to be simplified and how depended on the purpose of the model, and on the specific issue it had to address. Such considerations were, according to Tinbergen, the art of modelling.

1.2. Uncertainty, Decision Models and Policy Scenarios

Another opportunity for the CPB to take on a new role appeared within the newly found Central Economic Committee. This committee was composed of high-ranking public officials and tasked with the preparation of policies and discussion papers for the Council of Economic Affairs (*Raad voor Economische Aangelegenheden*), the latter being a sub-meeting of the cabinet meetings, attended by the ministers of finance, social affairs and economic affairs. The Central Economic Committee was initially founded in order to facilitate increased coordination between the ministries of finance, economic affairs and social affairs with the purpose of counter the consequences of the before-mentioned Korea Crisis (Van Griensven, 1993). It would continue this coordination between the ministries afterwards. Apart from the Secretary-Generals and other high officials from those ministries, the director of the Dutch Central Bank and the CPB were also members of the committee. The role that the adopted within the working group was determined more or less by the nature of the crisis the committee was to address initially. The development of the Korea Crisis was deemed very uncertain, and this was the reason that the bureau decided to carry out multiple forecasts of the Dutch economy—from a very grim outlook to an optimistic one allowing the committee to work out multiple possible policy scenarios. Although the single figures the CPB had been using up to that point were distrusted by the public officials, the multiple forecasts were received positively and contributed greatly to the success of the measures proposed by the committee. This success, as well as the agreeable cooperation between policymakers and the CPB within the committee, inspired the bureau to adopt a new framework for their Central Economic Plans (Maas, 1986; Don, 2019; Van den Bogaard, 1997, 180-186).

The new format was also inspired by theoretical developments within the bureau itself. In 1951, an internal memorandum by Tinbergen was circulated in which working with forecast scenarios was further theorised in a formal economic manner.[11] He based his approach on Ragnar Frisch's work on managing the economy through calculating preferences and decision making, adopting his notion of a *decision model*. The main issues that Frisch addressed with his decision models related to how the economy could be managed in a more democratic fashion. To that end, Frisch's model incorporated the preferences of policymakers, producing multiple forecast outcomes that could, in theory, be discussed in a public debate. Similar to Tinbergen, Frisch was here concerned with the public nature of economic expertise,

[11] Tinbergen, 'Welvaartmaximalisatie en decisiemodellen', 3 June 1951, NL-HaNA, CPB, 2.06.093, inv.nr. 319.

considering democratic support vital to the success of economic policy (see for example Frisch, 1962).[12]

The main question that occupied Tinbergen in his research memorandum was how a government would decide what policies to use (in his terminology *instruments*) to what ends (*goals*, as Tinbergen called them). Although it was clearly Tinbergen's aim to give policymakers and politicians freedom in choosing the goals and the instruments, he did develop a formal model in order to achieve a certain efficiency in the instruments. Tinbergen considered it the democratic responsibility of politicians to ensure the effectiveness of their policies; a responsibility the CPB was eager to assist in. The goals then should be formulated by the government—more specifically the cabinet—in terms of quantitative variables that are part of the model provided by the economist. The instruments are also variables of the same system. The right instruments that should be used as a means of achieving those goals can subsequently be calculated on the basis of four factors: (1) the preference of the cabinet for certain instruments; (2) available data on the variables; (3) boundary conditions (also expressed in equations, for example the balance of payments); (4) 'outside' variables (also confusingly called 'irrelevant variables'), such as world trade and inflation. The model then rendered multiple suitable instruments or combinations of instruments out of which the cabinet could then choose. This model would appear a year later in a more extended version in his *On the Theory of Economic Policy* (1952).

Perhaps the method of choosing aims and instruments in the decision model was not the most relevant for Dutch policy making since, as described above, most of the economic policies were already fixed. More applicable was the method of finding a way to combine the uncertainty inherent in the use of specific instruments with the preferences of policymakers, which provided a way to order the policy options, from more to less desirable. The uncertainty of an instrument depended on the availability of data on specific relations and 'outside' variables. Policy scenarios that relied on more uncertain instruments were deemed less desirable than more certain variants—Tinbergen even considered such ordering "objective", in contrast to the "subjective" preferences of the policymakers (Van den Bogaard, 1997, 180-186). The decision model thus formed a policy device which created a framework in which the drafting of policies consisted of ordering and evaluating alternatives, in which each policy should be judged by its efficiency and probability. The decision model as a poli-

[12] Work on the development of decision models within the CPB was also carried out by Henri Theil, a protégée of Tinbergen who was also working at the CPB at that time. Theil's work might be just as important to the influence of the CPB on policymakers as Tinbergen's contributions were. For the sake of brevity, I will focus on Tinbergen in what follows, but for more information see Theil (1958) and Don (2004).

cy device also provided a method of aggregating efficiency with uncertainty, thus becoming the ultimate measuring stick for policies.

Using decision models yielded multiple forecasts similar to the ones the CPB had previously delivered in the Central Economic Committee during the Korea Crisis. Apart from the method of combining preference and uncertainty factors in one forecast, the presentation of the policy scenarios in the Central Economic Plans was also crucial to its success within policymaking circles. Instead of presenting the present state and one forecast within one table, as the bureau had previously done, the plans now contained multiple policy scenarios (three to ten alternatives) and their estimated effects within one table (see figure 2 for an example). The overview of the present state was removed and replaced with a forecast containing a scenario of the Dutch economy in which no new policies would be adopted. With all scenarios in one table, it was easy for the policymakers to compare the alternatives and to choose their most preferred combination of policy instruments. Over time these tables became such a success that policymakers started to refer to them as the "railway timetables" ("spoorboekjes") of the CPB. Just like a train passenger, the policymakers would choose their destination (the goal variable) and then look at the timetable in order to find out which possible trains (the instruments) they could take to get there, and choose their preferred route (Den Butter, 2011). As one policymaker would remark years later when working with the railway tables became an established practice: "It makes … the discussion much easier … it's all neat and tidy and we all know what we are talking about and what we should think about when we have to take or discuss certain measures … makes the discussion much clearer" (Cited in Bemelmans-Videc, 1984, 482).

Since the principles of the economic policies were already in place, the main task of policymakers was to adjust those policies with regard to new economic developments, e.g. to increase the amount of money spent on a policy, or to prioritise specific policies over others. For example, one of the principles of social-economic policy was full employment, and in order to combat a rising unemployment rate when it occurred, policymakers would usually adjust government expenditure in order to boost the aggregated demand of the Dutch economy, resulting in more production and consequently more employment. This economic policy is often called Keynesian demand management (Schmelzer, 2016, 190). The Central Economic Plan in a new style contributed to and reinforced this practice, not only by incorporating the preferences and uncertainty in forecasts which were needed to adjust the policies accordingly, but the detail figures also offered a guideline on how to adjust those policies, i.e. which one should be prioritised or how much money should be spent on them. The tables of the plans thus framed the actions of the policymakers by reducing the options for making new policies into specific scenarios provided by the CPB and turning the process of policymaking into a more ordered affair.

Figure 2. 'Table III.2. Overview of the Principle Outcomes of the Alternatives for 1952'

Tabel III. 2. OVERZICHT VAN DE VOORNAAMSTE UITKOMSTEN DER ALTERNATIEVEN VOOR 1952

Omschrijving	Eenheid	1951	1952, alternatieven:							
			I	II	III	IV	V	VI	VII	VIII
(1)	(2)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(10)	(11)
Veronderstellingen:										
Aantal werklozen	1000 pers.	93	100							
Invoerprijspeil	1951 = 100	100	100				105			
Buitenlands prijspeil van met Nederlandse export concurrerende goederen	1951 = 100	100	100				103			
Autonome uitvoerstijging voor goederen	uitvoer goederen 1951 = 100		5		10		10		15	
Netto investeringen van bedrijven incl. voorraadvorming, (in prijzen van 1951)	mld gld	2,80	2,95	2,65	2,95	2,65	3,25	2,95	3,25	2,95
Uitkomsten:										
Nationaal inkomen tegen factorkosten	mld gld	16,70	17,28	17,16	17,32	17,20	17,75	17,63	17,79	17,67
Uitvoer	,, ,,	10,80	11,81	11,77	12,19	12,15	12,36	12,32	12,74	12,70
Invoer	,, ,,	10,80	11,93	11,71	12,18	11,96	12,59	12,37	12,84	12,62
Saldo betalingsbalans, lopende rekening	,, ,,	—	−0,12	+0,06	+0,01	+0,19	−0,23	−0,05	−0,10	+0,08
Productie per werknemer	1951 = 100	100	105,7	104,3	107,4	105,9	106,7	105,3	108,4	106,9
Reële consumptie	1951 = 100	100	101,8	101,4	102,5	102,1	100,2	99,7	100,8	100,5
Prijsniveau van consumptiegoederen	1951 = 100	100	99,0	99,2	98,1	98,4	102,4	102,7	101,6	101,8

This table is a good example of how the CPB presented their forecasts of policy alternatives within one chart, allowing for easy comparison. The upper half of the table contains the presumptions on the economy and the lower half the outcomes. The roman numerals (I up to VIII) represent the different policy alternatives. From *Centraal Economisch Plan 1952* (The Hague: Staatsdrukkerij Uitgeverijbedrijf, 1952, 32)

This emphasis on scenarios and especially the detailed figures they contained had another effect. As the tables of the Central Economic Plan allowed for comparison of the different scenarios, arguments in favour of this or that scenario came down to having the right number. Reasoning based on the use of figures from the Central Economic Plans started to form a dominant form of reasoning within the Central Economic Committee and the Social and Economic Council. Sometimes differences between these numbers could be very small, which often resulted in bickering over the second decimal. As the former minister of economic affairs, Koos Andriessen, would remark in an interview with Arjo Klamer concerning discussions within the Social Economic Council: "we have the tendency to call upon the authority of the figures if there is a clash of ideas." (Klamer, 1990, 58). Similarly, a respondent in Bemelmans-Videc's study remarks: "The policy requires figures; you can't say: prices will rise between 6 and 12%; that becomes 8 or 9%" (Bemelmans-Videc, 1984, 433). To speak with historian Theodore Porter, this 'culture of quantification' was very much propagated by the use of ever-growing macroeconomic models which were better suited to render more precise predictions (Porter, 1996).[13] As Hirschman and Berman would put it, the economy thus became a "calculative order".

1.3. Large-Scale Macroeconomic Models

With the success of the railway timetables, the CPB started to integrate their model-based advisory task on specific issues, such as unemployment insurance, with their advisory role of providing model-based scenario forecasts. This integration resulted in work on one large-scale model that would generate more precise forecasts and could be applied to multiple issues. The first of model of this kind was published in 1955 as part of the appendix of the 1955 Central Economic Plan (CPB, 1955, 110-119). Working with large models meant a change of practice within the bureau, as well as a change of expertise ideal. Within the bureau, the economic advisory practices started to revolve around the big model, either developing sub-models for specific issues that could be integrated into the larger framework of the model or running specific policy questions through the main model. As former employee Anton Barten would later put it: "The staff became model minded. It also homogenized their vision of the working of the economy" (Barten, 1988, 59). A bigger model also meant a more complex model. The model used for the social policies and decision models from 1952 consisted of ten and twelve equations, the 1955 model already consisted of 27, and quickly grew bigger. This meant that Tinbergen's ideal for developing models intended for use by politicians and policymakers could no longer be adhered to. The models were so complex that only CPB-employees could operate them.

This was not the only development that gradually obscured the activities of the bureau. Even if the decision models were aimed at more democratic engagement with macroeconomic forecasting and helping out in the politician's representative responsibility, the reality was that larger model generated too many policy options to include in the Central Economic Plan. Although the choice of which scenarios to include and which to exclude was dependent on the discussions the CPB had with the Central Economic Committee, choosing options was not a formalised process and often just as well depended on what the bureau's economists thought economically feasible. Moreover, the main discussion partners of the CPB had become the Social and Eco-

[13] Van den Bogaard discusses Porter's seminal work in the context of the history of the CPB. Contra Porter, Van den Bogaard argues that the emergence of economic modelling did not replace an intersubjective trust for an 'objective' trust in numbers, but rather introduced a new type of expert (Van den Bogaard, 1997, 204-208). This however does not change the fact that a culture focused on numbers did arise in Dutch politics in the 1950s.

nomic Council, and the Central Economic Committee. Neither council nor committee was a democratically elected body and consequently the openness and publicity of the CPB's activities were diminishing.

Another effect of the use of large-scale models was a shift in the debates on economic policy and the exclusion of certain topics. With an increasing reliance on models for the debates within the Social Economic Council, the validity of macroeconomic reasoning, as for example countering unemployment through government expenditure, or wage moderation, was no longer questioned. These fundamental questions on what kind of economic policy was desirable, which is what Tinbergen called "qualitative politics", were excluded by the model, focussing instead on the efficiency and uncertainty of these policies, which is what Tinbergen called "quantitative politics" (Tinbergen, 1952, chap. 1). To use a notion by the philosopher Bruno Latour, the model *black boxed* the more fundamental assumption in the debate on economic issues, that is to say, the matters were settled and disappeared into the background (Latour, 1988); questions on the desirability of the consumption moderation, equilibrium in the balance of payments, or full-employment, were rarely discussed after 1951.

The shift towards a form of expertise based on macroeconomic models came about through the interaction the CPB had with various audiences: most prominently the Social and Economic Council and the Central Economic Committee. Models were meant as tools or, in Hirschman and Berman's term, policy devices. Yet the workings of these devices remained for the most part obscure to its users. This meant that, despite early reservations and initial caution, the CPB's macroeconomic models had become what Goudriaan had criticised Tinbergen for in 1936: a night train. And although the policymakers now had timetables to plan trips, the trains they used were still very much night trains, i.e. the working of the trains were completely obscure for the ones who made us of them. Moreover, the desired interaction of the CPB's with the public debate became less and less pronounced when the bureau started to rely more and more on macroeconomic models.

2. Macroeconomic Models and the National Media: Unemployment Debates in the 1970s

With the start of the 1960s, the core economic policies of the Netherlands began to change. Wage moderation gradually ended, the Netherlands was experiencing an economic boom and the social security system was expanded. The constellation of councils, committees and bureaus involved in the preparation of economic policies, however, remained largely in place. The Social and Economic Council was still the main platform for the discussion of economic issues, and the Central Economic Committee the most important organisation for coordination between the ministries involved with social-economic policy. The CPB likewise continued to offer its model-based expertise to both institutes. Yet under the pressure of a new economic recession and the emergence of new ideas on the economy, this constellation was to shift in the 1970s. The relevance of the Social and Economic Council diminished and the CPB broadened its target-audience to include not only policymakers and politicians, but also the general public. The latter indicated a change in the form of expertise that the CPB provided: it was no longer just the provider of policy alternatives and assessor of scenarios, but also the "watchdog" of the public debate, determining what was feasible and what was not.

In writings of the CPB, the general public was featured previously as an ideal audience for economic expertise, rather than an actual public they had a concrete relation with. In order to analyse further how this relation with a concrete general public was established, I will apply the notion of *public intervention* as introduced by Gil Eyal and Larissa Buchholz, and later expanded in an article by Eyal and Moran Levy (Eyal and Buchholz, 2010; Eyal and Levy, 2013).[14] Building on the work of, amongst others, Latour they argue that the public sphere should not be seen as "an agora populated by reasonable citizens" but rather as constructed through "techniques, instruments, demonstrations, figures, charts and numbers" (Eyal and Levy, 2013, 227-228). Instead of conceiving the public sphere as one unified space, Eyal and Levy argue that this sphere consists of multiple *channels*, or as Latour puts it: "the frail conduits through which truths and proofs are allowed to enter the sphere of politics" (Latour, 2005, 9). Techniques, instruments, demonstrations, etc. are then materials which are used to constitute a culture or institute in which these truths and proofs can circulate. Truths and proofs that successfully enter the sphere of politics can then be considered a public intervention. In this section, I argue that in the debates on unemployment that ensued in the Netherlands in the mid-70s, macroeconomic models can be theorised as a technique that helped to establish multiple channels, allowing for a series of successful public interventions.

2.1. The Growing Public Sector and Unemployment Problems

From the end of the 1960s to the mid-1970s, a group of economists of neoliberal ilk became increasingly vocal, both in the community of academic economics and national media. What brought this group together was a shared group of issues, arguments and images, such as: a collective worry about the expanding state apparatus; similar academic economic arguments about how the growth of the public

[14] As the latter article is specifically concerned with economic expertise I take Eyal and Levy's account as starting point here.

sector relative to the private sector would have detrimental effects on the economy as a whole; and a shared political doom scenario in which the private sector would be swallowed by the state, ending free enterprises for good. In short, they formed what Eyal and Levy, following political scientist Peter Haas, call an *epistemic community*. That is to say, a community created and shaped by shared ideas, instruments, techniques, outlets and meeting places within which knowledge can develop and be circulated. The fostering of such a community is crucial for ideas of that group to compete with other ideas, and to bring those ideas within the political sphere (Eyal and Levy, 2013, 226). Prominent among this epistemic community were professors from Tilburg University, Theo Stevers and Dick Schouten, Floor Hartog from the University of Groningen and to a lesser extent Arnold Heertje from the University of Amsterdam (Lansbergen, 1980, 38-43).[15] Already in 1977, the economist Hans van den Doel noticed that the argument that markets would be more efficient in satisfying individual preference than the government was largely absent from the writings of this group (the writings of Hartog are an exception here). Yet, according to Van den Doel, it was this argument that constituted their underlying world view (Van den Doel, 1979, 60).

A good example of the writings of this group is Stevers' book *Openbare Financiën en Ekonomie* (Public Finance and Economics) from 1971. Stevers argued in an academic style for a technical point in economic policy, namely the restriction or diminishing of the costs of social insurances. According to Stevers, growing social insurances would lead to stabilisation, if not a decrease, in spendable income for workers even with a growth of wages. More government expenditure, including the social insurances, would lead to higher marginal income tax; combined with the ever-increasing demands for higher wages by unions, this would eventually lead to an inflation spiral. Such a situation would only be sustainable if the private investments kept up. But according to Stevers it was precisely this investment rate that was under pressure, as businesses experienced a decrease in the returns of investments (Stevers, 1971, 282-285). Arguments with similar structure can also be found in the writing of Schouten and Heertje for example (Heertje, 1970; Schouten, 1974).[16]

In articles intended for a broader audience, the same common issues and ideas can be found. For instance, in an article for *De Volkskrant* (one of the biggest daily newspapers of the Netherlands) from 1976, Stevers repeats his worries for the disastrous consequences the expansion of the public sector could have in a more urgent tone. The growth of the public sector can only have two outcomes, he ar-

[15] Schouten and Hartog had been working for the CPB in the past, but had long left when they published the after mentioned articles.

[16] The implication of Van der Doel's remark was that this group formed a neoliberal thought collective *incognito*.

gues, social chaos, because of a high level of unemployment, or the complete governmental take-over of all economic enterprises. The latter option would then automatically lead to "the trampling of personal freedom". Under the present circumstances Stevers warns, "the instalment of a leftist dictatorship would be the most likely outcome" (Stevers, 1976). Similar bleaks visions can, for instance, be found in an interview with F. Hartog in the Magazine *Haagse Post* in 1973, and in articles by Heertje from 1974 (Nypels and Tamboer, 1973; Heertje, 1974).

At the end of the 1960s and early 1970s, very little people picked up on the warnings of Stevers and company. Within economists' circles, the group formed an outlier, and among the general public probably even fewer people took notice. In terms of public interventions, they had too little material to build a larger community; moreover, academic publications and newspaper articles proved to be too weak a mode of intervention for these worries to actually enter the political sphere, i.e. to be put on the agenda in parliament or at cabinet meetings. Journals, papers and magazines were, however, not the only outlets through which the message of this epistemic community could travel. Among its associates, the group had some high-ranked public officials, most prominently Frans Rutten of the ministry of economic affairs, who later became Secretary-General in 1974.[17] Rutten was very willing to bring the concerns regarding the public sector into the meetings of the Central Economic Committee, of which he was the secretary from 1969 onwards. On the committee, Rutten was supported by Coen Oort, the Treasurer-General of the ministry of finance, and the president of the Dutch Central Bank, Jelle Zijlstra, who was also concerned with the public budget, albeit for different reasons. Although the CPB took these voices seriously—especially the CPB-director Cees van den Beld was very sympathetic towards Rutten and Zijlstra's arguments—the bureau struggled to find ways in which the worries about the growing public sector could be modelled.[18] Problems such as the rising inflation and the reduced returns on investment were framed as problems of overheating of the economy.[19] Such framing was at odds with the narrative that Stevers and Rutten were presenting since they considered the economy's problems as structural rather than conjunctural. In the end, the negative effects or potential downside of a growing public sector did not end

[17] For an account of the neoliberal ideas of Rutten and his influence on Dutch social and economic policy, see Oudenampsen (2019, 125-130).

[18] 'Beoordeling van de Huidige Economische Ontwikkeling' memorandum prepared for the *Centraal Economische Commissie,* April 10, 1970, NL-HaNA, CPB, 2.06.093, inv.nr. 211.

[19] 'Nadere en herziene informatie met betrekking tot de economische vooruitzichten van 1973', memorandum prepared for the *Centraal Economische Commissie,* June 7, 1972, NL-HaNA, CPB, 2.06.093, inv.nr. 211.

up in the scenarios of the Central Economic plan; thus the issue failed to gain traction among the rest of the community of policymakers.

Speaking with Eyal and Levy, the large-scale macroeconomic models that the CPB used for generating policy alternatives and scenario assessments had become so integral to the policymaking process that it formed a channel for public interventions on its own. That is to say, a community of economic experts (the CPB in this case) that can get their proofs and truths across relatively easy through a system of instruments and techniques (such as decision models, national accounting techniques and time-series data), figures and graphs (as those provided in the Central Economic Plans). Rutten and supporters therefore could not rely on a model-based channel of the CPB to pose the expanding public sector as a serious political problem; and lacking the models as instruments severely obstructed Rutten, Oort and Zijlstra's efforts.

However, concerns for the expanding public sector did not disappear, and only increased when the Labour Party and Roman-Catholic People's Party, together with some smaller parties, formed a new centre-left cabinet led by the Labour leader Joop den Uyl in 1974. The rise of New Left at the end of the 1960s had pushed the Labour Party gradually to the left, and when Den Uyl took office he led what was probably the most left-leaning cabinet in Dutch parliamentary history (Hellema, 2012, 150-152). The coalition agreement, which became famous under the slogan of "the redistribution of power, income and knowledge", chose a completely new economic outlook to counter the rising inflation rate of the early seventies than the ones proposed in the Central Economic Committee.

The economic situation became more complex when the Organization of Arab Petroleum Exporting Countries installed an embargo against those countries who supported Israel during the Yom Kippur War in October of 1973, which included the Netherlands, resulting in what is known as the oil crisis. The crisis hit the Dutch economy particularly hard. The unemployment rate, that had already been rising steadily since the start of the seventies, experienced a sudden spike in the aftermath of the crisis (Van Zanden, 1998, 160-167). Den Uyl initially reacted with a package of public investments, hoping to boost the economy. Although receiving praise at first for his quick action by the Dutch press, and also internationally by OECD, the economy was very slow to recover. Before long, the question whether the cyclical-oriented measures by Den Uyl were the right ones became a hotly debated topic. The uncertainty of the economic situation put extra pressure on the CPB to come up with new models to explain the rising unemployment.

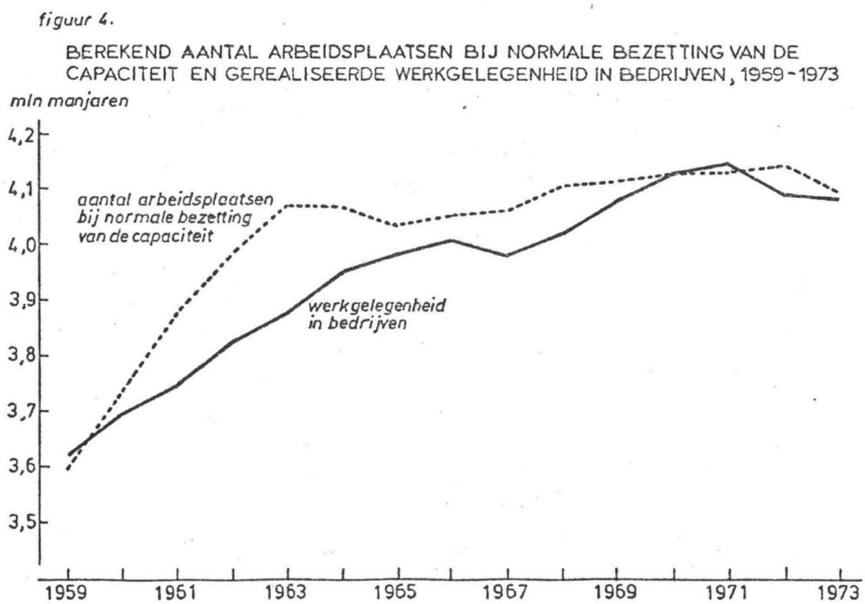
2.2. Neoclassical Growth Modelling

The new approach the CPB took with regard to the rising unemployment was neoclassical growth modelling based on the work of Robert Solow. This was a modelling approach the bureau had been researching since the mid-sixties. Although there was a pronounced wish within the board of the bureau to use elements from growth modelling in their main large-scale macroeconomic model, integration proved difficult. In practice the theory was only used to model specific issues or sub-sections of the economy (Barten, 1988, 66-67; Zalm and Verbruggen, 1993). The impetus to apply growth modelling to the unemployment problem came from the board's same wish for the integration of modelling techniques. Van den Beld, the director of the CPB, instructed employees Hok-Soei Tjan, who had previously been working on growth modelling in the context of assessing the economic consequences of environmental pollution, to work on a model of the development of unemployment. According to Van den Beld, what prompted the approach was the discussion on the so-called vintages approach. As he would later put it: "We came across an account on vintages in a journal. They [the writers of the article] applied those on this or that field. Then I said to Tjan and Den Hartog: this is how it should go. I could've done it myself, but I thought it would be nice if someone else could shine in the limelight instead" (cited in Passenier, 1994, 220).

The vintages approach had been derived from a certain way in which Solow's notion of technical change could be modelled. One of Solow's main contributions to the theory of growth was the idea of technical change, a notion that could explain why the capital-output ratio was increasing, i.e. how when applying the same ratio between capital and labour the output of goods could rise over the years. According to Solow, this increase was due to the development of technology, in other words, with more advanced machinery, the same amount of labour could make the output grow (Solow, 1957). The vintages approach then had found a way to further model the factor of technical change. According to the vintages theory, technical change would not come gradually, but only occurred with the replacement of old machinery. Assigning vintages to capital goods was thus a way of determining the likelihood of employers replacing their machines, and therefore a means to forecast the rise of the capital-output ratio better (Solow, 1962).

The result of applying the vintage approach to the relation between investments, prices, wages and unemployment resulted in what became known as the Hartog-Tjan model, first published in a CPB occasional paper in 1974. According to Den Hartog and Tjan, the rise in unemployment could be explained by high wage costs. Faced with increasing wage costs, employers would rather buy new machines instead of hiring more labour power. This meant that machines received a higher replacement rate than could be expected on the basis of their age (Den Hartog and Tjan, 1974). The paper thus not only explained the rise in unemployment, but also how the increase could have snuck up on the Dutch economy. In times of economic prosperity the fall in jobs relative to the production would not have been noticed. As such, Tjan and Den Hartog claimed that the problem of unemployment already started in the early 1960s (see figure 3). Beside its explanatory power, the strength of the model was that it could finally theorize a number of relations between the private and public sector, thus incorporating a long-standing concern on the part of the Central Economic Committee, while also describing unemployment as structural problem, providing ammunition for the ongoing debate on Den Uyl's unemployment policy.

Figure 3. 'Figure 4. Calculated amount of jobs under normal utilisation of the capacity and realised employment in firms, 1959-1973'



The graph shows that the actual amount of jobs (solid line) is much lower than the calculated amounts of jobs on the basis of the production function (dotted line). From *Investeringen, lonen, prijzen en arbeidsplaatsen: een jaargangenmodel met vaste coëfficienten voor Nederland* by Den Hartog and Tjan (The Hague: *CPB Occasional Paper* 8., 1974, 17)

Upon publication, the Hartog-Tjan model caused quite a stir among the community of professional economists. Due to its method and its application the model was considered controversial. Yet at the same time, it set the terms for further debate concerning the unemployment issue. The model and its outcomes was not a perfect fit with the narrative on the growing public sector that Stevers, Schouten, Hartog and Heertje were propagating. It said nothing about the public and private sector ratio, nor was the growth of the public sector a problem *per se*, only with regard to the cost of social insurances and wages. Yet Stevers and company seized the model in order to prove their arguments right (Stevers, 1975). Other economists also used the model in order to argue for their specific solutions to the unemployment problem. For instance, Tinbergen (who left the CPB in 1955), together with fellow Labour Party economists Van den Doel and Cees de Galan, drew on the basis of this model the conclusion that the instalment of wage moderation as a means of getting the wage-costs down was the best solution to the unemployment crisis (Van den Doel, De Galan, and Tinbergen, 1976).

Critics of the model mostly attacked the methodology, rather than the modelling technique or the identified relations. Former CPB employee and professor at the University of Amsterdam, Wim Driehuis, for instance, further disaggregated the relation between production output and wage-cost, concluding that productive industries acted as wage-leader for less productive industries and public sector, which explained the high wage costs in the public as well as in the private sector. According to Driehuis, the presumed ineffectiveness of Keynesian demand management was caused by a shift in private investment toward the service sector and a shift in the government expenditure towards social security. If the government would spend more directly, the multiplier effect on private investments would occur. A remarkable facet of Driehuis' study is that it used the same growth modelling techniques as the Hartog-Tjan model, while defending a Keynesian expenditure program to counter unemployment—completely the opposite of the narrative the CPB was pushing or the arguments that Stevers was making (Driehuis, 1979).[20]

The impact of the Hartog-Tjan model was not only that the unemployment issue came to be discussed in the terms and relations the model suggested. It also shifted the attention in the debate from the unemployment figures just after the oil-crisis towards the forecasted unemployment rate in the medium-term. The large-scale macroeconomic models used by the CPB were then still short-term models, the Hartog-Tjan model in contrast, could be applied for medium- and long-term forecasting, something which its successor, the VINTAF-

[20] Driehuis' article had already been circulating as research memorandum since 1976.

model, was explicitly designed for. In the short term, the CPB-models still predicted that unemployment could be countered through public expenditure, medium-term forecasts predicted that this was ineffective. With the Hartog-Tjan model, figures on the unemployment rate in 1980 started to enter the debate and soon took over the conversation. The focus of the conversation on the development of unemployment similarly shifted. No longer was the problem of disappearing jobs the centre of the discussion, rather structural causes of unemployment became the object of debate—even among economists like Driehuis who argued in favour of Keynesian demand management.

As discussed in the previous section, shifting the emphasis from the present state of the economy towards forecasts—going so far as removing the present state form their tables—was nothing new for the CPB. While such a shift previously reinforced the cognitive space of macroeconomics, the VINTAF model started to change the nature of the issue at hand. In other words, the CPB models *translated* the problem of unemployment into a problem of the development of unemployment and its relation to social insurances and wage costs in the long run.

2.3. The VINTAF Models in the Daily Newspapers

The structure of the Hartog-Tjan model differed so much from the large-scale model used for the Central Economic Plans that the former could not be easily integrated into the latter. But the fact that the Hartog-Tjan model was a growth model made it potentially very apt for medium-term forecasts. Therefore, Den Hartog and Tjan continued, together with their colleague Theo van de Klundert, developing the model into a medium-term forecaster. The results was the VINTAF model, whose name was derived from the vintages approach (VINT) and the Dutch word for sales, 'afzet' (AF). It was in this form that the model would stage its most successful public intervention. In the summer of 1975, the CPB prepared a report on the basis of the model intended for the cabinet, called *De Nederlandse Economie in 1980* (The Dutch economy in 1980). The outlook that the report provided was very dire: the unemployment rate would keep on rising together with the public deficit with no improvement of the situation in sight. These numbers convinced the minister of finance Wim Duisenberg that drastic measures were necessary (Visser and Wijnhoven, 1989, 42-54).

With the other cabinet members, Duisenberg agreed on the introduction of the so-called 1%-norm, the principle that the collective financial burden (taxes and premiums) could not grow to exceed more than one per cent of the national income. Together with a restriction on the public debt this basically meant a restriction on the growth of the public sector and the implementation of austerity measures. Yet for the most part, the 1%-norm remained a paper tiger. Some ministers were not too willing to implement the budget cuts in their portfolio, nor were all the ministers fully convinced of the necessity of the austerity operation. Most prominently, the minister of social affairs, Jaap Boersma, constantly proposed alternatives to the 1%-operation. According to him, the norm *de facto* made all his unemployment measures impossible. Boersma was also not persuaded by the arguing behind the norm. In his view, the unemployment problems were primarily caused by the international economic malaise. Den Uyl was not convinced either, but decided to follow the 1%-norm anyway. The CPB figures that were constantly updated during the operation stressed the importance of the austerity measures for the most part (Toirkens, 1988, chap. 3). The role of the VINTAF model was so important in this process that one policymaker would later remark: "The 1% norm … actually came about through the constant confrontation of ministers with a scientifically based model of causes and consequences" (cited in Bemelmans-Videc, 1984, 390). In the terms of Eyal and Levy, the VINTAF model became a successful instrument by means of which the CPB had created a new channel through which they could introduce 'truths' and 'proofs' into the government's policies.

In writing the memorandum to announce the restriction of the government budget, Duisenberg introduced the notion 'support' (*draagvlak*) to describe the relationship between the private and public sector. Meaning that the public sector could only thrive when it was supported by the private sector.[21] The same notion was later picked up in a report of the Scientific Council for Government Policy (*Wetenschappelijke Raad voor Regeringsbeleid*), another scientific advisory council of the government, which discussed the unemployment problem with a similar message (WRR, 1977). This description did not follow necessarily from the outcomes of the VINTAF model and echoes Stevers' earlier arguments in which he views the taking over of public sector of services from the private sector as the fundamental problem. This framing of the CPB forecasts brought the narrative of the public sector as a problem in full swing. A similar framing of the VINTAF - figures were also used in memorandums for the cabinet by the employers' federations and the Committee of Economic Expert of the Social and Economic Council. Although the content of the memorandums differs—the employers federation wanting a further restriction of ten billion on government expenditure; the Social and Economic Council wanting support for the weaker industries—part of the message overlaps, unemployment is a problem of the growing public sector (SER, 1977). In this way, a diverse set of social organisations rallied around the VINTAF model and its forecasts. The model allowed

[21] 'Nota over het te voeren beleid ter zake van de collectieve voorzieningen en de werkgelegenheid', Kamerstuk Tweede Kamer der Staten Generaal (1975-1976), 13951, ondernummer 4.

for multiple discussions and narratives, but amplified one main message, adding to the public pressure that was put on the cabinet to carry out the austerity measures.

Discussions on the usefulness of the 1%-norm were not confined to cabinet meetings, but became a heated subject of debate by economists, union and business representatives and political parties in national media. The fact that the norm was based on on a new CPB-model was quickly picked up by journalists, resulting in the name VINTAF becoming public. Discussion on the credibility, usefulness and desirability of the model soon ensued in newspapers and magazines (Van Seumeren, 1977; Van Zweeden, 1977; Pen, 1977).

Bringing the model into the open was probably a conscious effort on the part of the CPB. The VINTAF model was publicly presented for the first time in a preliminary report delivered by Tjan, Den Hartog and Van de Klundert for the annual meeting of the Society for Economics in December of 1975. It is clear from the structure of the paper that the authors wanted to focus on the model, putting the name VINTAF at the centre (Den Hartog, Tjan, and Van de Klundert, 1975, 6). Although the annual meeting for the Society of Economists was an event primarily intended for professional economists, its yearly preliminary reports were usually sure to attract some media attention. That year all of the major Dutch daily newspapers published something on the annual meeting. The CPB was thus ensured that its report would caught everyone's attention.

In the similar vein, Van de Klundert published a small booklet two years later intended for a broader audience in which he explained the workings of the model and placed it in the context of a broader development of economics as a science, thus adding to the public recognition of the VINTAF model (Van de Klundert, 1977). Such coordinate media strategies also fitted a general development of the relation between the CPB and the national media. From 1972 onwards, the bureau started to organise yearly press events for the launch of the new Central Economic Plans. A little later, press conferences on other CPB reports, such as the medium-term forecast, were also organised (Passenier, 1994, 280). Outside the regular publications, the bureau started to provide figures to politicians on specific subjects, such as purchasing power trends, which also fostered personal contacts between CPB-economists and members of parliament (Passenier, 1994, 230).

It is clear that the audience of the CPB was no longer limited to policymakers and politicians, but also included the general public. In an effort to build a channel for a public intervention on the growing public sector and unemployment for which large-scale macroeconomic models were unfit, the CPB had to charter new publics and forge new alliances with employer federations, neoliberal economists, and journalists. With these new audiences the form of the expertise that the CPB offered also changed. For policymakers and politicians, the

CPB had a seemingly facilitating function, providing tools for picking and choosing the right policy mix. With regard to a more general public, the CPB adopted a role that I will describe as that of a watchdog: an institute that watches over the public debate in order to make sure that untruthful or unfeasible statements are debunked or corrected; thus making sure the debate is concerned with facts.[22] In the news articles that were based on CPB publications at the time, the emphasis was usually on the impossibility of alternative policy proposals, rather on the possibility. Alternative plans on countering unemployment by the labour unions, left-wing politicians, minister Boersma and economists at the University of Amsterdam were all deemed unfeasible in a time where the primary concern of the government should be restriction of the budget. The forecasts for 1980 were hanging over the debate as a dark clouds warning that all scenarios that did not limit to the growth of the public sector would lead to massive unemployment. These were according to the CPB the facts, and everyone not adhering to them were branded in the debate.

The real *coup d'état* of the CPB model came when the successor of the VINTAF model (simply called VINTAF-II) had replaced the central macroeconomic model of the CPB, customarily used for the preparation of the Central Economic Plans. As discussed in the previous section, this central model which was up to that point, in essence, a revised updated version of the model from 1955, was embedded in the economic policymaking process to such an extent that it was crucial in how policymakers viewed the economy and understood the issues and formulated solutions. In other words, it had (and still has) a very solid surrounding infrastructure. The previous model had proved to be very influential in justifying the Keynesian demand management of the government; replacing it with VINTAF-II, which in comparison put much more emphasis on stimulating private investments, had a similar influence on the type of reasoning concerning policies and the justification of certain policies. Moreover, the instalment of the model took place in a politically turbulent time.

The Den Uyl cabinet had fallen in March of 1977 and in the following election the Labour Party won, making them again the largest po-

[22] The CPB has later adopted the notion 'watchdog' to describe its task within the Dutch government (Bos and Teulings, 2012). The word was not yet part of the task description of the bureau in the 1970s, thus I use the notion anachronistically. This watchdog role is different from other economic organization that are often also called watchdogs in the media, like the Financial Conduct Authority in the UK, as it is not the CPB's task to regulate markets or audit other organization. Rather, in their own description, the watchdog role is aimed at the public budget, making sure that the government adheres to budgeting rules. I use the notion in yet a different way: emphasizing the role the CPB plays in the public debate, guarding the 'truthfulness' of the debate. As I briefly mention in the conclusion, the fiscal watchdog and the public debate watchdog are strongly connected.

litical party in parliament. Yet negotiations with the newly formed Christian Democratic Appeal (a fusion of multiple Christian parties, among which the Roman-Catholic People's Party) on forming a second Den Uyl-cabinet were stiff. In this process, the CPB was tasked in with the assessment of policy proposals both parties could agree on. The instalment of VINTAF-II had a huge effect on the outcomes of these assessments, usually with negative effects for the proposed unemployment policies. According to one of the newspaper commentators, the Labour Party was so frustrated with the outcomes of the new model that they requested the CPB to calculate the intended measures with the old model (Hoffman, 1977). A similar frustration can be found in the diary that Labour negotiator Ed van Thijn kept during the process and that was published a year later. The complete astonishment of Van Thijn with the outcomes of the CPB-models was clearly visible on many occasions. For example: The CPB is overdoing itself this time [*bakt ze wel erg bruin*]. Instead of the previously estimated 150,000 unemployed in 1980 we now have to suppose that unemployment will rise to 275,000 in 1981. The CPB has adopted a new model, introduced new starting points and has also applied new policy variants. "Out of the blue the economy has collapsed. … When the politician is outside campaigning, the forecaster stays indoors and reads a book and suddenly the world has changed". (Van Thijn, 1978, 28)

The negotiation failed. And instead the Christian Democratic Appeal decided on forming a cabinet with the right-wing liberal People's Party for Freedom and Democracy, a party much more willing to implement further austerity measures.

3. Conclusion

The first macroeconomic model of the CPB in 1951 was to a large extent an answer to the policies of the time, the institutional architecture of Dutch policymaking, and the bureau's earlier failure to influence politics. By adjusting to the situation and reacting to the wishes of policymakers, the CPB designed their models in such a way that they could be used to enhance and improve existing policies; allowing policymakers to provide input and giving them a wide variety of choices. As a result, policymaking became a more structured, or systematic affair: all social and economic policies could be placed into the framework that the macroeconomic models provided and their effects on the economy as a whole could be expressed in seemingly precise figures. Policymakers could, with the help of models, rank policy scenarios and incorporate uncertainty in their measures, thus introducing a whole new dimension to policymaking. This new model-based practice created a cognitive space in which wage-moderation and Keynesian demand management became accepted measures.

A similar development took place in the 1970s with the VINTAF-model and the discussion on unemployment. Arguments surrounding the model made a strong association between unemployment, the growth of the public sector and wage costs; associations used by both camps in the debate, both the opponents and proponents of the growth of the public sector. These associations became commonly accepted relations, thus shaping the unemployment debate for the decade to come (Visser and Wijnhoven, 1989, 154-170). Later, at the start of the 1980s, the policy principle of full employment was abandoned, introducing the idea of a 'natural' rate of unemployment ushering a new way of thinking about unemployment. More fundamental question concerning the relation of unemployment and the collective financial burden were black boxed in the later iterations of the VINTAF model.

The VINTAF also shaped the cognitive space on thinking about unemployment even when contributors to the debate were not using the model as a policy tool. VINTAF became an artifact around which the debate developed; an artifact that allowed for the development of new arguments, the articulations of new issues and the creation of new epistemic communities. The model also functioned as a builder of coalitions, as its figures brought anti-Keynesian economists, employer federations and the Central Economic Committee together. VINTAF allowed for a successful public intervention putting the growth of the public sector as major problem on the political agenda.

The VINTAF intervention highlights the beginning of a development in which the CPB became increasingly more visible in the national media. Using new channels to circulate forecasts figures and policy scenarios also meant that the form of expertise the bureau offered changed. The figures associated with VINTAF did not only reconceptualise unemployment, they were also used to brand policy proposals that went against the 1%-norm as unrealistic, irresponsible, or outright dangerous. This set a precedent of how the CPB would operate in the public sphere from then onwards, namely, by putting emphasis on economic feasibility and political realism. Such a watchdog role went hand in hand with an emphasis on the public budget: the CPB consciously started to present itself as the institution which ensured the government would spend its money responsibly and wisely. As such the shift in the CPB's form of expertise fits into a larger development of the role of economists in society, a development Morgan describes as follows:

> In terms of operating the economy, notions of control engineering were explicitly discussed during the 1950s experience of the 'managed' economy. In the 1980s, still less interventionist modes were in favor, and macroeconomic policy was understood to be taking fiscal care and following rules of monetary operation, suggesting the idea of maintaining a smooth-running machine (Morgan, 2003, 276).

The only difference with the role of the CPB is that its practice is better described as fiscal watchdog rather than as fiscal caretaker.

To bring the topics of this article into the present, I would like to finish with a contemporary example of the CPB's watchdog role in public debates. As from 1986, the CPB has started to make assessments of political party manifestos during national election times. In these assessments, the bureau provides economic forecasts based on the policies provided in the manifestos, in order to allow voters to make a more informed choice. Although the assessment allows for quite some flexibility on how economic issues can be dealt with, all the manifestos should adhere to the budgeting principles provided by the ministry of finance. These assessments are also executed by the main macroeconomic model the bureau still employs. Even with the CPB preaching the transparency that these assessments would bring to the economic impact of the party manifestos, the analysis also obscures the fact that all parties agree to adhere to budgeting rules. Consequently, questions concerning the public deficit tend to disappear from the public debate. Although the models of the CPB are now widely discussed, the issues they tend to exclude are not. In Goudriaan's terms: the models are still night trains, but now operating in broad daylight.

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Port Economics in Search of an Audience: The Public Life of Marginal Social Cost Pricing for Ports, 1970-2000

Thomas Vanoutrive* and P.W. Zuidhof**

Economics and its sub-disciplines often developed in close relationship with its audiences. This paper examines the public life of one particular case, the idea of marginal social cost pricing for ports, by highlighting two key episodes. The first episode was the emergence of port pricing in the 1970s, when the academic concept found a willing ear at international organisations such as the World Bank. The idea of marginal cost pricing for ports replaced the then prevailing principle in port policy of national public interest, with the principle of economic efficiency. The second episode was the eager adoption of the idea of marginal social cost pricing for ports by the European Commission in the 1990s. Along the way, from the 1970s to the late 1990s, the relation between economics and its audience appears to have undergone a dramatic shift. In the earlier episode, academic economists took the lead finding only a receptive audience with international organisations. In the 1990s, by contrast, one such international organization, the European Union, took the lead in advancing the idea of marginal social cost pricing, pushing economists into the role of either intellectual defender or critical observer. The insights from this particular history may be useful to obtain a better understanding of the role of applied economics in the micropolitics of the various waves of deregulation, liberalization, and privatization that swept the world since 1970.

Keywords: port economics, port policy, marginal social cost pricing, the World Bank, European Union

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L'économie portuaire en quête d'une audience : les péripéties publiques de la tarification portuaire au coût marginal social, 1870–2000

La science économique et ses sous-disciplines se sont souvent développées en relation étroite avec leurs audiences. Ce papier examine la vie publique d'un cas particulier, l'idée d'une tarification au coût marginal social dans les ports, en soulignant deux épisodes clefs. Le premier épisode est l'émergence de la tarification portuaire dans les années 1970, lorsque ce concept académique a rencontré une écoute bienveillante dans des organisations internationales telles que la Banque mondiale. L'idée de la tarification au coût marginal social dans les ports a remplacé le principe qui prévalait alors dans la politique portuaire, l'intérêt national public, par le principe de l'efficacité économique. Le second épisode est la prompte adoption de l'idée de tarification au coût marginal social dans les ports par la Commission européenne dans les années 1990. Entre les années 1970 et la fin des années 1990, la relation entre la science économique et son audience semble s'être dramatiquement modifiée. Dans le premier épisode, les économistes académiques avaient pris l'initiative en ne trouvant un écho favorable que dans les organisations internationales. Dans les années 1990, en revanche, c'est une autre organisation internationale, l'Union européenne, qui a pris l'initiative en promouvant l'idée de la tarification au coût marginal social, poussant les économistes soit dans un rôle d'avocat intellectuel, soit dans un rôle d'observateur critique. Les leçons tirées de cette histoire peuvent être utiles pour mieux comprendre le rôle de l'économie appliquée dans la micropolitique des différentes vagues de dérégulation, de libéralisation et de privatisation qui ont ponctué le monde depuis 1970.

Mots-clés : économie portuaire, politique portuaire, tarification au coût marginal social, Banque mondiale, Union européenne

JEL: A11, B20, L98, N74, R48

There is a growing interest among historians of economics in tracing the public impact of economics, and its close relationship with its publics. Mata and Medema (2013), for example, used Eyal and Buchholz' (2010) notion of 'interventions' to study the concrete ways in which economists interact with their audiences. One area where there is obviously a strong interplay between economics and public reason, is applied economics (cf. Backhouse and Biddle, 2000; Backhouse and Cherrier, 2017). This paper focuses on the interaction between economics and its audiences when economics is applied to policy issues, presenting a case study where economics is applied to ports and port policy. It studies how, from 1970 to 2000, the nascent field of port economics interacted with its various audiences. It specifically focuses on the application of marginal social cost pricing to seaports,[1] and

[1] When referring to port pricing, the terms 'marginal cost pricing' and 'marginal *social* cost pricing' are used interchangeably in the literature and without clearly discriminating between the two (e.g. Button, 1979; EU, 1995; 1997; 1998). Walters

traces how this concept was first applied to ports by transport economists, slowly made its way into public policy in the 1970s, to eventually become the cornerstone of the European Union's (EU) port policy by 2000.

Over the period studied, like so many other public services and utilities, ports and port policy underwent important transformations. Prior to the 1970s, port policy was primarily framed in 'public' terms: ports were perceived as public utilities serving the national interest. By the end of the 20th century however, after waves of deregulation, liberalization, and privatization, port policy became increasingly more 'economized,' meaning that ports were increasingly viewed in economic terms and port policy was increasingly guided by neoclassical economic principles (for a general overview for the case of infrastructure, see Graham and Marvin, 2001). The present paper examines how the interventions of economics and economists facilitated such a transformation and what role the idea of marginal social cost pricing played in this. Port economics as an academic discipline was thus not only shaped by evolutions in the port industry. Indeed, developments in economic thought in general, interactions with key audiences, and the policy views of academics made port economics what it is today.[2]

For the case of port pricing, the audience consisted primarily of large international organizations, first in the 1970s, the United Nations Conference on Trade and Development (UNCTAD) and the World Bank, and later in the 1990s, the EU. To examine how economists helped shape port policy and especially the issue of pricing access to ports, this paper reviews two important episodes in the history of port economics. The first was the emergence of port pricing theory in the 1970s in the context of UNCTAD and the World Bank. The second episode took place in the 1990s, where the EU emphatically

uses the concept of 'marginal *social* cost' in his work on road pricing (Walters, 1954; 1961), but drops the term 'social' in his work on ports (Walters, 1975; Bennathan and Walters, 1979). For EU documents it is clear that 'marginal *social* cost pricing' is meant, even when 'marginal cost pricing' is used (see EU, 1998, 6-8), but the port economist Haralambides (2002) for instance refers to 'marginal cost' instead of 'marginal *social* cost'. When applied to the pricing of public utilities such as ports, marginal cost automatically implies social costs too. Thus, when determining the marginal cost of ports and port usage, marginal social cost are obviously included. In the current paper therefore, marginal cost is sometimes used as a shorthand for marginal social cost.

[2] In this respect our analysis differs from the received view, as expressed by Heaver for instance, who stated that "the economic objective of ports and the systems of which they are a part have not changed. It is to provide value to shippers. (The extent to which governments ascribe other objectives, for example, local employment or sovereignty, is beyond economics although the objectives may have economic consequences worthy of economic analysis.)" (Heaver, 2006, 32)

adopted marginal social cost pricing as a central tool for European port policies within the Common Transport Policy. These episodes illustrate that the worlds of academic economics and policy are hardly isolated and that the idea of port pricing emerged from the continuous interaction between port economics and its wider policy publics. The interventions of economics and the use of the idea of marginal social cost pricing shifted considerably along the way. Where in its early days, marginal cost pricing was mostly a critical device pressed by economists, it ended up being a normative ideal for EU policy. By tracing the public life of the idea of marginal social cost pricing in the port sector, this article hopes to contribute to a more detailed understanding of the role played by economics in the micropolitics of the 'economization' of public utilities within the larger process of deregulation and liberalization taking place since the 1970s and onwards.

1. The Birth of Port Economics in the 1970s: Marginal Cost Pricing in Search of an Audience

Up until the 1970s, economic theory did not occupy a prominent position in the literature on ports. The economic literature that existed was mostly directed at practitioners in the port sector (e.g. Cunningham, 1926; Bown, 1953; Bown and Flere, 1967). In the academic economics literature, there was also very little attention given to ports (Kershaw, 1947; Heaver, 1993; Brooks and Pallis, 2012; Woo et al., 2011). Reviewing the early history of maritime economics, Goss remarks that the early publications "were certainly useful to the 'practical men' of their day … but none of these contain anything likely to be recognised as related to economic principles as known today" (Goss, 2002, 396). Note that "economic principles" here refers to those of neoclassical microeconomics, given that other economic ideas have always played a role in port policy, as ports where generally seen as essential economic infrastructures for the national or regional economy.

1.1. The Push for Marginal Cost Pricing in Ports

Port economics as an academic field only emerged with the application of neoclassical microeconomic principles and economic analysis in the 1970s (Goss, 2002; Heaver, 2006). The discussion on port pricing in the present paper relates exclusively to the dues charged by port authorities for the use of infrastructure to access quays, including dredged channels and traffic control for instance, but not port facilities user charges for services like pilotage and towage or occupancy charges for the use of berths, cranes and storage facilities.[3] The application of the principle of marginal cost pricing to transport derives from a more general discussion on marginal costs and public utilities that dates back to the 1940s (Hotelling, 1938; Vickrey, 1948; 1955). For various reasons, the application of marginal social cost pricing came to ports later than to road transport and railways.[4] Here we will concentrate on how it made its first appearance in the literature on ports.

A first attempt to apply microeconomic principles and the notion of marginal social cost analysis to port pricing was offered in 1974 by Ian G. Heggie. At the time, Heggie was Director of the Oxford University Transport Studies Unit, but wrote his contribution as a visiting professor at the Centre of Transportation Studies at the University of British Columbia (UBC) in Vancouver, Canada.[5] The opening lines of Heggie's intervention set the stage:

> Publicly owned ports rarely price port services on a commercial basis. They do not keep comprehensive cost accounts, and they make little attempt to relate specific revenues to costs in any organised way. By and

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[3] There exists a large variety of institutional arrangements for ports ranging from municipally or government owned ports to trust ports, and various models of managing ports exist (see for instance Verhoeven, 2010; Verhoeven and Vanoutrive, 2012). These are in turn matched by a wide variety of charging principles and practices observed and proposed both in theory and practice (e.g. Thomas, 1978).

[4] O'Neill (2013) point out that the conceptualisation of infrastructure networks as public utilities in sectors such as electricity and transport in the 1950s to 1970s paved the way for the application of 'market' principles and 'privatisation' logics to these infrastructures in following decades. Vickrey's (1952) proposal to revise the rapid transit fare structure in New York City was a response to the financial problems of the city. Regulation of railway monopolies in the United States and Canada had a long tradition and was considered more urgent than interventions in the more competitive shipping market. Moreover, the diversity in service providers in the ports sector, including railways, has made it a heterogeneous industry which is more difficult to analyze and regulate, also for its international character (Heaver, 2006). Furthermore, shipowners and port authorities have been rather defensive and secrecy has been highly valued (Goss, 2002). Furthermore, the fact that ports and railroads have been priced might make alternative ways of pricing, on the one hand, more acceptable, but the gradual disappearance of toll roads and investments in toll-free motorways can, on the other hand, have made road pricing a more urgent topic of discussion in the 1950s and 1960s (Lindsey, 2006). Other relevant factors include the 1970s oil crises, and the rise of the environmentalist movement and the increased support for the pricing of externalities.

[5] The Centre of Transportation Studies at the University of British Columbia was established in the 1960s with funding from the UPS Foundation (of the global express delivery services) and federal grants. At the time it was headed by Trevor Heaver who managed to attract several leading European transport economists for shorter and longer research stays. The Centre still exists until today and. See: http://www.sauder.ubc.ca/Faculty/Research_Centres/Centre_for_Transportation_Studies/About_Us (last accessed: 25 April 2018).

> large, their tariff structures were established before the turn of the century and have simply been extended and revised to cover their added responsibilities and their increased costs. (Heggie, 1974, 3)

According to Heggie, prevailing port tariffs "lack any obvious rational basis" (ibid., 6) and conventional "non-cost-based pricing" is usually defended with reference to flawed perceptions of the public benefits of ports. He therefore proposed that port "charges should be based on the [marginal] social opportunity cost of providing each service" (ibid., 10). To determine the marginal social cost of these services, Heggie drew on his own earlier work in transport economics (1972) and the pricing of transport improvements, where he used social accounting prices.[6] In his view, the advantages of using marginal social costs were threefold. In the short run it produces port prices that are conducive to an efficient use of facilities. In the long run, it offers a rational basis for port investment programs. Lastly, it could fuel competition among port users.

Heggie's contribution was only a prelude to the real uptake of marginal social cost pricing in the ports literature following the interventions of Alan A. Walters. In 1975, Walters published a seminal paper titled 'Marginal cost pricing in ports'. It was followed in 1979 by a book-length treatise titled *Port Pricing and Investment Planning for Developing Countries* co-written with Esra Bennathan, which was prepared for and published by the World Bank. Later authors built on Walters' ideas (notably Bobrovitch, 1982; Button, 1979; Noritake, 1985) and review papers and textbooks invariably refer to Walters' contribution on optimal port pricing (e.g. Jansson and Schneerson, 1983; Goss and Stevens, 2001; Abbes, 2007; Acciaro, 2013; Heaver, 2006; Bergantino, 2002). Published only one year after Heggie's, Walters' paper, apart from some differences, makes similar claims but is more convincing.[7] Incidentally, the paper was written while Walters was also a Visiting Professor at UBC. Walters' paper starts with the

[6] Social accounting prices was an instrument borrowed from development economics where it was developed as part of Social Cost Benefit Analysis, a method used at the OECD and World Bank in the 1960s and 1970s to assess development projects (viz. Little and Mirrlees, 1969).

[7] One difference between Heggie (1974) and Walters (1975) is that the former borrows his cost concept from social accounting prices that were used in the context of Cost Benefit Analysis, while the latter is more firmly rooted in conventional welfare analysis. Another difference is that Heggie and Walters each propose a different solution for the problem of recouping fixed costs, with different political ramifications. If pricing is based on marginal (social) cost, large investments are sunk costs that are not earned back. Heggie suggests to cover these by introducing a subvention due, basically a subsidy, to be paid by the port authorities or government. Walters proposes using two-part tariffs, that consists of a fixed annual fee plus a marginal cost fee for services. The fact that Walters proposes to put the burden on users as opposed to governments may be part of the explanation as to why his intervention got more play than Heggie's over time.

observation that "ports are normally operated by public authorities" (1975, 299) and that governments, as a rule, rely on a set of historical standards for determining port charges. Walters claimed that "the long history of government regulation has not produced a rational system of charges either according to the marginal costs of providing the service or to any discernible principle of social justice," and that there is "no single guiding principle of port pricing as there is now in the area of road pricing" (ibid., 300). The reference to road pricing is no coincidence. Walters had been an important pioneer in modern transport economics and made important contributions to the research on congestion pricing—marginal social cost pricing applied to roads (Lindsey, 2006; Vanoutrive, 2017).

Walters discussed some examples of port pricing to illustrate how the application of short-term marginal cost pricing challenges or even runs counter to the then existing perspective on port charges. The common practice of charging large vessels more for the use of a dredged channel may seem right from the perspective of equity or ability to pay, but has little basis in terms of marginal cost. For Walters, the idea of marginal cost pricing was hence a way to debunk existing port pricing policies. Walters points out that if port authorities do not apply marginal cost pricing, they consistently provide incorrect price signals that hamper economic efficiency. The first objective of better pricing is to encourage economic efficiency in the short term, and the second is to offer a rational guide for port investment decisions (see also Goss and Stevens, 2001). Third, by not pricing according to marginal costs, port authorities willingly or unwillingly distort competition in the logistic chain that runs from international shipping to domestic transport, with potentially disturbing effects on trade. Walters' conclusion was that "the introduction of marginal cost pricing into port operation involves many difficulties of detail and administration"—not the least the problem of how ports will be able to recoup sunk costs or fixed costs—it does however clearly "supply a useful set of principles to deploy in the discussion of port pricing policy" (ibid., 306).

The intellectual inspiration for marginal cost pricing in ports came straight from the field of transport economics, where both Heggie (e.g. 1972) and Walters had earned their stripes. Walters, who would later become a macroeconomic advisor to Margaret Thatcher, got his first job in 1952 at the University of Birmingham working with the transport economist Gilbert Walker and the maritime economist, Esra Bennathan. Working on public utility pricing and the pricing of road services, he developed the argument that pricing policies should be based on short-term, not long-term marginal costs (Walters, 1954). He extended this to a theory of congestion pricing published in *Econometrica* (Walters, 1961) and in *The Economics of Road User Charges* published with the World Bank (Walters, 1968). With Bennathan, he made his first foray into maritime economics with *The Economics of Ocean Freight Rates* (1969).

After his stint as macroeconomic advisor in the Heath government in the UK, Walters spent a year in Vancouver (in 1974), a year at the World Bank, and four years at Johns Hopkins University. The time abroad provided Walters with the opportunity to extend his earlier research on marginal social cost pricing and congestion pricing for roads to the new context of ports.[8] The 1975 essay on port pricing was, together with Bennathan, developed into *Port pricing and investment policy for developing countries* (Bennathan and Walters, 1979), published by the World Bank. It could be considered the first textbook on port pricing, explaining key principles and discussing practical applications and complications.

The conceptual toolbox of marginal cost pricing had been readily available within transport economics and both Heggie and Walters adapted it from roads to apply it to the case of ports. The theory of port pricing thus developed as an intellectual spill-over from road pricing. The initial push for marginal cost pricing in ports thus came largely from within the economic field, as a critical tool for appraising existing port policy. It was driven by a motivation to use sound economic principles to put port pricing policy on a new, rational footing. Where port pricing had largely been the province of national economic interest and public interest considerations, the neoclassical economic approach aimed to replace this with the objective of economic efficiency.

1.2. An International Audience for Marginal Cost Pricing in Ports

Designed as a critical tool for appraising existing port policies, marginal cost pricing could not immediately find a willing ear among policymakers. Port authorities, for one, would hardly be open to the suggestion of marginal cost pricing, which could imply lower charges for port services while leaving the problem of recovering sunk costs to the port authorities. Heggie (1974, 12) anticipated that port authorities or governments would have little incentive to embrace these notions:

> Tariff revisions are generally associated with attempts to raise charges. They are therefore usually resisted by both shipping companies and cargo interest … and they generate little interest from the port authority because of the lack of ultimate financial responsibility and the cost accounting and other difficulties. (ibid., 20)

[8] The biographical details were derived from an auto-biographical paper published by Walters (1989) and obituaries published after his death in 2010, e.g. Blundell for the Mont Pèlerin Society published on the website of the Adam Smith Institute.

Walters' solution to the problem of investment cost recovery was the adoption of two-part or multipart tariffs that comprise a fixed charge to recoup fixed costs and a variable charge based on marginal costs.[9] While his solution would make marginal cost pricing more palatable to port authorities, it still ran counter to the immediate interests of port authorities. Why replace a system of port charges that brought in sufficient dues, with one based on economic principles whose outcomes are still uncertain (Walters, 1975, 306)?

According to early port economists, another benefit of marginal cost pricing is that it would put more competitive pressure on large shipping interests, in particular the so-called shipping conferences. These conferences (which functioned like cartels) were agreements between shipping companies to set standard freight rates on shipping routes, which was a key issue in maritime economics in the 1970s. A problem posed by shipping conferences was that marginal cost price savings in one port would not have an immediate effect on shipping prices because of the standardized shipping rates for routes (see Heggie, 1974, 9; Bennathan and Walters, 1979, 134). Customers of shipping lines would thus not benefit from the efficiency gains of rational port pricing. Only if marginal cost pricing would improve the cost basis of outside competitors, could it set in motion a process of "chiselling" that could cause a conference to break down (Walters, 1975, 303; Bennathan and Walters, 1979, 204). The adoption of marginal cost pricing thus also ran counter to the interests of members of shipping conferences.

In light of the immediate interests of port authorities and large shipping interests then, marginal cost pricing would have been expected to garner little support. The project, in fact, presented an even more fundamental political challenge as it contested the then dominant view that emphasized the public function of ports. The reigning view, which never disappeared entirely, was that ports should serve the interests of national and regional industry and trade, and should act as engines of economic growth and employment.[10] Bennathan and Walters referred to this as the 'European doctrine':

> The European doctrine views the port as part of the social infrastructure of a whole region. The value of a port should be assessed not in the accounts of the facilities but in terms of the progress of industry and trade in the hinterland. (1979, 4)

[9] The solution of a two-part tariff emerged as part of the 'marginal cost controversy' where it was introduced by Coase (1946) in response to Hotelling (1938). See also Frischmann and Hogendorn (2015).

[10] Note that this is a broader claim about ports having a public function that goes beyond stating that ports are public goods in the technical economic sense (see also Baird, 2004).

The proposed 'economization' of ports through marginal cost pricing clearly challenged such a public and national function of ports:

> The national interests which are supposed to motivate the European doctrine are elusive and nebulous. Nevertheless, most people would agree that the term somehow expresses the spirit which should guide port policy. (ibid., 4)

The rational economics of marginal cost pricing thus promised to dislodge the 'elusive and nebulous' national and public interest reasoning that marked port policy at the time. The interventions of economists like Heggie, Walters and Bennathan, based on the mainstream neoclassical economic principle of efficiency, thus threatened to challenge the perceived national and public interest of ports and 'protectionist' maritime policy, which would not be received lightly by port authorities and other governing bodies.

Given these political strictures, it is no surprise that the economics of marginal cost pricing for ports found a more willing ear elsewhere. Circumventing port authorities and other national policy bodies, the emerging ideas of rational port pricing found a first receptive audience at international organizations whose aims reached beyond narrowly defined national economic goals or shipping interests. As Goss noted, in the 1960s shipowners and national port authorities had been highly sceptical of economic research, since the "dissemination of scientifically-based ideas on shipping economics was a deliberate policy intended to moderate the exaggerated claims often made by interested parties" (Goss, 2002, 399).

In the 1960s and 1970s, international organizations such as UNCTAD, the World Bank, and the OECD however began building their economic research capacities in the field of transport and shipping (Stern and Ferreira, 1997). The establishment of UNCTAD in 1964 presented a first step in this direction, and international shipping was one of UNCTAD's first policy concerns (UNCTAD, 2014). The UNCTAD's Shipping Committee had begun to attract maritime economists, opening its policy advice to more rigorous economic analysis (Metaxas, 1983, 148). The committee delivered reports critical of the shipping conferences, which signalled its efforts to put maritime economics to work for promoting free trade, development, and the validity of a scientific approach (Goss, 2002, 394 and 400). In 1975, UNCTAD published a first report addressing the question of port pricing (UNCTAD, 1975).[11]

During the 1970s the economic analysis of transport infrastructures, however, got more play at the World Bank. Stern and Ferreira

[11] Alternative approaches for assessing port costs and port prices, other than marginal cost pricing, were explored at the time. Bromwhich (1978) suggested alternatives and UNCTAD was exploring alternative options based on the notion of fully distributed cost (quoted in Bergantino, 2002, 361, n. 14).

(1997, 531) describe how this period was characterized by an increased interest in the application of basic microeconomic principles and the role of prices, notably in the economics of transport infrastructures. One of the earliest World Bank Working Papers on transport economics was in fact Alan Walters' book-length paper on 'The Economics of Road User Charges' (1968). The World Bank's search for a more solid economic footing for its infrastructure projects is reflected in the foreword to Walters' paper by the then President of the World Bank, Robert S. McNamara:

> I would like to explain why the World Bank Group does research work, and why it publishes it. We feel an obligation to look beyond the projects we help to finance towards the whole resource allocation of an economy, and the effectiveness of the use of those resources. Our major concern, in dealings with member countries, is that all scarce resources, including capital, skilled labor, enterprise and know-how, should be used to their best advantage … Finally, we are required by our Articles, as well as by inclination, to use objective economic criteria in all our judgments. (In Walters, 1968, v)

Walters' paper on marginal cost pricing for roads had a big impact on future research on transport at the World Bank (Stern and Ferreira, 1997, 554), and continued to inform its policy recommendations (Grosdidier de Matons, 1986, 274).

It is in this context of development policy at the World Bank and the need to assess port investments where marginal cost pricing ultimately found a willing ear. As stated by Director of the Transportation Department, the World Bank sought to put its programs on a more solid economic footing:

> In its operations in developing countries, the World Bank has encountered a large variety of pricing practices and widely diverse effects on efficient port operation. In the belief that there must be a systematic set of principles that would much improve port pricing, professors Esra Bennathan (of the University of Bristol) and A. A. Walters (then of the London School of Economics) were asked to undertake this study. (Foreword, Bennathan and Walters, 1979, xiv)

Walters and Esra Bennathan were asked to repeat Walters' feat on road pricing for port pricing in developing countries (Stern and Ferreira, 1997, 554-555), which resulted in *Port Pricing and Investment Policy for Developing Countries* (1979). The book provides a well-elaborated plea for marginal cost pricing. While pleased with the study, it is telling that the World Bank director remained somewhat apprehensive about the 'radical' nature of some of its proposals:

> The main conclusion of *their sometimes involved discussion* is that the main basis of port tariffs should be marginal cost. But within this general conclusion, certain *rather surprising and unorthodox recommendations* emerge, such as the proposal that ports should charge congestion levies. (In Bennathan and Walters, 1979, xiv, emphasis added)

McNamara's comments underscore the wish of the World Bank to base its port policy on firm economic reasoning that goes beyond narrow national economic interests, but also highlights the relatively radical nature at the time of applying marginal cost pricing to ports.

This episode shows how the push by economists and the pull from international organizations made marginal cost pricing a tool for 'economizing' port policy. From earlier applications in transport economics and road pricing in particular, the economic principles of marginal cost pricing for ports were ready, tested and available. Because these principles ran counter to the perceived national and public interest of public port authorities and government, and the particular interests of shipping lines, economists found a first audience for their ideas among international organizations. Only there, increasingly mainstream neoclassical economic principles of pricing for efficiency could begin to challenge public interest principles, slowly embarking on a long march of global acceptance that would ultimately transform the field of port economics and port policy. In this early phase, marginal cost pricing was primarily a critical tool provided by economics and adopted by international organizations to challenge the predominant national interest principles of port policy, by putting these on a firmer economic footing. In interplay with economists, international organizations were important catalysts in promoting marginal cost pricing and the gradual 'economization' of port policy it entailed, switching it from policy based on public, national interest principles to one governed by neoclassical microeconomic principles.

2. Port Pricing enters EU Policy: Marginal Social Cost Pricing as a Tool for Integration and Competition

The legacy of the early episode of port pricing in the 1970s becomes clear when one considers the making of European Union policy on ports in the 1990s. During this period, marginal social cost pricing was turned into the cornerstone of EU policy on ports. While this episode underscores the march of marginal social cost pricing in port policy circles, it also shows that the interaction between economics and its audience took a new form.

2.1. EU Port Policy: A New Audience for Marginal Social Cost Pricing

Since the establishment of the European Coal and Steel Community in 1952, transport has been a central concern in European policy (Chlomoudis and Pallis, 2005). The signing of the Treaty of Rome in 1957 establishing the European Economic Community brought the first attention to ports (Bird, 1967), albeit with limited impact. This only changed in the 1990s, when due to further integration of the internal market and enhanced competition, a number of EU policy initiatives on transport and port policy were launched under the auspices of the Commissioner for Transport, Neil Kinnock (Chlomoudis and Pallis, 2005; Verhoeven, 2009).

The first policy document devoted to ports was the European Commission's 1997 *Green Paper on Sea Ports and Maritime Infrastructure*. It presented a first proposal for a more uniform, European framework for port pricing. It argued that the formation of an internal market and increased competition in Europe put increasing pressure on the traditional national character of ports. Because of "disappearing national (captive) hinterlands," issues of "pricing, port development and financing decisions of a particular port may have marked effects on its neighbors, nationally and internationally" (EC, 1997, 6). With increased European and international trade, differences in pricing mechanisms between European ports, and especially differences in the role of public funding, have possible distorting effect for the entire community. The Commission therefore concluded that "the 'general economic interest' argument loses weight, leading to a more commercial and universal attitude towards pricing and infrastructure funding" (ibid., 12).

Putting its focus on port pricing, the Commission also appears to stave off a contentious discussion on the potentially distortive effects of public funding to ports, and EU rules on state aid:

> Until now the Commission has not considered public funding of port infrastructure which is open to all users as aid. However, as ports are increasingly considered as terminals having mainly commercial activities with greater involvement of the private sector, and competition is strong on a Community-wide basis, a different approach could be desirable for the future. Therefore, the Commission finds that port infrastructure should be priced in such a way that users should bear the real costs of the port services and facilities they consume. (ibid., 2)

For the European Commission, harmonizing port pricing thus constituted a politically expedient measure to tackle the increasingly tenuous place of ports between public purpose and market competition. Besides a general promise of improving port efficiency, a uniform framework for port pricing would especially help the Commission "to meet the Community's responsibilities under the Treaty to ensure free and fair competition in the port sector" (ibid., 5) while at the same time steering the public involvement in ports clear from state aid concerns. The implementation of marginal social cost pricing proposed by the European Commission was hence not in the first place driven by efficiency considerations but was instead aimed at creating an internal market undistorted by state aid and other protectionist measures, forcing all ports to follow the same pricing rules.

To develop a common framework for port pricing that would overcome potential distortions, the Green Paper considers three alternative approaches: average cost pricing, charging for operating costs, and marginal social cost pricing. The Commission rejected the first two on the grounds that average costs would overcharge for historical sunk costs and the second would undercharge. It hence concluded: "The Commission, therefore, considers that port charges could be set in line with marginal costs, which would also take into account new investments" (ibid., 15). The Green Paper proposed that the Commission would make an inventory of existing charging practices in European ports to ultimately draw up a framework "on port tariff regimes" that, following the principle of marginal social cost pricing, would form the basis for a new Council directive.

There are few references in the Green Paper in support of the endorsement of marginal social cost pricing. The ideas, however, could be traced back to an earlier Commission Green Paper titled *Towards Fair and Efficient Pricing in Transport* (EC, 1995), also drawn up under the responsibility of Commissioner Kinnock. The central argument of this paper was that economic instruments and market-based solutions were preferred for dealing with transport externalities ranging from congestion to accidents to air pollution, and to noise: "Prices have to be right in order to get transport right" (ibid., 50). It speaks favorably of marginal social cost pricing when discussing pricing of road and rail infrastructures, and congestion for instance, taking its cues from OECD research and Walters (1968). Marginal social cost pricing found a willing ear again at another international institution, about to be made into the cornerstone of EU port policy.

In 1998 appeared a comprehensive transport White Paper, titled *Fair Payment for Infrastructure Use: A Phased Approach to a Common Transport Infrastructure Charging Framework in the EU* (EC, 1998). Building on similar arguments, it claimed that in order to avoid distortions, EU-wide competition would benefit from a comprehensive system of pricing. It insisted that "the same fundamental principles should be applied to all commercial modes of transport in each Member State of the European Union." It concluded that "the only charging approach that fully satisfies … is marginal cost charging" (ibid., 6) and the "Commission proposes that a framework should be drawn up that would introduce the type of charging in all modes at Community level" (ibid., 8). With a great sense of ambition and urgency, then, the White Paper turns marginal social cost pricing into a general norm and tool for the EU's entire transport policy.

The successful march of marginal social cost pricing in EU port policy was short lived. The Green Paper was met with significant opposition from various directions (Pallis, 1997). In a speech at a port conference, Commissioner Kinnock (1998) relayed that the issues of port financing and the Community framework for port pricing were most contested. While most parties were in agreement with the aim of fair competition, Kinnock tellingly summarizes the criticism as follows:

> However, at the same time some have quite naturally expressed doubts as to whether the proposed Directive on charging is the right instrument for achieving these important principles. "Bureaucratic" and "theoretical" were the words most frequently used by those who raised this question.

The Commission's proposals on port pricing were indeed striking in the bureaucratic way it attempted to apply the theoretical principles of marginal social cost pricing as an administrative tool of EU port governance. After the 1998 White Paper, marginal social cost pricing quickly receded into the background in favor of "transparency" of financing and charging practices (e.g. EC, 2001a; 2001b). The EU Regulation that was adopted in 2017 was thus titled, "establishing a framework for the provision of port services and common rules on the financial transparency of ports" (EU, 2017).

2.2. A New Role for the Economics of Marginal Social Cost Pricing in EU Port Policy

When comparing the public use of marginal social cost pricing in EU policy with its earlier public engagement in the 1970s, two aspects stand out. The first concerns the role of academic economics and the second is the function of marginal social cost pricing in policy. The ambitious plans of the European Union on port pricing had ushered in a new involvement of economists. Where economists in the 1970s used marginal social cost pricing to critique the existing policy consensus and only found a willing ear with international organizations, their role changed significantly in the 1990s. In the case of EU port policy, economists took an active role in formulating the policies in which marginal social cost pricing became the preferred standard. Economists were evidently deeply involved in introducing marginal social cost pricing as the standard for EU transport. Economists working for the Commission probably had the most direct impact. One such economist is Gert Jan Koopman, a member of Kinnock's cabinet, who had been an outspoken advocate of market-based solutions for externalities problems in transport (Koopman, 1995). Koopman had previously worked for the Dutch Central Planning Bureau and as an economist at the DG Economic and Financial Affairs at the Commission. The 1995 Green Paper *Towards Fair and Efficient Pricing in Transport* (EC, 1995) clearly bears his influence (compare Koopman, 1995) and he appears to have been one of the Commissions' leading voices on pricing in EU transport policy of the late 1990s. Moreover, several academic economists were regularly involved as consultants in conducting studies and drafting policies. Most visible in this respect is Hercules Haralambides, a maritime economist based at the Erasmus University Rotterdam, the Netherlands. According to his CV he was a member of various advisory committees of the transport Commissioner, Neil Kinnock.[12] Haralambides drafted an early version of the Green Paper.[13] He was also leading a study (ATENCO) that was conducted for the European Union as a follow up to its 1998 White Paper, in which other port economists such as Richard O. Goss and Trevor E. Heaver participated.[14] In a paper summarizing his insights, Haralambides writes: "Many of the ideas developed in this paper have benefitted from numerous discussions with staff of the European Commission over the period of my involvement in the preparation of its Green Paper on Ports and Maritime Infrastructure" (2002, 342). In the paper, Haralambides defends the EU position, claiming that long-term (sic.) marginal cost pricing would provide a "powerful pricing discipline that can eliminate subsidies and establish a level playing field among ports" (2002, 341). Significantly, Haralambides underlined that marginal social cost pricing is no longer purely an academic idea, but has gained practical political importance:

> The issue of port pricing in maritime economics has not arisen only out of academic interest but as a response to the need felt in the port industry itself for a self-discipline mechanism that, if consistently applied, would eventually lead to the recovery of port investments and to future investments that are largely demand driven. (Haralambides, 2002, 340) [15]

In another paper on EU policy, Haralambides reiterated the entanglement and emerging alignment of economic reasoning and political reason:

> The paper argues that the prime goal to be pursued at a European level is to achieve a level playing field among competing commercial seaports. It reviews … the past and present efforts of the European Commission in this area, the difficulties and challenges these efforts are faced with and, finally, it attempts to indicate the way forward; a way consistent with Europe's political thinking, priorities and realities. (Haralambides et.al., 2001, 368)

[12] http://ec.europa.eu/competition/consultations/2007_maritime_guidelines/elaa_annex3.pdf (last accessed: 1 August 2018).

[13] Haralambides published this draft as part of a compendium of collected papers published on this website: www.assoporti.it/media/1407/port-book-incl-introduction.pdf (last accessed: 1 August 2018).

[14] The academic expert group of the ATENCO study included besides Haralambides as chair: Karl-Heinz Breitzmann, Richard O. Goss, Sidney Gilman, Trevor D. Heaver, Ugo Marchese, Eddy van de Voorde.

[15] A similar confirmation of the symbiosis between economics and EU policy, can be found with Goss and Stevens (2001, 129), defending the EC's endorsement of marginal social cost pricing: "As part of this approach the EC has commissioned several studies aimed at introducing such policies into European ports' charging systems; indeed, some of the points made here have arisen from these studies. This paper is, therefore, intended to be of practical importance in the current development of policies as well as, we hope, of theoretical interest."

These examples serve to show that by the end of the century, an intimate entanglement had emerged between economists, economic reasoning, and the policy objectives of the European Union around the topic of marginal social cost pricing in ports and port policy. In this phase of its public life, the economics of marginal social cost pricing gradually shifted from being used as an *external* principle to critique policy to become an *internal* principle serving as an instrument for policy.

This is not to claim that all economists supported the EU's use of marginal social cost pricing. Unlike Haralambides, Goss, and Verbeke who were involved in EU policy making, there were also some who took a much more distant and critical stance (notably Bergantino, 2002; Rothengarther, 2003; Abbes, 2007; Acciaro, 2013). In general, the critiques were conceptually inspired, but empirical questions played a role as well. William Vickrey famously stated in 1948 that average cost "can be measured but cannot be defined" non-arbitrarily while marginal cost "can be defined but cannot be measured" (Vickrey, 1948, 232). In their review of EU policy, Abbes (2007) and Acciaro (2013) note that empirical studies on port pricing were a rarity when compared to, for example, the rail sector. Others pointed out that marginal social cost pricing posed the problem of cost recovery when marginal cost falls below average cost. The diversity of charging practices and institutional settings among EU ports and member states was also seen as a hindrance which could cause unintended effects when marginal social cost pricing was applied across European ports. And the argument was made that marginal social cost pricing and free and fair competition were two fundamentally incompatible goals.

The intimate entanglement between economics and EU policy thus affected the use of the concept of marginal social cost pricing in policy. In the 1970s, marginal cost pricing functioned as a critical tool developed by economists that used an economic rationale to challenge reigning public and national interest notions of ports. In the hands of economists consulting for the EU, this function was expanded, adding a specifically European, namely *integration* rationale. As it was employed in EU policy, the function of marginal social cost pricing was not only to promote economic efficiency, but also intra-European port competition ("to ensure free and fair competition in the port sector", EC, 1997, 6) while simultaneously staving off concerns about state aid rules. Even though policy documents have generally tended to use vague yet appealing phrases such as 'level playing field', the aims of EU port policy were fairly clear. The implementation of marginal social cost pricing proposed by the European Commission was directed at creating a market undistorted by state aid or other protectionist behaviour, demanding that all ports follow the same pricing rules. At this point in its public life, marginal social cost pricing had been reworked by economists consulting for the Commission into a political tool for European integration (and may have acted as a unifying idea in this emerging and heterogeneous institutional context, cf. Jabko, 2006).

Kinnock's summary of the criticism of EU port policy neatly illustrated the instrumentalized use of marginal social cost pricing that considered it both "theoretical" and "bureaucratic." The EU's port policy was indeed using the theoretical concept of marginal social cost pricing in a bureaucratic way, as an administrative instrument to achieve the political objectives of the EU. In the hands of consultant economists, the academic concept of marginal social cost pricing was put to a new political use, which was to further European integration by leveling the playing field between Member States and ports. While with hindsight it seems that the Commission's economists overestimated the political and practical applicability of their theoretical concepts, they nonetheless contributed to a further 'economization' of port policy discourse.

3. Conclusion: The Public Life of Marginal Social Cost Pricing for Ports

This paper examined the public life of the idea of marginal social cost pricing for ports. It did so by tracing the ways in which economics interacted with its audiences in two different historical episodes. The contrast between the two episodes in the history of marginal social cost pricing in ports and port policy is significant. The first episode revolved around the emergence of marginal social cost pricing for ports in the 1970s. The project of marginal cost pricing of the 1970s effectively undermined the prevailing principle of national public interest in port policy by replacing it with the neoclassical principle of economic efficiency. It was shown that the drive towards using the principle of economic efficiency in port policy originated neither from calls from port authorities, nor from the demands of large shipping interests. Marginal cost pricing in ports was largely pushed by economists, who were plying their well-established conceptual tools from other areas of transport economics to ports as a new area of study. The idea could however only become successful if it would find a willing audience for these conceptual innovations. When international organizations such as UNCTAD, the OECD and especially the World Bank, took an interest in marginal cost pricing for ports, they created a fertile context in which these ideas could be developed, disseminated, and brought to political fruition.

The second episode took place in the 1990s. At the time, marginal social cost pricing was emphatically embraced by another international institution, the European Union. The European Union had adopted marginal social cost pricing as the cornerstone of its budding port policy to serve as an active tool to promote a level playing field and increase competition in Europe. Between the 1970s and the late 1990s, the relation between economics and its audience had undergone a major shift. As an international institution, the European Union was no longer merely a receptive audience of the economics of marginal social cost pricing, but manifested itself as an ardent promotor of marginal social cost pricing in port policy. With the European Union's embrace of marginal social cost pricing, the relationship of economists and their audience had changed accordingly. It was shown that economists had either adopted the role of intellectual defender and even author of the Union's policies, or were forced to become modestly critical interlocuters of marginal social cost pricing for ports.

The two episodes provide an interesting insight into the remarkable twists and turns in the history of port pricing. They contain at least three lessons with a broader significance. First, they underscore the role played by economists in advancing marginal social cost pricing and the 'economization' and transformation of the public control over ports and other utilities. Backed by the growing dominance of neoclassical economics, the ascendance of marginal social cost pricing was first advanced as a tool to make port pricing more rational and to wean it away from strictly public or 'political' considerations; later, marginal social cost pricing became the core principle of EU port policy. Secondly, the two episodes highlight the changing role of economics and its relation to its various audiences. In the first episode, economics was in the lead in developing and adjusting the ideas of marginal cost pricing to the context of ports and port policy. In this phase, economists were actively in search of an audience to demonstrate their theoretical prowess. The second episode illustrated how these roles had shifted significantly. No longer merely a receptive audience, the European Union showed itself a very active promotor of the idea of marginal social cost pricing, with academic economists either lending their expertise in favour of EU port policy or forced to take the role of critical bystander. As such, it is a telling illustration of the historically intricate and variable interactions between economic and public reason.

The paper thus showed how the emerging field of port economics may have contributed to the 'economization' of ports and port policy, and how it interacted with some of its publics. Thirdly then, our findings about how port economics contributed to the 'economization' of port policy, provide some much-needed substance to claims that economics was not merely a passive onlooker within the broader shift of what has been labelled liberalization, deregulation and marketization that took place from the 1970s to 2000s. The two episodes in port economics demonstrate that economists played a leading role in one aspect of the economization of port policy, but could only do so through their engagement with some of their audiences. In their research on ports, economists such as Alan Walters, Richard Goss and Hercules Haralambides, promoted a distinct policy agenda. The paper has thus offered a novel contribution to a more detailed understanding of the involvement of economics in the micropolitics of deregulation, liberalization, and privatization that has swept the world since 1970. It has shown that 'small' and applied economic interventions were equally important in forging such new political projects as were the more visible ideological battles. Alan Walters is sometimes called 'Europe's Milton Friedman', due to his role as chief economic advisor to the Thatcher government and his guidance of its monetary and fiscal policy.[16] As this paper shows, his contributions to transport economics on road pricing and his forays in port economics may however have been equally important in earning that sobriquet.

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16 This description was given by John Blundell in an obituary delivered at the Mont Pelèrin Society in Sydney on 15 October 2010. See: https://iea.org.uk/blog/obituary-%E2%80%93-professor-sir-alan-walters (last accessed: 4 May 2017).

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David Colander and Craig Freedman, *Where Economics Went Wrong: Chicago's Abandonment of Classical Liberalism*

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Colander and Freedman use their story of the Chicago School's abandonment of classical liberalism as a way to get at their fundamental argument, which is about the failure of American economics generally to maintain appreciation for both economic science and the art of economic policy. Economists, the authors argue, have subsumed art within science in the effort to turn economics into an applied policy science. The focus on the Chicago School emerges from Craig Freedman's extensive familiarity with the Chicago tradition through his interviews with Chicago economists, and his previous book *Chicago Fundamentalism: Ideology and Methodology* (Freedman, 2008). Colander adds part of the argument's frame—the emphasis on the lost art of economic policy (Colander, 1992), his knowledge of the American Keynesian tradition (Colander and Landreth, 1996), and his clear writing. After a brief restatement of their argument, this review will focus on the part that Chicago economics plays in their story, and some brief remarks complicating Colander's story of the lost art of economic policy.

In brief, Colander and Freedman's argument is that modern economics traded the appropriate balance between science, ethics, and the art of policy-making, found in the classical political economy of John Stuart Mill and John Neville Keynes, for the hope of creating an economics discipline that could shed the woolly-mindedness of ethics and art, and stand on its own as the true *applied policy science*. Both

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Milton Friedman and Paul Samuelson, who shared the classroom as students of the classical liberals Jacob Viner and Frank Knight at the University of Chicago in the early 1930s, share responsibility for this move (which neither Viner nor Knight would have approved of). "The Methodology of Positive Economics," Friedman's (1953) famous essay, provided a framework for Chicago-oriented economics, while Samuelson's various welfare economics essays set the framework for American Keynesianism. The policy science that emerged was seen as the equivalent of a mechanic finding the right tool to fix your car's engine (Friedman's analogy), or a dentist choosing the right tool to clean your teeth (see Keynes, 1930). In this sense, post-war Keynesianism *and* post-war Chicago, including the latter School's considerations of industrial organization, externalities, public finance and the rest, enshrined the "economist as applied policy scientist" as the new archetype of a modern policy advisor. Of course, the two schools differed in their findings, and Colander and Freedman argue that Chicago economists in particular came to emphasize empirical evidence as the conclusive difference. In that context, ideological leanings and empirical evidence often conjoined to produce policy studies that followed predictable patterns. Time after time, Chicago economists provided empirical evidence to support free market policies; mainstream economists used empirical studies to support Keynesian policies.

At its core, then, modern economics, especially at Chicago, wedded ideology with methodology in the quest to create an applied policy science. Here I want to point out that Colander and Freedman's argument about Chicago economics could have been strengthened if they had made more use of the Chicago School's second foundational methodological assumption, encapsulated in the Latin expression which gave the title to the article articulating the principle—*De Gustibus Non Est Disputandum* (Stigler and Becker, 1977). Assuming that no account need be given for tastes or values means that Chicago-oriented economists can take tastes as given, and make observed changes in costs or constraints the explanatory factor in scientific policy evaluations. Friedman's method and the Stigler/Becker *de gustibus* assumption fit together hand-and-glove to create the methodological framework for the Chicago School's work from the 1960s to at least the early 1990s.

There is much to appreciate in Colander and Freedman's account of what went wrong with economics. To their credit, they do not seek to counter the scientific conclusions of modern economic research. Nor do they attempt to extend their research beyond Becker's time at Chicago. What they do in the final three chapters, however, does extend their research by considering a) the "Virginia School"—best represented they say by Ronald Coase and Jim Buchanan (Colander has seen an advance copy of Levy and Peart, 2020), b) what a classical liberal alternative focused on "argumentation for the sake of heaven" (see chapter 8, 120-138) could provide, and c) a look at several contemporary economists, including Amartya Sen, Paul Romer, and Dani Rodrick, who the authors believe embody the classical liberal alternative today. The conclusion of those chapters is upbeat, suggesting the promise of what might be if these various ideas or personal styles of applying theory to policy are followed. Perhaps an appropriate follow-up to those chapters could have been the contrast of the views presented there with an evaluation of the consequences of the abandonment of economic theory for piecemeal studies using experimental methods that render economic theory superfluous (Biddle and Hamermesh, 2017). Much of the experimental and random control trials literature shows little of the judgment about the application of their science to economic policy that Colander and Freedman emphasize. Vernon Smith, a missing classical liberal voice in this book, would have usefully served as a another voice crying from the wilderness, in this case, of experimentalism (see Smith and Wilson, 2019).

Colander and Freedman mount such an effective argument for the resurrection of a classical liberal attitude toward the science, ethics, and art of economics that one almost misses a potential line of criticism that only a Frank Knight or some members of the Virginia School might catch. To appreciate the criticism, we need to return to the world of the two classical liberals Colander and Freedman lead off with—J.S. Mill and John Neville Keynes. Both Mill and Keynes lived in a world where democratization was incomplete, and the policy-maker was a gentleman of a certain class whose education Neville Keynes shared. Mill was born during the debates that led to the abolishment of the slave trade, was a young man as the vote was extended to middle class men and slavery abolished, and died a decade before working class men received the vote. Harriet died fifteen years before J.S. did, and it was another fifty years before women received the same rights to vote as men. Neville Keynes was born into a world where working class men had just received the vote, and lived to see women receive the same rights. He and his son Maynard also lived to see the social and political order that had been the context for classical liberalism ripped to shreds twice. Those results were frightening. Maynard Keynes' conclusion was "that civilization was a precarious crust erected by the personality and will of a very few" (Toye, 2000); the judgment of that few would decide whether civilization or chaos would continue.

Frank Knight drew a somewhat different conclusion. Colander and Freedman recognize in a footnote the infamous Knight lecture "The Case for Communism: From the Standpoint of an Ex-Liberal" (Knight, 1991). "The Case for Communism" was delivered on the eve of the 1932 presidential election, and contained a paradoxical exploration of the prospects for positive change in a democratic society (Burgin, 2009). If the radical challenge of communism focuses on the weakest aspects of capitalism, and if democracy is "government by discussion," but public discussion seldom takes the real problems of a democratic society seriously and often devolves into salesmanship and political posturing, is there still hope for a liberal democratic society such as the one that Mill and Neville Keynes promoted? Despite his constant and paradoxical questioning of free markets and democratic discussion, Knight's arguments in the lecture consistently point back to the core tenets of the classical liberalism that he (and Colander and Freedman) believed was in danger of being abandoned: markets function sufficiently well in terms of the spontaneous coordination that economic theory indicates, a constitutional framework consistent with markets and democratic discussion creates constraints on political disorder, and family and social life create a framework that enforces social norms. For Knight, the future of a liberal society did not depend upon the elite few who knew what was right (Knight, 1946). Good judgment in a liberal democratic order would balance the insights of economic theory, ethics (Knight, 1951), democratic theory, family and societal order, political theory, and institutional analysis (Knight, 1935) to create a civilizational context within which freedom would survive. Throughout the rest of his career, Knight sought to find the balance of economics, democratic philosophy, and ethics that would enable a liberal society to survive. Colander and Freedman remind us that the same challenge remains with us today.

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Louise I. Shelley, *Dark Commerce. How a New Illicit Economy Is Threatening Our Future*

Princeton and Oxford: Princeton University Press, 2018, 357 pages, ISBN 978-6066916170186-3

Clotilde Champeyrache*

Louise Shelley is not a newcomer to the field of criminality: a historian at George Mason University, she is also the founder and director of the Terrorism, Transnational Crime and Corruption Center and the author of previous books on illegal traffics such as *Human Trafficking: A Global Perspective* (2010) and *Dirty Entanglements: Corruption, Crime, and Terrorism* (2014).

In this new book, Louise I. Shelley aims at providing a comprehensive look at the world of illicit trade. Accordingly, she adopts a multidisciplinary approach encompassing social sciences, business and economics, history, international relations, and—in a more original way—science and public health, environmental studies, and cybercrime. The wide range of the approach shows in the number and the diversity of references. The book is based on interviews with practitioners and field-work travels. One could even get the impression that each chapter could, in itself, be turned into a book.

The subject of concern is criminal trade. Its estimated annual revenue is supposed to be around 1.6 and 2.2 trillion dollars, which accounts for around 1.5% of global GDP. It represents an economic field wider than illegal trade, which relates to criminal acts (for instance drugs, human, and arms trafficking). According to Shelley, illicit trade also relates to various forms of trade that are less clearly harmful and legally defined. The illegal nature of these forms of trade is often not transparent and, as a consequence, it gives birth to "grey areas of commerce" (7) that are closely linked to corruptive processes but are clearly not "enforcement priorities", meaning by that term that the control over those illicit activities is not high on the political agenda.

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The facts are clear and can be summed up in three major features: the growth of this illicit trade is exponential; it benefits from cyber technology (computers and social media); its impact on the planet and human health is both irreversible and harmful. These facts are clearly established thanks to scientific analyses that measure data such as extinction of species, decline of bird, and animal populations, destruction of forests and other habitats, degradation of public health.

The aim of the book is to draw attention to the "dark sides of the globalized digital economy" (3). Most interestingly, as explained in chapter 1, illicit trade is not a new phenomenon. It dates back to the Ancient world—smuggling, counterfeiting, or piracy being among humanity's first businesses—and has also seen states involved in illegitimate behaviors and corruption. Nowadays the problem is the impact which the criminal use of new technologies has upon the range, pervasiveness and dangerousness of illicit trade. Shelley coins the term "computer-facilitated crime" to refer to the increased scale of illicit trade. Many novelties are introduced due to computers and social media. For instance, internet and encrypted software spread impersonal and anonymized trade, allowing for vast profits in relatively short periods of time, in both the legal and the illegal economy. It is also sustained by new currencies such as anonymized cryptocurrencies. Illicit trade also refers to new commodities: tangible goods such as drugs, human beings, antiquities, rhinoceros horns and so on are still traded, but trade in the cyberspace promotes also intangible commodities. Indeed, malware, botnet and ransomware are new illicit commodities based on algorithms. Frauds also prosper on virtual products, namely identity, password, and money theft. Consumers and organizations directly suffer financially from embezzlement of bank accounts, theft of computer data and violation of intellectual property rights.

One of the most interesting aspects in Louise I. Shelley's *Dark Commerce* is to put illicit trade in a wider context thanks to highly-documented and varied field examples. Thanks to this multidisciplinary and global approach, the author avoids the simplistic argument based exclusively on a cost-benefit analysis, an approach now dominating, after the work of Gary Becker, the economic analysis of crime. The costs and irreversibility of illicit trade have to be assessed in the long run. Furthermore some costs are not financial but rather political. Thus, illicit trade cannot be understood merely through the behavior of individuals confronted to the alternative "break a law / abide by law". The frontier is, indeed, now blurred and the institutional dimension of crime cannot be left untold.

The focus of the introduction on recent technology and its dreadful impact on the spreading of illicit trade may leave unnoticed another fundamental lesson from Shelley's case studies. As stressed in chapter 8, technology is a driver rather than the real cause of the exponential growth of dark commerce. Technology is a tool in the hands of many actors in a specific context where illicit trade has become more and more tolerated, even from an opportunistic point of view. As a consequence, it becomes highly unrealistic to consider the upperworld and the underworld as two watertight spheres of activities. The blurring of the frontier already appears in the distinction established by Louise I. Shelley between illegal and illicit trade. A further step is taken when the role of the state in the process is taken into account, showing some dubious links between (some) state actors and underground activities. North Korea and its state involvement in environmental and computer crime, or weapon and drug trafficking, gives a good example of how a state can also take political advantage of illicit trade (210 sq). The official use of illicit trade by North Korea does not only stem from greed and profit-seeking strategies; it also aims at undermining rival states, such as the United States, thanks to the illegal control of nuclear weapons and the diffusion of harmful synthetic drugs for the American civil population.

Even though some states benefit from illicit trade, others suffer from it. Shelley's assessment is that, all in all, the role of states is declining—dark commerce can contribute to the unmaking of states—while that of non-state actors—criminals, terrorists insurgents—is on the rise. For instance, terrorist groups in states plagued by civil wars—Syria is a perfect example of the phenomenon—resort to illicit trade (in antiquities, embargoed oil, environmental resources, weapons, human beings or drugs) in order to fund their activities. Once again, this fact is replaced in a more global context: there is a continuum between conflicts, illicit trade, and global human consumption of illicitly sourced resources. Therefore, because they are entangled, problems must be tackled together. The same holds for environmental crime, climate change and population displacement: in the absence of viable legal economic opportunities, displaced people will in turn develop further illicit trade. It is even more the case if, as is perfectly exemplified with rhinoceros horn trafficking, actors in charge of abiding by law do not perceive such rules as legitimate. Criminal tacit rules (such as the authorization to poach) then become, for some people, rules of conduct.

Another particularly interesting point in Shelley's book is the role of legitimate actors as facilitators in illicit commerce. Individuals and corporations sustain illicit trade. Sometimes they do so unwillingly: many citizens buy illicit goods on online marketplaces without even knowing that they enrich criminal organizations. In other cases, companies and individuals willingly and openly support illicit businesses, taking advantage from them. It explains phenomena such as the glorification of the criminal world in culture: narco-corridos in Latin America, but also the films generated by the powerful and well-financed entertainment industries. Once more, the entanglement between criminal and legitimate interests is worrisome. It contributes to the unmaking of state legitimacy and to the blurring of the frontier between what is legal and illegal.

Perspectives are bleak, to say the least. And the conclusion of the book does not leave much room for hope. To be effective, the fight against organized crime urgently requires an all-encompassing endeavor from all actors, at both the individual and the collective levels. In particular, states must strive to regain forces and legitimacy in establishing what is forbidden or not. International law and controlling devices must be implemented. Financial and corporate worlds are singled out for their complacency with illicit persons and activities. Unfortunately, past evidence shows that, although the effort is highly needed, the establishment of more supervising rules is more a wishful thinking than a realistic perspective.

In brief, Shelley's *Dark Commerce* is worth reading for its worrying but extremely realistic and fact-based account of contemporary organized crime businesses. Some could argue that the extreme wealth of references is paradoxically a weakness of the book: indeed, Louise I. Shelley's work is empirical and lacks theoretical background. Nevertheless, it is necessary to start from the ground in order to, later, build a convincing theory of (organized) crime. It is also worth reading for the acuteness of the analysis of the intrinsic weaknesses of states, societies and individuals in front of the various new criminal threats.

Economists in particular should pay specific attention to the admonitions contained throughout the book. Crime economics, already a minor branch of the discipline, is dominated by the Beckerian approach. Often insulated from field work and empirical data, the Beckerian models reduce criminal activities to merely profit-oriented rational behaviors. Rhinoceros horns trafficking, North Korea's involvement in criminal businesses, implications of terrorists in trafficking, and other examples show that there is more to crime, than such simplistic assumptions. Collective behaviors are at stake, too, and profit—though a motivation—is not the only driver for crime. Institutional dynamics and power struggles have to be taken into account in order to work out an economic analysis of crime able to give a clear understanding of the illicit economy and, consequently, appropriate operational tools for public policy. Louise I. Shelley's work contributes to building an alternative, institutional approach to crime economics.

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Steven F. Railsback and Volker Grimm, *Agent-Based and Individual-Based Modeling. A Practical Introduction*

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Simon Scheller*

You have probably encountered the acronym *ABM* before, but in the unlikely event that you have not: Agent-based modeling (which is what ABM stands for) is a formal modeling technique in which complex (social) systems are represented on the level of individual agents and their mutual interactions, seeking to identify by means of simulation analysis how macro-level patterns emerge from agent interactions.

In recent years, agent-based modelers (such as myself) have become eager and proud to proclaim that their once nerdy niche methodology has moved closer to the mainstream of scientific research in numerous fields. One might argue about the degree to which this is true for different fields. Yet, papers using ABM are increasingly published also in mainstream science journals, and publications range across a large variety of disciplines (Macal, 2016). Economics is no exception in this regard (see e.g. Tesfatsion and Judd, 2006; Janssen and Ostrom, 2006; or more recently Geanakoplos et al., 2012; Klimek et al., 2015; Tesfatsion, 2018).

Not just advances in computational infrastructure account for this growing success. While ABM can still be seen as an evolving research program, important attempts towards unifications and standardisations in model analysis and presentation have been made. These attempts center around issues such as robustness and sensitivity analysis, conceptual tools like the so-called ODD (for: "overview, design and details") protocol or the modeling cycle, or the use of NetLogo as a widely shared software platform for implementing ABMs. If you don't know any of these: Do not worry, we will get to them.

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While such standards usually emerge at the frontier of current research enterprises, teaching ABM to students and junior researchers constitutes an important aspect for the adaptation and the widespreadedness of such standards in a larger community. In this article, I discuss Railsback and Grimm's *Agent-Based and Individual-Based Modeling* (henceforth abbreviated R&G's *ABIBM*), which has become a standard introductory textbook for aspiring agent-based modellers since the publication of its first edition in 2011. A quick and certainly highly unreliable Google search for "Agent-based Modeling syllabus" evidences this, as six out of the first ten syllabi (which include literature at all) use R&G's book as a primary resource. With now its second edition out in 2019, a closer look at *ABIBM* is warranted.

Before discussing *ABIBM*, let us ask: Why should economists and other social scientists even care about ABM? First as already argued, there is an increasing chance for having to engage sooner or later with research that involves ABM. Second and more importantly, ABM research promises to illuminate micro-macro relationships in complex social systems by modeling possible causal mechanisms explicitly. This helps in uncovering, understanding and explaining mechanisms of social dynamics, even in cases where data are hard or impossible to obtain. In this respect, the ABM approach is diametrically opposed to other data-driven methods, and thus promises a highly useful complementary tool for social science research in many different areas.

R&G intend *ABIBM* as a guide to ABM at advanced undergraduate or graduate-student level, both for university class teaching and self-study. Most importantly, the authors promise what one could call an "overall package" for using ABM to address scientific questions, including technical aspects of implementing, analysing and presenting ABMs as well an insight into ABM's methodological, theoretical and conceptual aspects (xii). In short: Work through *ABIBM*, and get started as an ABM researcher. Let us see how the book lives up to this goal.

As its subtitle promises, *ABIBM* really is a *practical* introduction to ABM. Reading the chapters is only one part of working with this book. Already on page 16, readers are invited to get started with NetLogo, and first code examples follow merely a few pages later. Each chapter is accompanied by a substantial set of practical (programming) exercises. While these start easy, they become challenging rather quickly and require continued effort to get through. To assist learners, documentation is very detailed for modeling and coding examples and exercises throughout the book. Additionally, plenty of supplementary material is provided online, and there exists an online platform for interaction with one's fellow ABM apprentices. The exercises also frequently feature examples from the NetLogo model library, which somewhat alleviates the burden of active programming before being able to look at and work with ABMs scientifically. This underlines one crucial characteristic of *ABIBM* 's approach: Theory and practice consistently go together, so you get started thinking right away about models, how they are used and what matters for good modeling.

Part I of *ABIBM* mainly caters to the primary needs just described: It gives readers an idea of what modeling is about and how it is done. Most importantly, R&G's well-known modeling cycle (8) describes the practice of ABM as an iterative process: Formulate a research question, derive hypotheses, implement a model, analyse it. By going through this cycle over and over again, each of these aspects is continuously refined. Importantly, this problem-oriented spirit of using ABM carries through the entire book, and advises readers to develop habits of mind that are essential to ABM and science more generally.

Part I also invites the reader to implement her very first model in NetLogo: The butterfly-hilltop-model is a simulation of how distinct movement corridors emerge when butterflies search for hilltops. When I started working with NetLogo as a young PhD student (using *ABIBM* 's first edition), I still recall my own surprise after seeing butterfly highways emerging after having written only a few lines of very simple code describing very simple movement procedures. This not only vividly illustrates ABM's potential to explain "much from little", but also embodies many people's continued fascination with ABM.

R&G's maybe most well-known methodological contribution is their *ODD*-protocol as a framework for describing ABMs based on characteristic model components (35). *ODD* stands for "overview, design and details", which constitute their three proposed steps of model description. The protocol starts by requiring a general overflow and purpose, followed by increasingly detailing distinct model components. Certainly, not all ABM publications explicitly follow the *ODD*-protocol and its many subcategories. Yet, the fundamental principle of spelling out a model's components in a structured and standardised way casts into a concrete form how formal modeling induces transparency. This is equally important for research communication and replication. Such a protocol also forces the modeler herself to be clear, consistent and thorough in her thinking and writing.

Part II introduces and discusses several common components of ABMs in detail, leading the reader through the "engine room" (233) of ABM. Each chapter provides a closer look at a standard ABM building block, what it can be used for, and how it is implemented. Apart from some components that are essential to most ABMs (like sensing, scheduling or adaptive behaviour), here you can pick and choose what you want to focus on depending on your interests and needs. *ABIBM* is modular in this regard: You need not read all chapters and do all the exercises to learn how to use ABM for your purposes. Further, different components are mostly presented on the basis of different models. Hence, wrapping one's head around each model demands substantial resources in terms of focus, time and effort, especially when one wants to do all the exercises thoroughly. While doing so certainly pays off in terms of acquired skill and experience, those readers with a more restrictive schedule will face trade-offs at this stage.

Part III turns the reader's attention towards applying ABMs to the study of real systems. It does so mainly by elaborating on the core challenge which every ABM researcher faces: How do we know that our models are appropriately "realistic", and how can we learn from them? In response to this challenge, R&G propose and elaborate their principle of *pattern oriented modeling* (234): As an agent-based modeler, we should design our models so that they reproduce not just one pattern we are interested in. Instead, we should evaluate to what extent they fare well on a multiplicity of such criteria, thereby comparing larger ensembles of models. On that basis, ABM can also be used for theory development: If we analyse our models in this pattern-oriented fashion, we can try to make deductions about, say, how individuals behave in certain situations, or what cognitive processes we can reasonably ascribe to them.

There is an ongoing debate within the ABM community about the issue of learning from very simple models, which is particularly prominent in the social sciences. Notably, while most of R&G's examples are taken from ecology, the two simple models the authors engage with are Duffy (2006)'s minimal intelligence trading model (R&G, 253f), and Schelling's (1971) segregation model (R&G, 286ff). The former model supposedly shows that an equilibrium price emerges quickly even on a market with minimally intelligent traders. Schelling's model, simulating the residency decisions of agents of two distinct groups, supposedly shows how spatial segregation can emerge already from rather moderate preferences for neighbor-similarity. I deliberately use the word "supposedly" here, as there is no general consensus on what these models really show. Arguably due to their very abstract nature, both models stand somewhat apart from the examples taken from ecology.

ABIBM 's moderate focus on ecology is not necessarily a hindrance for scholars from other disciplines such as the social sciences. These models are sometimes more easily accessible since it is clearer what their components represent in the real world. In other fields, however, agent-based models can be employed somewhat differently at times. In the social sciences and philosophy for instance, models are often taken to provide "how-possibly" explanations, claiming not to provide an *actual explanation* for a certain phenomenon, but only that some micro-mechanism would be *sufficient to generate* it. The methodological discussions surrounding simplicity, descriptive accuracy and the fundamental mode of learning from ABMs in different fields are lively and multifaceted, see e.g. Grüne-Yanoff (2009); Lustick and Miodownik (2009); Reiss (2011); Fumagalli (2016); Reutlinger et al. (2017) as a starting point. Tracing these discussions obviously lies beyond what can be sufficiently conveyed by an introductory textbook such as *ABIBM*. Thus, R&G's pattern-oriented modeling account should be considered as one voice in a broader debate. For ABM beginners, *ABIBM* nonetheless provides a good starting point for a worthwile broader exploration into these matters and offers a great introduction to ABM also for scholars from those other fields.

Part IV introduces the most important concepts and strategies for model analysis. R&G's basic idea consists in treating models as *virtual laboratories* for simulation experiments, where a range of scenarios can be explored systematically. Again, many practical examples are used to illustrate core tools, such as performing sensitivity and robustness checks with behaviour space, or producing contour plots to present one's results in an easily accessible way. Standardised tools in this category are of central importance to the credibility of ABMs in mainstream research domains. Well-performed sensitivity, robustness and uncertainty analyses are the agent-based modeler's answer to the question one frequently gets asked at non-ABM conferences: "How do we know your little toy model really holds?" Oftentimes, this criticism is not phrased as such, but rather comes in the form of "Have you tried modeling X?", or "What happens if you change Y?". Even though it is clear that one cannot pre-emptively answer all such questions, following the principles described in part IV provides a solid guideline for researchers as to what can reasonably be done to establish a model's credibility.

In summary, if properly worked through, *ABIBM* offers everything one needs to get started working with ABM scientifically, from basic techniques and strategies of model building, to the general ideas and core tools of how to do science with ABMs. It does so in an intuitive and accessible way, using numerous well-documented examples and exercises. All things considered, *ABIBM* is a great didactic tool, and I can recommend it wholeheartedly as a basis for both university courses and mavericks who want to get started all by themselves. For using *ABIBM* in university courses, it should be noted that one should take some time to carefully pick and choose the topics for a one-semester class so as not to overburden students with too much input, or failing to cover all areas sufficiently. This is especially true for picking exercises and examples, as they sometimes require quite some time to familiarise with. For maverick learners, it should be noted that patience and a certain amount of tolerance for frustration is demanded, as even a very good textbook can only provide guidance up until some point. In either case, you only really learn to use ABM if you get started with your own project. That is the real challenge, but can be very rewarding eventually.

In comparison to the book's first edition, not just the cover illustration has been updated from orange to blue. Most importantly, the second edition is based on NetLogo 6.0.4. This matters, as especially the transition from NetLogo 5 to 6 has brought some significant changes with it. Some functions and commands were added, some work differently than before, which often results in errors when models programmed in earlier versions are run in NetLogo 6. If you start with NetLogo as a novice, using version 6 is a no-brainer. Still, the transition is worthwhile also for experienced users, and certainly in order to avoid confusion in teaching. Furthermore, as is necessary for a rapidly evolving field like ABM, the second edition incorporates new sources, and keeps track of the field's most important developments. The essence of *ABIBM*, however, has remained the same.

Steven Railsback and Volker Grimm's personality as enthusiastic ABM researchers perspires from every pore of *ABIBM*. They deserve much credit for the didactical approach to learning ABM which this book embodies. It is certainly no overstatement to say that the ABM research community would be much smaller without *ABIBM* as a starter-pack for young researchers. At the same time, the authors deserve credit for the conceptual advances they have brought to ABM as a research practice, which are all contained in this book. It remains to be seen how the field of ABM keeps on developing in the future, and whether or not it can truly consolidate as a mainstream research practice. Coaching young scholars towards following a structured and problem-oriented approach to ABM research is crucial in that regard. The other task that remains to be taken up over and over again is to reach out to non-ABM scholars and join forces on the actual research frontier, in order to make agent-based modeling an embedded endeavour altogether.

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Bruna Ingrao and Claudio Sardoni, *Banks and Finance in Modern Macroeconomics, A Historical Perspective*

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Responding to the global financial crisis of 2007-2008, this book plumbs the history of economic thought for resources that can help us understand the relations between the financial and the real sectors of the economy. Such an investigation is made necessary, in the view of the authors, by the fact that mainstream macroeconomics has "almost completely ignored, or amply downplayed" these relations, a fact that itself calls for historical investigation and explanation. Why did the robust discussion of the 1930s about how best to integrate monetary theory and value theory die out, leaving macroeconomists intellectually disarmed in the face of the rise of global finance?

According to Ingrao and Sardoni, Keynes and the Keynesians are responsible for this. Keynes got the ball rolling in the *General Theory* by shifting attention from banks to money demand, and from the dynamic method of his earlier *Treatise on Money* to the equilibrium method. Postwar Keynesians finished the job by constructing the so-called Neoclassical Synthesis. The monetarist counterrevolution was of no help, and eventually (as Frank Hahn repeatedly warned) the inherent logic of the Walrasian equilibrium frame pushed money out of the picture entirely. And that's where we are today: DSGE triumphant.

In my reading, the key section of the book is "The Evolving View of the Nature of Banking" (127-131) where the authors highlight the key role played by Chester A. Phillips in his book *Bank Credit* (1920), that urged the shift from the "old view" to the "new view" of banking, and the key role played by Paul Samuelson in endorsing and popularizing Phillips, starting with his 1948 textbook. This is the origin of the treatment of banking in the postwar neoclassical synthesis. The valiant attempt by Gurley and Shaw, in their *Money in a Theo-*

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ry of Finance (1960), to urge for a broader view gained some traction with the work of James Tobin, but ultimately failed to reverse the tide. A similar fate met subsequent interventions by Hyman Minsky and Charles Kindleberger.

Why does the disappearance of banks from economic theory matter?

The "old view" of banking emphasized the degree of freedom in the system that comes from that most basic of all banking operations: a swap of IOUs (IOU standing for "I Owe You"), the bank's IOU being an immediate means of payment and its counterpart's IOU being a promise to deliver means of payment at some future date. In effect, this operation increases the supply of money to meet the demand for finance. The old view thus emphasized the *elasticity of credit in the payments system*. Banking could be a force for the better, for example by providing purchasing power to entrepreneurs with positive Net Present Value projects, thus giving them the green light today by expanding credit (as Schumpeter emphasized). But it could also be a force for the worse, giving the green light instead to mere speculations that never pan out, sowing the seeds of eventual financial crisis. The art of banking is all about using this degree of freedom with wisdom.

By contrast, the "new view" emphasized the clearing constraint that individual banks face, particularly so when creating deposits that are likely going to be transferred to someone with an account at some other bank, hence an outflow of reserves. In effect, this view highlights the constraint that comes from portfolio equilibrium, the *discipline of reserves in the funding system*, and the role of asset prices as the key equilibrating factor. Ex post, after the clearing, all assets must be willingly held by wealth holders. Specifically, money demand must equal money supply. Thus, if money demand doesn't change, then neither can money supply, and banks are conceptualized as mere intermediaries.

Apparently, the reason for the shift from one view to the other—elasticity to discipline and payments to funding—was the rise to dominance of Walrasian general equilibrium as the frame used by economists to think about these matters. An equilibrium frame leads inevitably to a focus on funding. Indeed, once one adopts an equilibrium frame, it is hardly possible even to *see* payments.

The failure of macroeconomics to deal adequately with banking, and the financial sector more generally, did not go unnoticed. Leading figures, not just Hahn but also Kenneth Arrow and Robert Lucas, repeatedly bemoaned the hiatus. Eventually, something had to be done, and this explains the proliferation of papers that, starting in the late 1980s, proposed various ways of bringing in financial factors. But essentially, all of this work still takes the non-monetary DSGE model as its central frame, and just adds some imperfection or frictions. Ingrao and Sardoni call for a more fundamental treatment.

In the old view of banking, banks were active players, choosing when and where to expand their balance sheet, and thus directing the course of economic activity. In today's real world, that role is arguably even more relevant than it was in the 1930s—but it is nowhere to be found in economic theory. For modern concerns, it is the older authors—Wicksell and Fisher, Schumpeter and Robertson—that are the best resources. But Ingrao and Sardoni want more than that. They call for nothing less than a revival of the tradition of classical political economy, specifically Marx, Schumpeter, and Hayek (246). These are authors from a tradition that that highlights the role of "large firms that directly affect prices and control markets". This is in contrast with the passive role which they play in Walrasian general equilibrium theory, where they take prices as given by the auctioneer.

As an account of what happened in the history of economic thought, this book is largely unobjectionable—with the possible caveat that Tobin does not strike me as "at the margins of the mainstream" given his enormous impact on macroeconometric models that were actually used by central banks. However, one is left without much sense of exactly *why* all of this happened. Can it really be the case that the modelling decisions of Keynes, in one single book, shifted all of economics on the wrong track? For me, the book was interesting mainly for its account of a familiar history from an unfamiliar point of view, viz. the point of view of classical political economy. As such, its main contribution may be to provide an introduction to banking and finance for students of classical political economy.

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