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MACROECONOMICS UNDER PRESSURE: THE FEEDBACK EFFECTS OF ECONOMIC EXPERTISE

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Macroeconomics under Pressure: The Feedback Effects of Economic Expertise

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Abstract: Macroeconomics is said to exert a decisive influence on policy-makers/-making through economic expertise. This influence is usually assumed or taken for granted in- and outside academic circles. Yet, the reverse proposal, i.e. policy-makers' influence on macroeconomics, appears to be far less elusive and as significant. This paper sheds light on three such significant "feedback effects" of expertise on macroeconomics based on Edmond Malinvaud's writings. First, expertise has made the discipline highly sensitive to the results of economic policies. Second, expertise has impelled macroeconomics to behave as a tool for decision-making. Third, it has spurred the discipline to search for a consensus since WWII, for this is a necessary condition for economic expertise to be operative.

Keywords: Expertise; Macroeconomics; Keynesianism; Edmond Malinvaud

JEL codes: B22; B23; B31; B41

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> "We economists love to quote Keynes' final lines in his 1936 *General Theory* – for the reason they cater so well to our vanity and self-importance. But to admit the truth, madmen in authority can *self-generate* their won frenzies without needing help from either defunct or avant-garde economists. What establishment economists brew up is as often what the Prince and the Public are already wanting to imbibe. We guys don't stay in the best club by proffering the views of some past *academic* crank or academic sage." (Samuelson 2007, X; his italics)

1. Introduction

Paul Samuelson's statement about the relationship between economists and policy-makers is far less disseminated than Keynes's opposed and fairly idealistic one.[2] In light of the history of macroeconomics, Samuelson's assessment does not appear less relevant. This might be because he had witnessed the incredible boost the discipline experienced after WWII, and then had taken a step back in the early 1970s which allowed him a more detached view of macroeconomics and its forthcoming turbulences. To put it frankly from the outset, I fully endorse Samuelson's statement. I would simply add that such a relationship between economists and policy-makers takes place mainly through economic expertise.

This observation might be the reason why "Bob" Coats (1969) identified "the role of economists in governments" as one of his famous "research priorities" for the history of economic thought. It took a while, however, before this subject matter became a research priority, at least in *History of Political Economy* (Coats 1983; Dudenhefer 2009; Edwards 2020). Economic expertise has increasingly been investigated in recent years, and thanks to the impulse of science studies. This commitment may explain, in turn, why research has mainly focused on the external effects of economic expertise, i.e. its effects on policy-makers and "society" (more details in section 2). In this paper, I suggest tackling the issue from the other way around, shedding light on what I call the "feedback effects" of economic expertise,

[2] "The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed, the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influence, are usually slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back." (Keynes 1936, 383–84)

i.e. its internal effects on the concrete functioning and development of economics. For this purpose, I analyze Edmond Malinvaud's writings on the nature and role of economic experts.

The reference to Malinvaud is anything but anecdotal in the French context, for he was both an outstanding economist and a key figure of economic expertise throughout the second half of the 20th century.[3] For some, he even embodied "the economists' structural position between economics and politics" (Lebaron 2000, 2001). As an economist, Malinvaud highly contributed to the "modernization" of French economics, arguably more than any other economist-engineer of his post-WWII generation. He took part in each of the major developments that affected economics, be they theoretical or applied, and taught many generations of economists, which resulted in three handbooks in micro-, macroeconomics, and econometrics (Malinvaud 1966, 1969, 1981). As an expert, Malinvaud frequented every top economic expertise center. Along with his professional career at the INSEE, he was involved since 1946 in the *Commissariat General au Plan* [French Plan] in charge of preparing and implementing five-year plans. This was particularly the case from 1962 to 1965 thanks to his proximity with Pierre Massé, then head of the 4th plan. From 1951 to 1957, Malinvaud worked at the *Services des Etudes Economiques et Financières* (SEEF) [Office of Economic and Financial Studies] in charge of setting up national accounts, which was the hot bed of macroeconomic expertise at the time (Fourquet 1980; Terray 2002). From the early 1970s on, he assumed higher functions as head of the *Direction de la Prévision* [forecasting Department] (1972-1974), and head of the *Institut National de la Statistique et des Etudes Economiques* (INSEE) [National Institute for Statistics and Economic Studies] (1974-1987). As such, Malinvaud was not only responsible for large-scale models that played a crucial role in guiding economic policies, but he also became a regular adviser to the government.

Arguably, Malinvaud was well aware of his "structural position" between economics and politics because he defined himself as a "government statistician, an occasional policy adviser, and a theoretician" (Malinvaud 1994, 1). More importantly, he wrote at length about economic expertise, especially after he retired from the INSEE in 1987. Hence, his account was mainly written in retrospect, alongside his wider reflection on economic methodology (Armatte et al. 2017). This is not a matter of big concern because Malinvaud's very purpose was to provide insights "from the inside" on both the nature and the role of economic experts. This is not saying that his writings were context-free; for they depended very much on how

[3] For more details on Malinvaud's biography see Renault (2016, 2–9).

expertise took root within the economic institutions of the French planning. Accordingly, he regarded experts as mere intermediaries between economists and policy-makers.[4] In the same way, he defined expertise as all places "where communication between economists and policy-makers occurs" (Malinvaud 1997b, 149). His writings on expertise mostly reflected his concerns about macroeconomics, which had been his focus from the early 1970s on. When Malinvaud came to discuss both the nature and role of economic experts, he mostly had in mind a public expertise on macroeconomic issues provided to policy-makers.[5] For the sake of consistency, the scope of this article is limited to macroeconomics.

From the analysis of Malinvaud's writings, I set forth three significant feedback effects of economic expertise on macroeconomics. First, expertise has rendered macroeconomics highly sensitive to the results of economic policies. Second, expertise has impelled the discipline to behave as a tool for decision-making. Third, expertise has been a driving force prompting the discipline to search for a consensus on macroeconomic knowledge, which is a necessary condition to make expertise operative both inside and outside the field. Taken together, these three feedback effects show how macroeconomics, through economic experts, has been connected with policy-makers/-ing. Further analysis of Malinvaud's writings shows that this pattern of relationships was very much at work during the "Keynesian consensus" era in France. To go beyond this specific case, the potentialities and limits of this pattern for the history of macroeconomics are then discussed.

2. The deadlock in the literature on economic expertise

Expertise has been a hot topic since the early 1990s, fostering research in many subfields investigating politics and sciences – often committed with science studies. The original motivation was that expertise has played such a key role in the contemporary pattern of relationships between science, politics, and society, that an in-depth analysis of the nature and role of scientific experts was required (Granjou 2003; Delmas 2011). The literature on the subject consisted in a myriad of empirical studies, whose main achievement was to diversify

[4] "Economic advisers have frequent and direct access to the political authorities for whom they are working and who will eventually decide. They are supposed to be familiar with the studies produced by economic analysts. In other words, an economic adviser is an intermediary, like other intermediaries, [he] must understand both sides: what scientists can deliver and what deciders really want." (Malinvaud 2001b, 10–11)

[5] Malinvaud did not address private expertise, which has significantly risen in France during the 1990s.

the definition of what an "expert" is (e.g., Collins and Evans 2002, 2007; Ericsson et al. 2018). Arguably, the issue of expertise had been lost from sight and replaced by a series of questions relevant only within a particular sub-field / approach.

The issue of expertise is straightforward and had been nicely captured by Trépos's (1996) formula: "Are experts manipulated or hostage-takers?" In other words, the issue is to determine whether experts are a simple cover for policy-makers – who make their own decisions but then seek to legitimize them thanks to their experts – or a leverage by which the scientific community influences policy-making. This issue arises in any natural and social science engaged in decision-making. Therefore, it also applies to economics. Actually, this issue applies particularly to economics given the impressive number of its experts involved in a wide range of public (central banks, government agencies, international institutions such as the IMF and the World Bank) and private institutions (companies, credit rating agencies, and the like). For this reason, economic experts have been a privileged target for the literature on scientific expertise in the social sciences.

The issue of expertise in economics caused great turmoil in 2008, when few economists were proved to have brought their scientific support to financial institutions and companies deeply involved in the subprime crisis. The issue became controversial in the United States following Charles Ferguson's documentary *Inside jobs* (2010) and Curtis Hanson's movie *Too Big to Fail* (2011). The controversy only eased off after the American Economic Association adopted "ethical guidelines" on 5 January 2012.[6] The debate affected other countries, such as France, where cases of corruption were also disclosed (e.g., Gadrey 2009; Halimi, Lambert, and Lordon 2012). Far less fierce, it ended with similar ethical rules issued by the French Economics Association (AFSE) (see Deschamps and Helstroffer 2014). Without doubt, the recent context has reinforced the thesis that economic experts are nothing but manipulated, if not corrupt (Krugman 2010).

Yet this context has not altogether undermined the opposite thesis long strongly held in- and outside economics and that still meets a large audience nowadays. According to this second thesis, economic experts are the sword arm of economics in its aim to run the world according to its core principles. This thesis has been pushed to the extreme by some sociologists who argue that economics influences the world (the "social reality") through many channels, such as a "performative effect" (e.g., MacKenzie, Muniesa, and Siu 2007; Muniesa and Callon

[6] Note that the AEA code of professional conduct was updated on 20 April 2018.

2013), a "theory effect" (e.g., Bourdieu 2004), and a "belief effect" (e.g., Lebaron 2000; 2001). All in all, the envisioned effects of economics are similar. On the micro level, economics would impel individuals to adopt a rational behavior to help them better pursue their self-interest – a modern-day illustration would be nudges. On the macro level, the purpose of economics would be to promote liberalism and liberal governance in all seasons – today's pattern would be the "neoliberalism."[7]

Though radically opposed, these two theses have in common to consider economic expertise by its external effects, i.e. on policy-makers and on "society." In doing so, both take for granted that economic experts have a certain influence on world affairs so that the main concern is very much about the influence of economics (see e.g., Hirschman and Berman 2014). In this regard, let us object that things are less clear-cut when trying to be more specific about the influence of economics. The claim that such and such economist had some influence on policy-makers/-making is a commonplace – the history of economic thought provides a slew of examples. But trying to establish this influence in the facts often proves to be a very hard task, for this elusive notion never appears as straightforward (policy-making is hardly ever based exclusively on economic expertise), as one-sided (does the economic expert say what he thinks or what the policy-maker wants him to say?), and as free of strategic interests on the part of policy-makers (what does it mean to say that a liberal economist, say Friedman, succeeded in influencing liberal governments?). All these difficulties at the individual level should cast doubt, to put it mildly, on the far more ambitious attempt to establish the influence of economics on policy-makers/-making.

This paper aims to address a blind spot in the literature on economic expertise. Rather than its external effects, this paper sheds light on the feedback effects of expertise, i.e. the internal effects of this practice on the development, the shape, and the concrete functioning of economics. With this inverted perspective, the issue becomes: to what extent have policy-makers/-making influenced the discipline by means of experts? Interestingly, this inverted perspective is enough to explain the sudden rise in both economic expertise and economics after WWII in France (e.g., Restier-Melleray 1990; Trépos 1996; Robert 2008; Le Merrer 2011). To ensure reconstruction and implement planning, the French state massively invested

[7] The literature on neoliberalism is too important to be discussed thoroughly. Let us just note that even the typical case of the Chicago Boys' influence on the neoliberal agenda implemented in Chile during Pinochet's dictatorship is not clear-cut, for free market ideas had become part of the junta's calculations to preserve the monopoly of political power (Fischer 2015, 319–20).

in its own services, in particular in the SEEF and the INSEE (Terray 2002; Fourquet 1980). As a result, these institutions quickly exceeded academic institutions in terms of financial and human resources (Pollak 1976). From this (inverted) perspective, it is not surprising that the "modernization" of French economics was mainly carried out by economists-engineers as opposed to academic economists (Spenlehauer 1999; Fourcade 2009).

3. Macroeconomics' critical dependency on economic policies

Malinvaud usually described expertise as a practice resulting from an original tension that he called "the economists' dilemma" (e.g., Malinvaud 1988a, 1990a). Subject to increasing pressure from "social demand" since WWII, economists rarely had enough knowledge to provide comprehensive answers. More specifically, the economists' responses often had too weak a foundation to be communicated to policy-makers and the public opinion (Malinvaud 1988b, 1989a, 1991a). The issues were urgent economic problems for policy-makers, who had no other option than to deal with them with or without the guidance of economists (Malinvaud 1989a, 1989b). For Malinvaud, this situation resulted in a serious dilemma for the economists: either they kept silent because of their incomplete knowledge but then a decision was made without the support of economic knowledge, or they guided policy-makers but they ran the risk of making recommendations that went beyond their knowledge. Faced with this dilemma, Malinvaud opted in favor of economic expertise in claiming that it is always better to make decisions with the support of information and knowledge in economics.

> This situation often places the economist in front of a serious dilemma, either he refuses to comment urgent matters that are nevertheless urgent and belong to his field of expertise, or he advances unfounded proposals, relying on his intuition and going beyond what has been established as legitimate. […] These questions, whether ambitious or very modest, often require answers that those involved in the action cannot postpone. For this very reason, economists find themselves involved, and it is no wonder that they sometimes go beyond what their science demonstrates. (Malinvaud 1988b, 5–6)[8]

[8] This and all subsequent translations from Edmond Malinvaud's publications in French are my own.

Portraying expertise as resulting from an original tension is obviously an ex-post rationalization whereby Malinvaud justified this practice. In fact, this "dilemma" hardly arises in practice. From the moment an authority – be it public or private – decides to index its policy-making on economic knowledge and hires economic experts for this purpose, his experts are not free to remain silent. Besides, it is misleading to insist too much on this dilemma since it would result in charging only economic experts; this was not Malinvaud's main concern here. Instead, he regularly pointed out that the fundamental issue with expertise is not individual because experts engage more than themselves. First, they do engage the discipline in their practice. Second, they become de facto the most visible agents of the discipline outside academic circles. For better or worse, economic experts have thus become representatives of both macroeconomics and macroeconomists. For Malinvaud, economic expertise presents two major issues for the discipline.

The first issue is strictly ethical. In this regard, he highlighted how porous the boundary is between expertise and advice, which has a subjective dimension (the 'intuition' mentioned earlier). Malinvaud therefore regularly called for vigilance and enhanced the discipline to introduce ethical rules so as to regulate economic expertise (Malinvaud 1988b, 1990b, 1990a, 2003). He proposed a set of ethical rules that he swore to be applying himself in his expertise activities. In particular, he insisted on the ethical rule to make sure that a personal judgment (advice) was not presented as a well-established judgment within economics (expertise) (Malinvaud 1990b, 120). Moreover, he insisted on the fact that the pressure of "social demand" should not be used as a pretext to deviate from scientific standards in economics or to promote intellectual shams. This rule applied to the two main functions of economic expertise, namely the production of economic information and the study of economic policies (Malinvaud 1994). It is worth noting that the method he suggested to deal with the ethical issue of expertise was precisely the one adopted in the US and France after the 2008 crisis, namely a code of professional conduct (see section 2).

The second issue with economic expertise is more significant, for it addresses the specific relationship between economics and policy-makers. As soon as expertise is used to back policy-making, the reliability of economics is under scrutiny and then hinges on the success or failure of the economic policies implemented. The issue at play thus goes well beyond ethical concerns. It concerns the ability of economics to guide policy-making efficiently. From this perspective, expertise constitutes a litmus test for economics, which is then apprised in its capacity to guide policy-making efficiently. This has a high price in the event of failure. Indeed, expertise tends to make economists partly responsible for the results of economic

policies.[9] This is particularly true in macroeconomics, the area of economics mostly concerned with the study of economic policies, where any significant economic crisis quickly leads to an internal crisis. In this regard, it is worth recalling that the 1970s crisis gave birth to a crisis in macroeconomics. Arguably, the same process was at play following the 2008 financial crisis, which gave way to many statements on the failure of modern macroeconomics and has sharply reopened the spectrum of disagreement within the discipline.[10] These controversies even reached the US Congress on 20 July 2010, where leading macroeconomists (e.g., V.V. Chari, Robert Solow, and David Colander) were invited to explain the failures of the DSGE models.[11]

Considering the importance of these feedback effects, expertise can no longer appear be considered as an extrinsic function, namely a peripheral activity without consequences on the scientific activity in macroeconomics. On the one hand, expertise might cause damage to the entire discipline such that ethical rules are needed. On the other hand, expertise engages macroeconomics so that the latter's reliability depends on the success or failure of ensuing economic policies. Expertise is definitely not an extrinsic function of macroeconomics. But could it be more than that? Could it be an intrinsic function?

4. Macroeconomics as a tool for decision-making

As a prolific handbook producer, Malinvaud provided definitions of economics after an academic fashion. Thus he defined microeconomics by highlighting its specific methodology, in line with Lionel Robbins (Malinvaud 1969, 1). He defined macroeconomics by referring to its main objects: unemployment, inflation, and growth (Malinvaud 1998b, 1–2). Far from this exercise, he provided an entirely different definition of economics in a speech given at an event commemorating his professional career in 1989. On this occasion, he defined

[9] Only in part, as Malinvaud (1990a, 1990b) also pointed out difficulties in the relationship expert / policy-maker can arise from communication problems or that experts may be manipulated by political leaders and held responsible if a political decision proves to be disapproved by the public opinion.

[10] For instance, see Paul Krugman's (2009) tribune in the New York Times ("How Did Economists Get it So Wrong?"), and Olivier Blanchard's "Five Lessons For Economists From the Financial Crisis" published in the Wall Street Journal (see Wessel 2013).

[11] The audio record is available on line "Hearing: Building a Science of Economics for the Real World". For the typed report, see: https://www.govinfo.gov/content/pkg/CHRG-111hhrg57604/pdf/CHRG-111hhrg57604.pdf.

economics by highlighting its "object" or, better yet, its purpose, given that Malinvaud did not intend to provide a substantive definition of economics.

> Our discipline has a dual object: to understand and to advise. To understand by advancing an objective explanation for the phenomena. To advise by providing policy-makers with an objective account of the consequences to expect from the alternatives among which they have to choose. (Malinvaud 1990b, 115)

In this definition, Malinvaud explicitly recognized a twofold purpose to economics. It must not only produce an explanatory scheme of the reality ("understand") but also information for policy-makers ("advise"). Interestingly, expertise is not set forth as an extrinsic function but falls explicitly within the prerogatives of economics, in the same way as the traditional purpose of producing economic knowledge. A complete understanding of Malinvaud's definition requires a clarification of how both functions articulate. Let us observe first that the two purposes, "to understand" and "to advise", rely on objectivity, which is a property of scientific knowledge. The articulation is then unambiguous: the purpose of "understanding" must precede the one of "advising" such that economic expertise is warranted as long as it relies on objective knowledge. [12] As it happens in other scientific areas, the legitimacy of expertise comes from its reliance on scientific knowledge, even though science and expertise must not be confused (e.g., Trépos 1996; Delmas 2011). In this regard, it is worth noting that Malinvaud considered that macroeconomic forecasting should rely as much as possible on scientific knowledge, though this practice has definitely more to do with Art than science:

> […] forecasting must be distinguished from science. Only science can achieve progress in knowledge, a progress which is crucial to the control of our destinies. But forecasting is one of the exercises, one of the Arts by which we must put our knowledge into practice for a better mastery of our destinies. (Malinvaud 1994, 36)

[12] Malinvaud's ethical rule not to let a personal judgment be considered as a well-established judgment within the discipline becomes thus meaningful. Respect for this ethical rule determines the legitimacy of expertise, as it determines the ability of economics to guide policy-making efficiently.

It is essential to know what Malinvaud had in mind when he wrote about the articulation between expertise and (objective knowledge in) economics. Does it mean to either "understand" or "advise"? No, because no expert should be ignorant of scientific advances, on the one hand, and nor should scientists be insensitive to the "social demand," on the other hand. Does it mean to "understand" and then to "advise"? Yes, but this model does not entirely cover the reality of economic expertise but would limit it to cases where comprehensive explanatory schemes were available to guide public action. As we mentioned earlier, these comprehensive schemes do not exist in most cases – and this is the very reason why expertise might be regarded as a "dilemma."[13] The articulation between science and expertise that Malinvaud had in mind is much more integrated: it means to "understand" in order to "advise." He made this clear when answering a question he was asked in a public debate about "The relationship between economics and politics."

> Regarding the second issue [can economics develop independently from political action?] I would say: it can, but it should not. It should not refuse to study the effects of different policy measures, but should adjust its agenda, its investigations, so as to address the issues that political action raises in our contemporary society. In particular, it is important to find out whether or not a particular economic policy can achieve its objectives. Therefore, science must be in dialogue with society, in this matter as in others. (Malinvaud 1975, 16)

The kind of articulation envisioned by Malinvaud was straightforward: economics ought to understand the economic phenomena about which policy-makers want to be informed (and guided). In other words, the purpose of "advising" dominates the one of "understanding." Thus, if expertise should be recognized as an objective in its own right, this purpose is likely to guide scientific research in a way compatible with policy-makers' expectations. As a result, expertise can be easily regarded as an intrinsic function which, in turn, deeply affects the production of macroeconomic knowledge.

Malinvaud went further in claiming that macroeconomics was a tool for decision-making. This assessment does not deny the need for scientific approaches aimed exclusively at

[13] Note that Malinvaud's "dilemma" would not even exist if economists were insensitive to "social demand." Accordingly, economic expertise would be nothing but an extrinsic function.

advancing knowledge ("to understand"). However, by satisfying only one of the two purposes of the discipline, such approaches run the risk of what Malinvaud describes as "scholastic bias," by which a science would develops in isolation and only answers its own questions (Malinvaud 1988b, 1995, 1997b). He was referring here to all the proposals in economics that do not have, directly or indirectly, an operational purpose. In particular, Malinvaud was targeting mathematical economics and its "potentially unlimited deductive refinements." In addition to failing to satisfy the "advising" purpose, this approach – if it were to develop in macroeconomics – would result in depriving the profession of the sole external criterion capable of evaluating its inner contents.[14]

> We as economists have to recognize that satisfaction of demand is the acid test for evaluating the services provided by suppliers. Dissatisfaction on the demand side, with the perception of a mismatch, creates a problem for us as suppliers of knowledge. All the more so as the same perception is shared by many members of our profession, including some who greatly contributed to theoretical advance. (Malinvaud 1997b, 151–52)

Again, such a mismatch between knowledge and the "satisfaction of demand" would be insignificant if expertise were only extrinsic to macroeconomics. However, in the event of a deeper articulation between science and expertise, the need to reduce this gap becomes critical so that the balance between the two purposes of economics is called into question. As a result, any attempt to reduce the gap between economic knowledge and the needs of economic policy-makers ultimately undermines the autonomy of macroeconomics. For Malinvaud (1997b, 1995, 2001c), this gap should be reduced by adjusting economics to practice (expertise). And it is up to research to produce explanatory schemes capable of meeting policy-makers' needs. Accordingly, Malinvaud (1984, 1997a, 1995, 2001c, 2004) stressed the operational purpose of the discipline and came to reduce the latter to a tool for decision-making.[15] In his words, the "ultimate aim of economics is to provide guidance for action,"

[14] For a detailed overview of this epistemological position in macroeconomics, see Rosier (1993). The argument is straightforward: macroeconomic knowledge, which deals with the entire economy and hardly ever relies on experimental data, can only be evaluated on the basis of the results of the economic policies it recommends.

[15] Note that this statement is shared by others, such as Varian (1996) for whom economics is a "policy science," and Mankiw (2006) who defined the macroeconomist as both "scientist and engineer." However, Malinvaud

hence, “it is natural that economists are called for advice.” (Malinvaud 1984, 67)
This applies in particular to macroeconomics whose status is very specific within economics, let alone other social sciences (Malinvaud 2001a). This specificity is due to the goals assigned to macroeconomics, namely, to guide economic policies. Drawing on the history of economic expertise, Malinvaud (1997a, 2004) highlighted the gradual rise of experts among the ministers in charge of economy and finance throughout the 20th century. In this regard, the Great Depression marked a turning point. But it was only with the rise of Keynesianism after WW2 that macroeconomics established as a tool for decision-making.

> […] since the Great Depression, the main motivation inspiring [the] development of macroeconomic theory was to guide policies. This was obviously true within the Keynesian movement, but also outside it whenever for instance alternative policy rules and their effectiveness were at stake. (Malinvaud 2004, 128)

This evolution, Malinvaud (2001c, 8–9) claimed, exerted a deep influence on how macroeconomists defined their research objects and methods. The purpose of “advising” (expertise) is so embedded that it has forced macroeconomics to behave as a tool for decision-making. This explains, in turn, why macroeconomic knowledge has been mostly oriented by policy-makers’ current needs and issues. In the same way, Malinvaud was eager to consider macroeconomics as the most “positive” branch of economics because of its higher concern with real phenomena (Malinvaud 1988b, 1991b, 1995). Then, Malinvaud’s account of the relationship between expertise and macroeconomics resulted in two contradictory proposals: (*i*) macroeconomics is an autonomous and an objective science, and (*ii*) macroeconomics is a tool for decision-making.

5. The appeal to a consensus in Macroeconomics

Resolving the paradox presented earlier implies deepening the single property that provides unity to macroeconomics’ twofold purpose, namely objective knowledge. Malinvaud defined this knowledge as being all the proposals that are subject to a “broad consensus” within the

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regularly complained that economists involved in expertise rarely account for their role and activity as such; for this reason, he provided a list of rare exceptions (Malinvaud 1998b, 1631–47).

profession, namely a consensus supported by a majority agreement between peers (Malinvaud 1984, 1989b, 1989c).[16] This consensus then appears to be a necessary condition for articulating economic expertise efficiently and functionally with macroeconomics. Inside the field, expertise provides macroeconomics with objectivity and unity. Outside the field, consensus provides legitimacy to the practice of economic expertise.

> When they address others, macroeconomists should, it seems, limit their statements to what is sufficiently well established to be the object of a kind of consensus in the profession. Indeed, their statements are supposed to be objective, so that they can be accepted by people who are not able to judge their validity by themselves. (Malinvaud 1989c, 311)

If there were no consensus, hence no unity and objectivity in macroeconomics both inside and (as perceived) outside the field, why would policy-makers bother to rely on economic expertise? Thus, consensus is truly a necessary condition: the practice of economic expertise is legitimate insofar as it rests on objective knowledge. As a result, economic experts are bound to play the role of intermediaries, conveying objective knowledge to policy-makers.

> "Everywhere decision makers are using the service of economic advisers who really are intermediaries between the academic economists, who are supposed to know, and those who are supposed to act." (Malinvaud 2004, 142)

In Malinvaud's mind, economic experts are nothing but intermediaries. Strikingly, when he came to discuss the nature and role of these experts, he referred to the traditional dichotomy between ends and means (Malinvaud 1991a, 1994, 1997a). More than that, he considered that economic experts were called to offer an operational solution within modern societies characterized by an ever-increasing division of scientific labor, where the task of trying to evaluate the inner content of economics has become very difficult for the policy-maker (and the layman) (Malinvaud 1984, 1991b, 1997a). Accordingly, he was far less willing to lay the

[16] "The results or modes of analysis that are being used should have been proved valid, which means that they should be supported by a broad consensus of the profession. Direct transmission to policy-makers of theses or hypotheses should be withheld until these have been properly tested and, therefore, accepted by specialists." (Malinvaud 1984, 67)

responsibility on experts than on the profession itself for what he called the "economists' failures," namely the failure to efficiently guide policy-makers from the 1970s on (Malinvaud 1990b, 1990a, 1989c, 1991b).

As intermediaries, the role of economic experts is both crucial and two-sided. While assisting policy-makers, experts are informed about policy-makers' actual needs and issues, and they bring this information back to macroeconomics. Based on this information, some researchers will adjust their agenda and strive to provide solutions, and hence, produce new knowledge to meet policy-makers' needs and issues. If the newly produced knowledge reaches a broad consensus within the profession, experts convey this knowledge to policy-makers, and so on and so forth. In this regard, Malinvaud (1989b, 208–9) drew a meaningful distinction between well-established proposals – what he called "scientific facts" – and proposals that are still disputed by specialists and considered "scientific activity." Therefore, the pattern of relationships between economists, experts, and policy-makers envisioned by Malinvaud is also dynamic and, hence, it may account for the evolution of macroeconomic knowledge.

Whereas Malinvaud was eager to found economic expertise on objective knowledge, the criterion he chose for doing so (i.e. a majority agreement among peers) was hardly based on a sound philosophy of sciences. In this regard, let us stress that Malinvaud had long taken for granted the existence of objective knowledge in macroeconomics. Like many others, he adhered to a certain spontaneous positivism, considering the evolution of macroeconomics as a succession of research programs with an ever-increasing empirical basis.[17] However, Malinvaud's belief was seriously shaken by the turn taken by macroeconomics from the early 1980s on, against which he stood up by radically opposing the New Classical Economics (Renault 2020a). After he retired from the INSEE in 1987, Malinvaud embarked on a methodological reflection about objective knowledge in macroeconomics. This quest for objectivity led him to a dead end as he quickly found out that Karl Popper's refutation criterion was hardly reliable in macroeconomics.[18]

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[17] By way of illustration: "Since I am not worried about the philosophy of science as applied to macroeconomics, I did not invest much time on it. But I feel at ease with what I understand to be Karl Popper's views on science in general and I do not think economics to be fundamentally special, even though its scientific achievements may be found meagre as a whole with respect to the questions to be solved." (Malinvaud 1989c, 298)

[18] Malinvaud devoted his first year of teaching at the *Collège de France* (1987-1988) to the methodology of macroeconomics, which turned into a book (Malinvaud 1991b). Then, he wrote many other papers on economic methodology; the most famous was: "Why economists do not make discoveries" (Malinvaud 1998c).

Malinvaud did not give up and fell back on a looser concept for defining objective knowledge, namely a consensus through a majority agreement among peers. This criterion was not better founded, however. For expertise to be grounded on (consensual) objective knowledge, the majority agreement among peers ought to operate both in synchrony and diachrony. In other words, macroeconomists are supposed to agree on objective knowledge at a given time but also to identify and select the most promising research programs to provide future objective knowledge. This criterion is clearly too demanding for macroeconomists. Malinvaud himself found it very difficult to provide only a single piece of evidence to substantiate such objective macroeconomic knowledge in synchrony, especially during the 1980s. Moreover, this criterion is simply inoperative in diachrony. Malinvaud recognized it by noting that macroeconomists were seriously groping to distinguish progressive from degenerative research programs in the short-term.[19] But there was more. According to Malinvaud, these difficulties in identifying progressive research programs and maintaining consensus about objective knowledge over time were reinforced by disturbing effects very much at play within macroeconomics, such as trends and rhetorical effects.[20]

Provided the weakness of consensus based on a majority agreement, Malinvaud should have abandoned this criterion and admitted instead that generalized dissensus is "normal science" in macroeconomics, to speak in Kuhn's terms. This conclusion would have been more in line with more common assessments in the profession (e.g., Solow 1979; Klamer 1984; Brunner 1989; Phelps 1990) according to which macroeconomics has always been the subject of competing approaches. From this perspective, periods of generalized dissensus are far less puzzling than periods marked by some degree of consensus in macroeconomics.

Yet, this conclusion was precisely a step Malinvaud never took; because he was plainly convinced that objective knowledge could exist in macroeconomics. He disclosed the reason for his firm belief while describing his experience of the "Keynesian consensus" in France. As we shall see, Malinvaud's writings go on to uncover the mechanisms at work in his pattern of relationships between macroeconomics, expertise, and policy-making.

[19] "[…] the selection and transformation of the results of research are the outcomes of collective scientific activity. At any particular time it may be difficult to recognize which programmes are progressive and which are degenerating." (Malinvaud 1989b, 221)

[20] For more details on Malinvaud's conclusions, see Armatte et al. (2017) and Renault (2016, Chap. 7).

6. The "Keynesian Consensus" through the lens of expertise

According to Malinvaud, the "Keynesian consensus" era offered a case for such objective knowledge supported by a broad consensus in macroeconomics. In providing more details, he showed how much his pattern of relationships was historically located and associated with the specific way the "Keynesian consensus" took root within French economic institutions from the 1950s to the mid-1980s.

> It is obviously a simplification to present things as if unanimity had been reached twenty years ago on the virtues of the theoretical construction of the. But it is true that it obtained a very broad support. It provided a vision of macroeconomic phenomena and a conceptual framework for dealing with them; it seemed to have clear-cut implications for economic policy and these were quite broadly accepted […]. (Malinvaud 1982, 6)

At first sight, the "Keynesian consensus" Malinvaud referred to encompassed the usual components of the Neoclassical Synthesis: the IS-LM model, the Phillips curve, and large-scale models (Mankiw 1990). On closer examination, the "Keynesian consensus" mainly applied to the methodology of large-scale macroeconometric models (e.g., Malinvaud 1989b, 208).[21] This consensus was not unanimous since these models were criticized by Liberals, Marxists, and mathematical economists who always doubted that macroeconomics could be relevant in some way for policy-making (Malinvaud 1982, 1989b).

In trying to explain how the "Keynesian consensus" came to be, Malinvaud (1982, 1991b, 1997b) stressed the operational form that was rapidly given to Keynes' ideas through the analysis of aggregate demand, namely the IS-LM model. This simple and operational framework also turned out to fit surprisingly well with short-term phenomena.[22] More importantly, Malinvaud (1988b, 1998c, 2007a, 2007b) highlighted that, since Tinbergen (1952, 1956), large-scale macro-econometric models provided a set of tools for policy-making. In doing so, these models created an interface between modelers and policy-makers,

[21] In line Qin (2015), Malinvaud regarded as "normal science" the process of consolidating the Haavelmo – CC research program during the decades 1950-1970, to which he had contributed (Malinvaud 1966).

[22] "The theory of aggregate demand was so simple and accounted so adequately for short-term fluctuations in production that it quickly became very appealing and was incorporated into basic teaching." (Malinvaud 1982, 6)

thus leaving room for economic expertise. Last but not least, these models were inspired by Keynesian concerns and reflected policy-makers' willingness to prevent the damaging effects of macroeconomic fluctuations such as those suffered during the Great Depression.

> […] it was a fundamental objective after the war to seek to avoid a return to the devastating economic disorders of the interwar period. This objective was all the more natural as Keynesian theory increasingly appeared to be a reliable guide to its realization […] (Malinvaud 1998a, 330)

In France, policy-makers not only aimed at regulating macroeconomic fluctuations but also at controlling a large part of the economy (through public monopoly in key sectors, credit rationing, price control, massive public investment, among others means). On many occasions, Malinvaud (1989c, 1992, 2003) provided details of French planning after WWII, policy-makers' guidelines, and the role granted at the time to economists-engineers. In particular, he stressed policy-makers' will to "modernize" the French economy, which spurred economists-engineers to develop various techniques of intervention in market economies, such as economic calculation, marginal cost pricing, linear programming, optimal control and the like.[23] According to Malinvaud, this context was very influential in setting the economists-engineers' research agenda after WWII.

> We were […] in a context where public opinion was much more favorable to public intervention in the economic sphere. Our proselytism found a breeding ground when economic calculation was introduced in the public sector and was regarded as essential for growth; when there was support for an active control of global demand so as to ensure economic regulation; when planning had many supporters for mixed economies [...]. This context suffices to explain our attitude at the time and the problems one or the other of us chose to work on as if we were soon to play a crucial role in the management or the policy-making of our country, and even of foreign countries. (Malinvaud 1993, 7)

[23] For a good overview in English of the French planning and techniques that had been implemented by the French economists-engineers at the time, see Drèze (1964) and Kindleberger (1967).

In macroeconomics, policy-makers' firm desire was to smooth business fluctuations, and this was reflected in the profession as a large part of research was devoted to stabilization policies (Malinvaud 1987, 54). In this context, large-scale models became an inescapable tool for policy-makers. From the mid-1960s to the 1980s, these models served to forecast and study the effects of economic policies. Because of their crucial role in economic expertise, large-scale models rapidly spread and imposed on macroeconomics their hierarchical principles, methodological rules, and a certain division of labor. Both econometricians and applied macroeconomists occupied a top position and came to embody macroeconomics, which became tantamount to macroeconometric modeling. In this configuration, there was room for theoretical research, especially if it was directed towards the needs of large-scale models. However, theoreticians' results were not widely accepted until their relevance was proven to be reliable in macroeconomics, thus contributing to explain aggregate phenomena so as to be implemented within large-scale models.

Malinvaud's pattern of relationships between science and expertise performed well during the "Keynesian consensus" era in France, provided minor adjustments. First, objective knowledge in macroeconomics was considered to be the knowledge incorporated in large-scale models, which then served to guide policy-makers' decision-making. So, in practice, econometricians and applied macroeconomists endorsed the role of economic experts. Second, in their day-to-day activities, they studied elasticities and lags in behavioral structural equations (the most complicated aspect of macroeconometric modeling) to improve the accuracy of the large-scale models and better serve the purpose of policy-making. Such a priority made sense within the Neoclassical Synthesis, whose most salient property might not have been its "schizophrenic foundations" (e.g., De Vroey 2016) but rather its consistency with policy-makers' agenda:

> "It is fair to say that twenty years ago, most of our macroeconomic research aimed at stabilization policies. Our approach then assumed that, if short term trends were correctly observed and forecast, correlative monetary or budgetary policies would smooth our fluctuations and that market economies would then naturally grow close to their full employment ceiling. Priority was then given to the study of the elasticities and lags involved in economic behaviour and to the building of hopefully accurate macro-econometric models." (Malinvaud 1987, 54)

By focusing on the role of consensus, Malinvaud came to highlight the evolving nature of the Neoclassical Synthesis. Provided the intense political demand in that context, the existence of

a consensus – no matter how imperfect – was of utmost importance to make expertise operative. Once settled, the relationship between macroeconomics and expertise was dynamic and gave way to a virtuous circle: while assisting policy-makers, experts were informed about policy-makers' needs and issues, and brought this information back to macroeconomics. As a result, both applied and theoretical research were stimulated from the outside. In this regard, Malinvaud (1980, 5–7) paid tribute to the applied econometricians' sensitiveness to policy-makers' needs and problems during the 1970s.[24] It is worth noting that information circulated quickly between the economic institutions involved in French planning, which was a small "milieu" after all. This was particularly the case with the INSEE and the *Centre d'Etudes Prospectives d'Economie Mathématique Appliquée à la Planification* (CEPREMAP) [Center for prospective studies in mathematical economics applied to planning], whose several members were closely linked and in the habit of interacting on a day-to-day basis either for teaching or economic expertise purposes.[25]

This dynamic process also explains why the "Keynesian consensus," along with the Neoclassical Synthesis, was a constantly evolving consensus insofar as large-scale models incorporated additional elements, sometimes alien to Keynes's insights, in order to keep coping with policy-makers' current needs and issues. In this regard, Malinvaud frequently recalled that a series of effects were introduced in large-scale models over the years: the crowding-out effect on investment, the real wealth effect on aggregate consumption (Pigou effect), the effects of prices (through the Phillips curve), the effect of (adaptive) expectations, and the effect of stocks and/or bottlenecks on the value of the fiscal multiplier, among others.

We can now better understand why Malinvaud came to consider the "Keynesian consensus" as both a cumulative and a progressive research program (Malinvaud 1982; 1997a; 1998a). Yet, all of this did not necessarily entail that either macroeconomics or large-scale models exerted an influence on policy-makers. In this regard, Malinvaud was rather circumspect.

[24] In particular, this was the case of Malinvaud whose theoretical research program from the end of the 1970s can be regarded as an attempt to fill the gap between theory and practice (Renault 2020b).

[25] The CEPREMAP was created in 1967 in order to provide tools for decision-making to the French plan. This center for research also aimed to create an interface between academic research and economic administration, even though it only included economists-engineers of a similar background, such as Jean-Pascal Bénassy, Jean-Michel Grandmont, Robert Boyer, Pierre Malgrange, Chirstian Gouriéroux, among many others.

> [Econometricians] have to admit that the impact of their work upon the conduct of economic policy is still somewhat limited. […] The econometricians' contribution to policy-making can be evaluated only in the broader context of the contribution of economists generally. These, to be sure, play only a limited part in the determination of economic policy; their recommendations, however, nearly always rest upon the results of certain econometric studies. Neither public opinion nor politicians are very receptive to the views of economists. It would be wrong to imagine that Ministers are always waiting for the economists' advice before taking any particular decision, let alone following that advice. At best, such recommendation is only one among several elements considered at the moment when a decision is taken. (Malinvaud 1978, 13–14)

The major determinant of the "Keynesian consensus" era in France thus appears to be policy-makers' strong willingness to endorse stabilization policies. In other words, consensus in macroeconomics about Keynesianism and large-scale models did not first arise within the profession before succeeding in guiding policy-makers. Instead, it was entirely the result of policy-makers' enthusiasm and willingness to endorse stabilization policies from the outset. Both Keynesianism and large-scale models succeeded in becoming established in macroeconomics primarily because they fitted with policy-makers' attitudes and met with their current needs and issues.

7. Looking around: the potentialities and limits of this pattern

This pattern of relationships between macroeconomics and policy-makers could be regarded as very specific to Malinvaud and to the French context. It is fair to say that it performs particularly well during the "Keynesian consensus" era in France, namely from post WWII to the 1970s. So, it is now time to zoom out and to address the potentialities and limits of this pattern of relationships in other contexts and periods.

As regards other contexts, it is worth noting that Robert Lucas Jr. gave a similar account of the "Keynesian consensus" era in the United States. In his quest to debunk the mainstream approach of the 1970s, Lucas attacked this consensus on all sides. He fired against the theoretical underpinnings of the Neoclassical Synthesis (De Vroey 2016). Purposefully, he challenged then applied macroeconomics and opposed Keynesians' most operational tool for policy-making: large-scale macroeconometric models (Lucas 1976). To complete his crusade,

Lucas stood up against the mainstream's functional operational link with policy-makers through economic expertise – what he called "day-to-day management." For this reason, Lucas discussed at length the role of economic experts and their damaging effects on macroeconomics, in particular in "Rules, Discretion, and the Role of the Economic Advisor" (Lucas 1980). Interestingly enough, while criticizing "day-to-day management," Lucas came to shed light on the practical significance of the feedback effects of expertise in the United States from the 1950s to the 1970s.

First, he highlighted macroeconomics' dependency on the results of economic policies. In his view, the most damageable dependency was caused by the success of economic policies. Economic performances in the 1950s and 1960s were highly successful and this prevented the mainstream from being challenged within the profession (Lucas 1980, 202). By contrast, stagflation in the 1970s opened new perspectives for alternative approaches within macroeconomics (Lucas 1980, 204).

Second, Lucas (1980, 209) observed that macroeconomics had become a "policy-oriented" and operational "subdiscipline," and what is more an "advice-giving profession." Policy-makers' priorities "reflected in economists' choice of research problems" (Lucas 1980, 202) to the point that some macroeconomists behaved as if they were making decisions themselves. As the role of economic expertise expanded, applied macroeconomists occupied a top position and imposed on macroeconomics their hierarchical principles, methodological rules, as well as a certain division of labor. Academic macroeconomists were also involved in this process as their role became more and more "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." (Lucas 1980, 202)

Third, Lucas pointed out that the focus on "day-to-day management" was entirely due to the shift among US policy-makers towards more government intervention after WWII. This new set of beliefs was incorporated in the Employment Act (1946). In this context, macroeconomists – who had all accepted this institutional frame according to Lucas – did nothing more than "rationalize this activism" (see Goutsmedt, Guizzo, and Sergi 2019, 293).

> Renamed *macroeconomics*, this subdiscipline *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 1980: 201; *his italics*)

For all these reasons, Lucas found that "the consensus of the '60s was a very artificial period and not at all a model for how you can expect economics normally to interact with the rest of the society." (*in* Klamer 1983, 54) Against this "abnormal" relationship with policy-makers, Lucas championed an alternative regime of expertise, more distant from policy-makers, namely the "institutional design" of binding rules for economic policy.

Lucas's call for this regime of expertise was not a shot in the dark, of course.[26] But did he succeed in changing the (Keynesian) "day-to-day management" regime of expertise? Nothing is less certain. First, policy-makers' reliance on policy rules has been very limited since then. Moreover, it has not prevented policy-makers from relying on discretionary policies, in particular to cope with business fluctuations. Second, Lucas's research program hardly came up with a new consensus on objective knowledge in macroeconomics. Instead, it turned the discipline into a battlefield for 20 years, characterized among other things by the long-lasting dispute between New Classical and New Keynesian economists (Duarte 2012).

More decisively, the dominance of DSGE models since the mid-1990s appears to be very much subject to the feedback effects of expertise that were at play during the "Keynesian consensus." Likewise, DSGE models were increasingly used in Western Central Banks because they fitted policy-makers' current priorities, namely to smooth business fluctuations through the sole monetary policy. Thanks to their alleged role in the successful "Great Moderation," DSGE models also became more and more established among academics. Thus, DSGE modelers came to occupy a top position and imposed on macroeconomics their own methodological rules, hierarchical principles, and a certain division of labor. Last but not least, DSGE models have provided the basis for a new consensus through the "New Neoclassical Synthesis," which so far does not necessarily appear better (micro-)founded than the "Old" one (Zouache 2004; De Vroey and Duarte 2013).

The pattern of relationships between macroeconomics and policy-makers is thus hardly limited to the "Keynesian consensus" era in France. First, it seems to be present in the US context during the same period, as Lucas suggested. Second, this pattern may account for the rise and dominance of DSGE models from the mid 1990s on. Though the picture is not as

[26] First, it was more consistent with a liberal agenda – such as creating a stable environment for the private sector – he fully endorsed without committing himself to promote it actively. Second, this call for policy rules reflected Lucas's own beliefs in self-stabilizing markets and the harmfulness of government interventions (Goutsmedt, Guizzo, and Sergi 2019; see also De Vroey 2011).

clear and would require additional research, it seems that feedback effects similar to those of the "Keynesian consensus" were at work. In this regard, the best evidence is the aftermath of the 2008 crisis. As was the case during the stagflation crisis in the 1970s, the recent crisis gave way to a sudden rise of opposition against the mainstream (see section 3) and sharply reopened the spectrum of alternatives within macroeconomics.[27]

This is not to say that the potentialities of this pattern of relationships are limitless. In a general way, this pattern seems relevant whenever a dominant approach prevails for a while and seems to correspond more and more accurately to policy-makers' needs and issues. This signals that a stabilized and functional relationship between macroeconomics and policy-makers is at play, thus involving the crucial role of economic expertise. By contrast, this pattern of relationships hardly accounts for qualitative changes. Why did policy-makers come to endorse stabilizing policies after WWII? Why did they give them up from the mid-1970s on and turned to a liberal agenda instead? These questions are clearly out of the scope of this pattern. The only thing this pattern can do is to illustrate the feedback effects of a great economic crisis on macroeconomics. For the sake of consistency, let us consider the stagflation crisis in France. From the mid-1970s on, economic policies failed to put an end to three major economic phenomena: the rise of unemployment, the rise of both prices and wages, and the fall of profits. From this moment on, the feedback effects of economic expertise kept operating, though in a negative way. The failure of economic policies progressively eroded the "Keynesian consensus" within the profession. Disagreements re-emerged and quickly led to a wider spectrum of opinions on how to manage the crisis. Malinvaud, who was involved with policy-makers at the time, experienced the resulting "cacophony" amid economic experts:

> After the 1974 downturn and later, when it became obvious this was not just a business cycle episode, we proved unable to express a common proposal on what ought to be done. Faithful Keynesians, strict monetarists, supply siders and others, all spoke simultaneously so that the general public could only hear a cacophony. (Malinvaud 1987, 55)

[27] Arguably, the mainstream approach in macroeconomics has entered a new phase of reconstruction for some years based on complementarities and cross-fertilization between DSGE and Macroeconomic Agent-Based Models (Dal Pont Legrand and Baccini 2020; Plassard 2020).

As a result of the experts' cacophony, the unity and objectivity of macroeconomics eroded outside the discipline, undermining the legitimacy of economic expertise. This contributed to break up the functional relationship with policy-makers. Thus, the economic crisis of the 1970s gave birth to a crisis of economic expertise.[28] In this context, policy-makers had no other option than to find their own way to tackle the economic problems they faced. This is an interesting but counter-intuitive property of economic expertise. In troubled times, when they are most needed, economic experts prove to be unable to help policy-makers solve economic issues. For this reason, macroeconomics as a whole might have played no specific role in the "Liberal Turn" in Western economies. As in the "Keynesian revolution", macroeconomics and macroeconomists did not set off such a qualitative change in policy-makers priorities, even though they surely accompanied this change thereafter.[29]

8. Conclusion

Macroeconomics has been profoundly affected by economic expertise, which ought to be regarded as one of its intrinsic functions. First, expertise has made the discipline highly sensitive to the results of economic policies, in particular in the event of failure that regularly gives way to a crisis in macroeconomics. Second, expertise has impelled the discipline to behave as a tool for decision-making, very willing to adjust its research agenda to address policy-makers' needs and issues. Third, it has spurred the discipline to search for a consensus on objective knowledge, which turns out to be a necessary condition for expertise to be useful to policy-makers. The resulting pattern of relationships between macroeconomics and policy-makers performs well to portray the "Keynesian consensus" era in France, as depicted in Malinvaud's writings. From this perspective, the evolution of macroeconomic knowledge appears to depend on both internal and external factors.

> Improvement of knowledge of macroeconomic phenomena not only requires the success of many research projects, some quite fundamental, others dealing with

[28] For an account of the crisis of economic expertise in the 1970s, see Boyer (1998) and Van-Lemesle (2004)

[29] This statement is consistent with Jobert and Théret's (1994, 57–58) analysis of the "Liberal Turn" in France since the early 1970s and the exact role played by economists in this process.

> the measure of specific effects, it also requires sensitiveness to problems that policy makers are trying to solve. […] None of these tasks is trivial. In their most delicate aspects, they all involve judgement as to what should be stressed and what the real needs are. (Malinvaud 1989c, 297)

This pattern of relationships between macroeconomics, economic experts, and policy-makers is historically-grounded, insofar as it is based on Malinvaud's observations of the "Keynesian consensus" in France. For this reason, it calls for further applications in other contexts and historical periods.[30] Such comparative studies would certainly disclose significant discrepancies with respect to this pattern. This article also calls for a wider and deeper dialogue with historians and other social scientists investigating the evolution of economic policies since – if our hypothesis is correct – the actual reasons for major shifts in the policy-making cannot be found in macroeconomics, let alone in economics.

Again, this pattern of relationships performs best for stabilized relationships between macroeconomics and policy-makers. By contrast, it hardly accounts for qualitative changes such as the "Keynesian revolution" after WWII or the "Liberal turn" at the end of the 1970s – i.e. the 64-dollar question in the history of macroeconomics. In this regard, the pattern only suggests that qualitative changes are expected to happen in macroeconomics if endorsed massively by policy-makers. Thus, when Samuelson (1946, 187) claimed that Keynes's General Theory "caught most young economists under the age of 35 with the unexpected virulence of a disease first attacking and decimating an isolated tribe of South Sea islanders," he was not telling the whole story – it seems. In the very same article opening this paper, Samuelson was more specific on the practical underpinnings of the "Keynesian revolution" and of the "Liberal Turn" some decades later:

> I conclude with an unworthy hypothesis regarding past and present directions of economic research. Sherlock Holmes said, "Cherchez la femme." […] When post-Depression Roosevelt's New Deal provided exciting job opportunities, first the junior academic faculties moved leftward. To get back ahead of their followers, subsequently the senior academic faculties shoved ahead of them. As post-

[30] For instance, Bernstein (2001) made a similar account of economics in the United States throughout the 20th century. For a critical assessment by historians of economic thought, see Sent et al. (2005).

Reagan, post-Thatcher electorates turned rightward, follow the money pointed, alas, in only one direction. So to speak, we eat our own cooking. (Samuelson 2007, IX–X)

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