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PHD THESIS SUMMARY:
U.S. Economics and the Quest for Scientific Authority (1932–1957)

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This thesis studies the way in which economists have sought to establish the scientific authority of their discipline during the period before and after World War II in the United States. The research shows how the quest for scientific authority by economists gave rise to new concepts and notions, instruments of control, and calculation methods. Such developments contributed material and symbolic advantages to the discipline in the academic world and the broader academic sphere.

The main contribution of the thesis is its consideration of the heterogeneity of scientific approaches used by economists in different institutions. To capture this heterogeneity, and to highlight the practical and political dimension of epistemological issues regarding the definition of science, the research was guided by the notion of *boundary-work* (Gieryn 1983, 1995, 1999). Similarly, the application of Pierre Bourdieu's sociology (Bourdieu 1988, 1998, 2004; Bourdieu and Wacquant 1992) made the clarification of interactions between the academic world and other social spheres possible. The thesis is based on a significant amount of secondary literature and the consultation of primary sources (The Economists' Papers Archive at Duke University, and the AEA online archives).

The analysis focuses on three of the institutions at the pinnacle of the discipline in the American academic world: the Cowles Commission, the Economics department of the Massachusetts Institute of Technology, and the Economics department of the University of Chicago. The thesis is divided into three parts. Part one (chapters 1 to 3) highlights the *specific inflections* of each institution based on its institutional history and the profile of its researchers. Part two (chapters 4 to 6) studies the strategies put in place in each site to establish the scientific authority of the discipline. The third part (chapter 7) sheds light on the elements that, after World War II, combined to create the conditions for development of the disciplinary consensus on which economists frequently base their claims of scientific quality.

At the Cowles Commission, what is considered scientific was connected to a form of abstract knowledge whose objective was universality. The emergence and crystallisation of this concept of scientific knowledge are examined in three episodes: the preambles of the constitution of the Econometric Society (ES) (1930–1932), the controversy of the 'Mesure sans théorie' (CMST) (1947–1949), and the publication of *Three Essays on the State of Economic Science* by Tjalling Koopmans (1957). By closely observing these three different episodes, the thesis first describes how the network of researchers associated with the Cowles Commission was able to pass from a fringe position to a central and dominant one within the discipline. Secondly, it explores the conditions that progressively led to economics articulating a response to the criticism that was calling into question the focus on formal and mathematical problems per se.

At the Economics department of the Massachusetts Institute of Technology, scientific knowledge was assimilated with a form of technical knowledge. The thesis shows how, within the framework of an engineering school closely connected to the political and military powers, a *translation* between 'fundamental' research and 'concrete tools' was undertaken. To explain the conditions that made the development of this kind of knowledge possible, the thesis focuses on the pressures which demanded effective use of resources, exacerbated especially during World War II, and on the changes in the organisation and production of knowledge of the academic system of the United States during the postwar period. In concrete terms, the thesis shows how, by placing the laboratories at the heart of research and pedagogy, the administrators of MIT effectively interconnected the academic world and the practical sphere.

At the Economics department of the University of Chicago, science was associated with a form of empirical knowledge founded on statistical data and tested through predictive accuracy. The research shows how, through this association, economics established its qualifications as an applied discipline heavily involved in political decision-making. In particular, the classification of economics into 'positive means' and 'normative ends', as proposed by Milton Friedman, enabled the discipline to put forward a methodological response to the problem of the role that economists could play in the process of political decision-making without losing their scientific authority. In order to study this process, the thesis analyses the materialisation in the department's practices of Friedman's methodological precepts, his version of the 'theory of prices' and, more broadly, his positivist convictions.

The standardisation of the doctorate degree is presented as the central element of the development of the disciplinary consensus. To assess this, the thesis is based on the 'Bowen Report' (Bowen 1953). The thesis shows how, based on the standardisation of the doctorate degree, economics has defined a professional and intellectual locus of authority while simultaneously developing a relatively unified body of knowledge designed to preserve a consensus of thought.[1]

Considered as a whole, the processes studied in the thesis provide two distinguishable but interconnected scales of analysis. The first is local, meaning that it concerns the dynamics suited to each of the three institutional sites studied. The second is general and studies the consequences for economics as a discipline of processes studied on the scale of each institution. One of the main results of the thesis is therefore the construction of a disciplinary matrix that connects the two scales of local and overall analysis. Firstly, it sheds light on the fact that the increasingly unanimous acceptance of the expression 'mainstream' as a practical label does not however imply the existence of widespread agreement on the meaning of this expression.

Secondly, the connection of the results from the local scale within a disciplinary matrix has made it possible to capture the importance of the existence of a mechanism of accumulation of knowledge for the discipline's internal cohesion. In more concrete terms, the thesis identifies three mechanisms of accumulation of different knowledges in economics. To Cowles, the axiomatic method proposed by Koopmans in the *Three Essays* built on the guidelines of a mechanism whose mainspring was the construction of models that, progressively, were designed to take into account various aspects of markets and economic behaviour. Rather than rendering the hypotheses flexible so that they might take stock of aspects of reality, the accumulation of knowledges at Chicago operated via the broadening of the range of their applications. This method of accumulation of knowledges enabled

[1] An article presenting the main results of this chapter has been already published in French: see Orozco Espinel (2017).

economics to broaden the field of application of the discipline and led economists onto the terrain of other fields—notably sociology, law, and political science. The process of accumulation of knowledge at MIT operated very differently. The way in which the economists of MIT represent economic behaviour through simple mathematical models—aimed initially at understanding only a few aspects of a particular situation, to then apply those to a broad range of problems—served as a vector for the accumulation of knowledges. Among the problems to which the mechanism can be applied, we find trade, consumer behaviour, and public spending.

Finally, the disciplinary matrix was central to explaining why the production of economists with varied interests, abilities, and skill sets was initially possible and later proved very useful for enhancing the social authority of economics as a whole.

The disciplinary matrix also has heuristic potential. While the study focuses on three sites, the proposed analysis—focusing more on the discipline of economics—allows contributing to the wider problem of taking heterogeneity into account. Concretely, the analytical device established in the research opens up the possibility of articulating processes present in other institutions, notably those that are not highly ranked within the discipline, and thus also enabling the compression of the history of the discipline to be expanded, through the recognition of its richly diverse and iridescent character.

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Camila Orozco Espinel is an interdisciplinary scholar. She obtained her PhD in Sciences of Society at the EHESS (École des Hautes Études en Sciences Sociales, School of Advanced Studies in the Social Sciences). Her research focuses on 20th Century history of economics, primarily the post-Second World War quest of the discipline for scientific authority. She also pursues research on women economists in Latin America, the contribution of women to econometrics, the collaborations between couples of economists and history of the International Association for Feminist Economics. She teaches economics at the University of Lille, France.
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