

Mapping Macroeconomics

An interactive platform for the exploration of inter-specialties relationships in macroeconomics 1970 - 2020

Proposers:

- **Pedro Garcia Duarte**

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- **Alexandre Truc**

Affiliation: Postdoctoral Researcher – CNRS (France)

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Objectives:

Economics has been characterized since the 1970s by an exponential increase in the number of articles published in academic journals. This phenomenon makes it harder for historians of economics to properly assess the trends in the transformation of economics, the main topics researched, the most influential authors and ideas, *etc.* As a result, historians of this period run the risk of relying, at least as first pass, on a presentist view of the history of ideas: what today's economists consider as important contributions from the past and the most influential authors. When historians shield themselves from the retrospective views of the practicing economists, they have to delve into the literature of the past that has been forgotten for the most part and to scrutinize the network of authors that are little known. This effort allows historians to correct the potted histories of the practicing economists and to propose alternative narratives of the evolution of the discipline.¹ However, the bigger the literature to be studied is, the harder the historians' capacity to grasp the overall picture of the time.

We agree with those who consider that developing collective quantitative tools could help historians to confront this challenge. The issues and uses of quantitative tools in history of economics have been the topic of many discussions in our field (see for instance Backhouse, 1998, Claveau and Gingras, 2016, and the *Journal of Economic Methodology* special issue in 2018, in particular Edwards, Giraud, and Schinckus 2018 and Cherrier and Svorenčik 2018), but the technical barrier posed by the methods remains an obstacle for many historians.

The challenges and opportunities that a quantitative history brings are particularly useful to the recent history of macroeconomics. Practicing macroeconomists are eager to tell narratives of the evolution of their field that serve the purpose of intervening on current debates, by giving credit to particular authors and weight to specific ideas. Historians who go into this area find plenty of accounts by macroeconomists and have to handle the vast increase in the macroeconomic literature since the last quarter of the past century.

We apply to the HES New Initiatives Fund in order to build an online interactive platform displaying bibliometric data on a large set of macroeconomic articles. Our goal is to settle the basis for a broad and long-run project on the history of macroeconomics, as well as to bring to historians tools to run quantitative inquiries to support their own research work.

Our approach is similar to Claveau and Gingras (2016) as we focus on the same bibliometric data and share many common tools.² It differs from and extends it in several ways as our platform will:

- Focus on a smaller part of economics (i.e. macroeconomics) to keep a better control on the results and their interpretation, using the knowledge we have on the history of macroeconomics. In contrast, Claveau and Gingras (2016) offer a broad history of the many specialties in economics since the late 1950s.
- Offer interactions between micro- and macro- levels of analysis, by following the positioning (and the evolution over time of this positioning) of some authors, articles or institutions within the general map brought by network analysis. This would be

¹ See for instance Forder's (2014) deconstruction of the Phillips curve "myth", Düppe and Weintraub's (2014) analysis of scientific credit about the general equilibrium proof, or Medema (2014) on the different meanings of the Coase theorem.

² See Claveau and Gingras's platform here: <http://www.digitalhistoryofscience.org/economics/>

possible by displaying less aggregated visualisations than Claveau and Gingras (2016).

- Investigate more “sociological” issues, by studying co-authorship networks, as well as journals and institutions networks.

The goal of our platform is to bring forward general visualizations of the structure of macroeconomics between 1970 and 2020 to:

- Introduce bibliometric and network analysis tools, concepts and results to non-specialists in history of economics;
- Present general results about the structure of macroeconomics:
 - o Importance and centrality of particular actors, articles and books, or institutions;
 - o Evolution of topics, ideas and subspecialties. For instance, it would allow us to explore the supposed opposition between “fresh water” and “salt water” macroeconomists (Gordon, 1989) or the rise of the “New Neoclassical Synthesis” (Goodfriend and King 1997).
- Allow historians (but also macroeconomists) to explore questions of interests for their research:
 - o Identify relevant bibliographical documents and actors for a particular object in a simple and efficient way;
 - o Check simple claims about particular facts in macroeconomics (e.g., most cited papers by macroeconomists in a given time frame, or the role and importance of particular actors and contributions, searchable on the platform);
 - o Find new research directions in relation to under-studied topics or new unexplored patterns found in the data.

Methodology:

The first stage of the project is to find a set of articles that properly identifies macroeconomics. In the initial work already done in this project, we have pondered this challenge and one solution is to identify macroeconomic articles from JEL codes. Our procedure led us to develop two different corpora. The first corpus is simply made of all articles identified as macroeconomics by both the old (1969-1990) and new (1991-present) JEL codes system. This corpus is useful to understand how economists classify their own research into categories.

We have also developed a second corpus, less dependent on the economists' classifications, to identify what composed macroeconomics from a sociological and intellectual perspective. The second corpus uses this first corpus as a point of departure to identify all the articles closely related to macroeconomics with a two steps procedure that we apply to the old and new JEL codes corpus: (1) identify the core of macroeconomics by isolating the most cited references; (2) extending the core by identifying the articles citing several articles of the core or cited by several articles of the core.

Our analysis of this corpus will heavily rely on network analysis, and particularly on three types of basic networks:

- Bibliographic coupling networks, which links articles depending on the number of references they share in their bibliography (as Claveau and Gingras 2016 did);

- Bibliographic co-citation networks, which links the references cited by the articles, depending on the number of times they are cited together;
- Co-authorship networks, which links authors which have published articles together.

On this basis, we can analyze the main features of the networks, and notably explore the existence of communities, the characteristics of these communities and their links. It would also allow us to explore the role of different academic journals and institutions in macroeconomics (which are the main journals over time, how institutions specialised in sub-specialties of macroeconomics and how they structured the field, *etc.*).

The online platform we want to create would allow the user to explore our data and visualizations. First, the user would be able to navigate in our networks, by zooming and clicking on the nodes to identify them, but also to identify in the network the articles, authors or institutions she is interested in thanks to a search engine. Second, the user would be able to select the period she is interested in, and to generate the corresponding networks, but also citation statistics depending on the dates chosen.

Bibliography:

- Backhouse, Roger. 1998. "The Transformation of U.S. Economics, 1920–1960, Viewed through a Survey of Journal Articles." In Mary Morgan and Malcolm Rutherford, eds., *From Interwar Pluralism to Postwar Neoclassicism. History of Political Economy*, 30 (annual supplement): 85–107.
- Cherrier, Beatrice, and Andrej Svorenčik. 2018. "The Quantitative Turn in the History of Economics: Promises, Perils and Challenges." *Journal of Economic Methodology*, 25(4): 1-11.
- Claveau, François, and Yves Gingras. 2016. "Macrodynamics of Economics: A Bibliometric History." *History of Political Economy*, 48(4): 551-592..
- Düppe, Till, and E. Roy Weintraub. 2014. *Finding Equilibrium: Arrow, Debreu, McKenzie and the Problem of Scientific Credit*. Princeton: Princeton University Press.
- Edwards, José, Yann Giraud, and Christophe Schinckus. 2018. "A Quantitative Turn in the Historiography of Economics?" *Journal of Economic Methodology*, 25(4): 283-90.
- Forder, James. 2014. *Macroeconomics and the Phillips Curve Myth*. New York, NY: Oxford University Press.
- Goodfriend, Marvin, and Robert King. 1997. "The New Neoclassical Synthesis and the Role of Monetary Policy." *NBER Macroeconomics Annual*, 12: 231-296.
- Gordon, Robert J. 1989. "Fresh Water, Salt Water, and Other Macroeconomic Elixirs." *Economic Record*, 65 (2): 177-84.
- Medema, Steven G. 2014. 1966 and all that: Codification, consolidation, creep, and controversy in the early history of the Coase theorem. *Journal of the History of Economic Thought*, 36(3): 271-303.

Organization:

Aurélien Goutsmedt and Alexandre Truc will undertake the larger part of the technical work: extracting the data, treating them, running network analyses, building visualisations, *etc...* They will use the expertise acquired by working with Yves Gingras and François Claveau during their postdoctoral fellowships at Université du Québec à Montréal (UQAM). Their link with UQAM also gives them full access to the *Web of Science* database thanks to the [Observatoire des Sciences et des Technologies \(OST\)](#).

Pedro Garcia Duarte, because of his expertise in history of macroeconomics and of his external position regarding the technical work, would be in the best position to monitor the evolution of the project. Regularly, he would give his opinion on different analyses and visualizations produced as well as on the form of the platform.

Finally, the HES grant would allow us to hire a research engineer, who will help to develop the interactive platform in Javascript, HTML, and CSS, and an undergraduate research assistant, who will help clean the data for improving the quality of the results. Potential candidates for the research engineering position could be found within the [*Bureau des Initiatives Numériques*](#) of the CIRST (UQAM), which is specialized in digital humanities.

Evaluation:

The quality of the quantitative analysis, at the basis of the online platform, will be assessed through the standard peer-review process. Indeed, we plan to write two articles on the basis of our results:

- a first one, to be submitted to the *Journal for the History of Economic Thought*, about the construction of our two corpora, and the definition, through time, of what macroeconomics is and where its borders are.
- a second one, to be submitted in a macroeconomics journal, about the main results of our analysis of the JEL corpus.

Regarding the platform, a beta version will be circulated among a group of historians of economics. Their feedback will help us to amend the platform and make it more user friendly and helpful to historians of economics.

Needs:

The main financial need of the project would be to hire an engineer and an undergraduate research assistant. Finally, a part of the HES grant would also be used to fund travels for promoting the project in conferences.

Description	Price (US\$)
Research Engineer	150 hours x \$50/h (benchmark cost in the <i>Bureau des Initiatives Numériques</i>) Total cost = \$7 500
Undergraduate Research Assistant	100 hours x \$30/h Total cost = \$3 000
Promotion of the project	\$800 per conference 3 conferences targeted (HES 2022, ESHET 2022, another one to be chosen) Total cost = \$2 400
Total cost of the project	\$ 12 900

Time Frame:

Stages	January	February	March	April	May	June	July	August	Sept.	Nov.	Dec.	Long term
Making of the platform												
Freezing the corpus												
Recruiting engineer and planning												
Development by engineer			ALPHA	BETA								
Collecting users feedbacks												
Final version												
Evaluation												
Future: extending the platform												
Communications and Publications												
Article 1 (corpus and first results)												
Article 2 (Macro-history of Macro)												
Releasing first results and visualizations												
Communication in conferences												

Curriculum Vitae
PEDRO GARCIA DUARTE

pedro.duarte@insper.edu.br

Current Academic Position: Senior Research Fellow, INSPER (2019-present)

Previous Academic Positions: Assistant Professor, USP (2009-2011); Associate Professor, USP (2011-2013); Professor of Economics (2014-2020, on leave 2019-2020)

Education: BA in Economics, University of São Paulo (Brazil), 1998
MA in Economics, Pontifical Catholic University of Rio de Janeiro (Brazil), 2001
PhD in Economics, Duke University (USA), 2007

Five Major Publications: out of **14** articles in international journals (peer reviewed); **5** book chapters (4 in international books) and **2** books edited (1 international)

Duarte, Pedro G., and Kevin Hoover. "Observing Shocks", *History of Political Economy* (HOPE), **2012**, 44(Annual Supplement): 226-249.

De Vroey, Michel, and Pedro G. Duarte. "In search of lost time: the neoclassical synthesis", *The B.E. Journal of Macroeconomics*, **2013**, 13(1): 1-31.

Duarte, Pedro G. "The Early Years of the MIT PhD Program in Industrial Economics", *History of Political Economy* (HOPE), **2014**, 46(Annual Supplement): 81-108.

Duarte, Pedro G. "A Path Through the Wilderness: Time Discounting in Growth Models", *History of Political Economy* (HOPE), **2016**, 48(2): 265-306.

Assaf, Matheus, and Pedro G. Duarte. "Utility Matters: Edmond Malinvaud and growth theory in the 1950s and 1960s", *History of Political Economy* (HOPE), **2020**, 52(5): 863-894.

Academic Honors, Awards, and Recognition:

Costantino Bresciani Turrone-AISPE Prize for the best paper presented by a scholar under 35 years old at the AISPE Conference, **2006** (Padova, Italy).

Young Researcher Award, European Society for the History of Economic Thought (ESHET), **2015**.

Co-editor, *Journal of the History of Economic Thought*, 2018-present

Representative Grants and Fellowships:

Research Grant, State of São Paulo Research Foundation (FAPESP), Nov. 2010 – Nov. 2011

Research Grants, Brazilian National Council of Scientific and Technological Development (CNPq), Aug. 2010 – July 2012 & Dec. 2012-Nov. 2014 & March 2013-2015

Research Fellowship (PQ), Brazilian National Council of Scientific and Technological Development (CNPq), March 2010 – Feb. 2019 & 2020-2023

Newton Advanced Fellowship, **British Academy**, March 2015-March 2017

Representative Conferences Organized:

First International Symposium on the History of Economic Thought (**2009**, with Gilberto T. Lima; São Paulo - Brazil); Mini-Symposium on the History of Postwar Economics (**2010**, São Paulo); Second International Symposium on the History of Economic Thought (**2013**, with Gilberto T. Lima; São Paulo); 10th HISRECO (**2016**, with Yann Giraud; São Paulo); 11th HISRECO (**2017**, with Verena Halsmayer, Yann Giraud, Joel Isaac; Luzern - Switzerland); 12th HISRECO (**2018**, with Yann Giraud, Cléo Chassonnery-Zaïgouche, Jean-Baptiste Fleury, Béatrice Cherrier; Cergy - France)

Graduate Students (completed or expected):

MA: Gustavo Rechdan de Andrade (2010); Ricardo Batista Câmara Leal (2011); Danilo José Rodrigues Passos (2012); Anna Olimpia de Moura Leite (2012); Matheus Assaf Cosendey (2016), Alex Hayato Sasaki (2017), Marcos Thiago Graciani (2019), Vinícius Oike Reginatto (2019)

PhD: Danilo Freitas Ramalho da Silva (2011); Marcelo Gaspari Cirne de Toledo (co-supervision, 2011); Igor Velecico (2013); Andre Roncaglia de Carvalho (2015), Hugo Chu Chun Wei (2018), Bruno Roberto Dammski (2019), Arthur Brackmann Netto (expected 2021), Matheus Assaf Cosendey (expected 2021), Lúcia Regina Centurião (expected 2021), Jéssica Gesiene Nascimento (expected 2022), Marcos Thiago Graciani (expected 2023)

Post-Doctoral: Danilo Freitas Ramalho da Silva (2013), Matthieu Renault (FAPESP fellowship, 2019)

Research IDs: ORCID: <http://orcid.org/0000-0003-3525-7036>; Google Scholar: <http://scholar.google.com.br/citations?user=wE0OUmcAAAJ&hl=en>; MyResearcherID (ISI): <http://www.researcherid.com/rid/P-2005-2015>

Aurélien GOUTSMEDT

Université du Québec à Montréal (UQAM) and Université de Sherbrooke,
Centre Interdisciplinaire de Recherche sur la Science et la Technologie (CIRST),
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PROFESSIONAL APPOINTMENTS

- 2020 **Post-Doctoral Fellowship**
UQAM and Sherbrooke - CIRST
- 2018 – 2019 **Post-Doctoral Fellowship**
Duke University, Center for the History of Political Economy
- 2013 – 2018 **Teaching and Research Assistant in Economics – Doctoral Fellowship**
University of Paris I Panthéon-Sorbonne

EDUCATION

- 2017 **Ph.D. in Economics**
« The Macroeconomists and Stagflation: Essays on the Transformations of Macroeconomics in the 1970s »
- 2012 – 2013 **MA (Research) ESH (Economics and Human Sciences)**
University Paris 1 Panthéon-Sorbonne

PUBLICATIONS

- Goutsmedt A., Renault M. and Sergi F. (2020) “European Economics and the Early Years of the ‘International Seminar on Macroeconomics’”, *Revue d’Economie Politique*, Forthcoming 2021.
- Goutsmedt A. (2020) “From Stagflation to the Great Inflation: Explaining the US Economy of the 1970s”. *Revue d’Economie Politique*, Forthcoming 2021.
- Goutsmedt, A., Guizzo, D., & Sergi, F. (2019) An agenda without a plan: Robert E Lucas's trajectory through the public debate. *Æconomia*, 9(2). <https://journals.openedition.org/oeconomia/5605>
- Goutsmedt A., Pinzon-Fuchs E., Renault M. and Sergi F. (2019) “Reacting to the Lucas Critique: The Keynesians’ Pragmatic Replies”. *History of Political Economy*, 51(3): 535-556.
- Goutsmedt A. (2018) “Thomas Sargent face à Robert Lucas : une autre ambition pour la Nouvelle Economie Classique”. *Æconomia*, 8(2). <https://journals.openedition.org/oeconomia/3047>
- Goutsmedt A. and Rubin G. (2018) “Robert J. Gordon and the introduction of the Natural Rate Hypothesis in the Keynesian Framework”. *History of Economic Ideas*, 26(3): 157-187.

GRANTS

- UK ESRC funding, *Rebuilding Macroeconomics*, 2019-2020: [Excavating the Academia/Policy Pipeline – Economic Analysis at the Bank of England.](#)

SKILLS

R programming: Basic statistics, network analysis, text-mining, bibliometrics, graph visualizations.
SQL, Gephi (network analysis software).

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Research interests

Social network analysis; Digital Humanities; Behavioral economics; Decision theory; Philosophy of economics; History of economic thought; Interdisciplinarity

Work experience

Oct.2020 – Oct2022 • **Postdoctoral fellow** – CNRS (based at the GREDEG, Nice)
Jan.2020 – Sept.2020 • **Postdoctoral fellow** – UQAM (Montréal)
2014 – 2019 • **PhD fellow**– Université Paris VIII, UFR AES – Economie et Gestion

Formation

2014 – 2018 • **Ph.D. Economics**, Université Paris VIII
Thesis: « *Transforming Economics through Psychology: an Assessment of the Behavioral Economics 'Revolution'* »

Publications

Forthcoming **Truc, A., Claveau, F., Olivier, S. (Forthcoming). Economic Methodology: A Bibliometric Perspective. *Journal of Economic Methodology*.**

2018 **Truc, A. (2018). Is 'New' Behavioral Economics 'Mainstream'?. *Journal of Economic Methodology*, 25(1), 83-104.**

Working Papers and Submitted Papers

2020 Claveau, F., Truc, A., Santerre, O., Mireles-Flores, L. (2020). *Philosophy of Economics? Three Decades of Bibliometric History*. Submitted as a chapter for Routledge Handbook of Philosophy of Economics

2020 Truc, A (2020). *Forty Years of Behavioral Economics*. Submitted to the European Journal of History of Economic Thought.

2020 Truc, A (2020). *Mapping Behavioral Economics and Its interdisciplinary Practices*. Submitted to History of Political Economy.

2019 Truc, A., Santerre, O., Gingras, Y., Claveau, F. (2020). *The Interdisciplinarity of Economics*. Submitted to History of Political Economy.

2019 Truc, A. (2019). *The Disciplinary Mobility of Core Behavioral Economists: a social network analysis*.

2019 Truc, A. (2019). *From Inequity Aversion to the Definition of Science: a case-study of a controversy within behavioral economics*. Submitted to Journal of Economic Methodology.

2019 Truc, A. (2019). *Becoming Paradigmatic: the strategic uses of narratives in behavioral economics*. Submitted to the European Journal of History of Economic Thought.

Languages and Skills

Languages • **French:** Native
• **English:** Fluent

Computer skills • **Analysis and econometrics:** Eviews 9.5, SAS 9, STATA 14.1
• **Social network analysis** et Scientometrics : Sci2, Pajek, Gephi
• **Languages :** R, SQL, Python (beginner)