

How is the Mainstream changed?

A Topic Model insight

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5 1. Why studying the mainstream?

To understand the reasons of this work and, eventually, its scientific relevance a premise is needed.

Economics as discipline presents very strong social norms and a very hierarchical structure. As result, it is possible, and quite easy, to identify a small group of journals
10 in which the scholars in the top US department often publish (Dusansky & Vernon, 1998; Kim et al., 2006, 2009; Card & DellaVigna, 2013; Hamermesh, 2013). Those are the same journals that are able to assure a scholar the tenure by publishing one of their papers (Heckman & Moktan, 2020).

In other words there is a group of journals (the Top5 or the Blue Ribbon Eight) which
15 are liked (and managed) by those who are liked (and cited and funded) by the discipline.

This concentration of power and, as consequence, prestige have, inevitably, create a notion of prestige in every aspect of the discipline: there are more prestigious theories, more prestigious research topics, more prestigious departments and so on.

But the step is short in the underfunded academia to make the post prestigious altern-
20 atives the only alternatives, inducing conformism and, as a matter of necessity, excluding less prestigious theories from scientific debate.

The prestigious economics is, politely, knows as *mainstream economics* or, in a more colourful way, as *orthodox economics*. The idea of an orthodoxy, and so of some com-
25 peting heterodoxies, move the analysis to the semantic field of religion and faith. And it is wanted.

As many, mostly heterodox, scholars have pointed out many of the hypotheses which support the mainstream economics have to be accepted by faith, since there are not real-world evidences of their realism¹. The consequence is that to pursue a career in

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¹Some orthodox scholars address this criticism by not considering realism as necessary in a scientific theory, but discussing this would be a too long digression.

economics and be able to get a prestigious (and so well-funded) position, a profession of
30 faith is required to every (young) scholar².

The last piece of the puzzle I require to justify this work is the role of economics in the society.

Economics is a social science which influences the kind of politics are realized by the governments. It provides theoretical justification, it carries out the forecast on the real-
35 world effects, it influences the public debate providing the words to convey different ideas of the economy (and so of the society), helping to move the Overton's window.

In other words, Economics is a scientific discipline with a strong impact on the society, and the social and political implications of any economic theory must not be overlooked³.

So, critically studying the most common economics is necessary to understand with
40 conceptual framework the discipline is providing to the society to understand its times, to unveil which cultural and political programme it is (more or less consciously) carried out by the discipline.

Nevertheless, this work only tries to describe the mainstream economics, without arguing on the social consequences of the features highlighted. Which is still a necessary
45 first step.

2. The interpretative hypothesis

I'm clearly not the first to try to describe mainstream economics and neither the first to do it quantitatively (I review some previous attempts in the next section).

Therefore, I can climb up on the shoulder of other scholars to be guided to what I can
50 look for and which interpretative frameworks I can use.

Two qualitative observation will be the core pieces to guide this work: the *empirical turn* hypothesis and the *mainstream pluralism* hypothesis.

The first lens with which observe the mainstream economics is the progressive shift toward empirical research (Backhouse & Biddle, 2000; Backhouse & Cherrier, 2016,
55 2017; Cherrier, 2022). Neoclassical economics, which is the theoretical framework on which mainstream economics has been based in the second half of the XX century, built

²An example of this kind of “religious” reasoning is proposed by Galbraith: “Accepted in reputable market orthodoxy is, as noted, the inherent perfection of the market. The market can reflect contrived or frivolous wants; it can be subject to monopoly, imperfect competition, or errors of information, but, apart from these, it is intrinsically perfect. Yet clearly the speculative episode, with increases provoking increases, is within the market itself. And so is the culminating crash. Such a thought being theologically unacceptable, it is necessary to search for external influences—in more recent times, the downturn in the summer of 1929, the budget deficit of the 1980s, and the “market mechanisms” that brought the crash of 1987. In the absence of these factors, the market presumably would have remained high and gone on up or declined gently without inflicting pain. In such fashion, the market can be held guiltless as regards inherently compelled error. There is nothing in economic life so willfully misunderstood as the great speculative episode.” (Galbraith, 1994)

³The conceptual framework provided by Keynes’ theories is necessary to historically and politically understand Roosevelt and the European social state of the 50s. Similarly, Margaret Thatcher’s and Ronald Reagan’s economic reforms would never be realized without the theoretical background provided by Friedman.

its fortune on the ability to provide clear models expressed using a very formal flavour of mathematics. In more recent times instead, in part as a reaction to the credibility crisis arose after the financial crises of the first decade of the XXI century, econometrics is becoming the standard mathematical tool of analysis and theory-driven models are being replaced by data-driven model. This empirical turn in the scientific practices of the discipline is moving researcher away from the comprehensive economic models of the past, towards a perilous land in which the only theory is the way in which data are analysed, and every economic insight can come only from data itself.

The second lens is the mainstream pluralism hypothesis (Davis, 2006; Cedrini & Fontana, 2018; Davis, 2019a, 2019b). It has been observed that the domain of research of economics is widening and the number of different computational and mathematical tools used is increasing⁴. These two tendencies have allowed the emergence of many new fields in the discipline, which are very focused on a particular topic (like environmental or health economics) or on a particular method (like economic complexity or behavioural economics). Researchers who are specialized in one of these fields rarely engage with the other niches, creating an archipelago of unconnected islands and an appearance of pluralism in economics. The mainstream pluralism hypothesis states that this process of specialization is not developing pluralism as historically intended in economics (i.e. as a plurality of competing ontological views of the economy and the economics), but rather it is creating a plurality of loosely connected fields which shares a common ancestral set of hypothesis (the neoclassical one) and relax some of them to be able to tackle specific problems, putting themselves in continuity rather than in contrast with neoclassical economics⁵.

In the quantitative exercise that constitute the core of this paper, I try to find some evidences in favour of these two hypotheses.

⁴This is also a consequence of the new data-driven methodologies, which are able to deal with a wider range of hypotheses than the neoclassical calculus-based approach (see Cherrier, 2022)

⁵In this sense they can view as subfields of a wider “post-neoclassical” economics, which aims to improve (or save) some parts of the neoclassical approach and legacy, rather than rebuild the discipline on completely different assumptions like the heterodoxies aim to do.

3. Distant Reading and quantitative methods in the History of Economic Thought

4. The choice of the data

85 4.1. A first qualitative description

5. A strategy of analysis: the Topic Models

5.1. The choice of the algorithm

5.2. Model selection, validation and description

6. Interpreting the model

90 6.1. The empirical turn

6.2. Mainstream pluralism?

7. Limitations

7.1. Choosing the corpus

7.2. The quest for a good Topic Modelling algorithm

95 7.3. Interpreting the topics

7.4. Assess the robustness

8. What's next?

8.1. Rephrasing the questions for a theory-driven Distant Reading

8.2. Delve into the hierarchy

100 8.3. Enhancing the database

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References

- Backhouse, R., & Biddle, J. (2000). The Concept of Applied Economics: A History of Ambiguity and Multiple Meanings. *History of Political Economy*, 32, 1–24.
 105 https://doi.org/10.1215/00182702-32-Suppl_1-1
- Backhouse, R., & Cherrier, B. (2016, October 1). 'It's Computerization, Stupid!' The Spread of Computers and the Changing Roles of Theoretical and Applied Economics (SSRN Scholarly Paper No. ID 2781253). Social Science Research Network. Rochester, NY. <https://doi.org/10.2139/ssrn.2781253>
- 110 Backhouse, R., & Cherrier, B. (2017). The Age of the Applied Economist: The Transformation of Economics since the 1970s. *History of Political Economy*, 49, 1–33. <https://doi.org/10.1215/00182702-4166239>
- Card, D., & DellaVigna, S. (2013). Nine Facts about Top Journals in Economics. *Journal of Economic Literature*, 51(1), 144–161. <https://doi.org/10.1257/jel.51.1.144>
 115 ZSCC: 00000000
- Cedrini, M., & Fontana, M. (2018). Just another niche in the wall? How specialization is changing the face of mainstream economics. *Cambridge Journal of Economics*, 42(2), 427–451. <https://doi.org/10/gfxn7t>
 ZSCC: 00000000
- 120 Cherrier, B. (2022, August 12). The Price of Virtue: Some Hypotheses on How Tractability Shaped Economics. Retrieved August 17, 2022, from <https://papers.ssrn.com/abstract=4189091>
- Davis, J. B. (2006). The turn in economics: Neoclassical dominance to mainstream pluralism? *Journal of Institutional Economics*, 2(1), 1–20. <https://doi.org/10/bzn5sm>
 125 ZSCC: 00000000
- Davis, J. B. (2019a, January 28). Economics and Economic Methodology in a Core-Periphery Economic World. <https://doi.org/10.2139/ssrn.3324569>
- Davis, J. B. (2019b). Specialization, fragmentation, and pluralism in economics. *The European Journal of the History of Economic Thought*, 26(2), 271–293. <https://doi.org/10.1080/09672567.2018.1555604>
 130 <https://doi.org/10.1080/09672567.2018.1555604>
- Dusansky, R., & Vernon, C. J. (1998). Rankings of U.S. Economics Departments. *Journal of Economic Perspectives*, 12(1), 157–170. <https://doi.org/10.1257/jep.12.1.157>
- Galbraith, J. K. (1994). *A short history of financial euphoria*. Whittle Books in association with Penguin Books
 135 OCLC: 859325974.
- Hamermesh, D. S. (2013). Six Decades of Top Economics Publishing: Who and How? *Journal of Economic Literature*, 51(1), 162–172. <https://doi.org/10.1257/jel.51.1.162>
- Heckman, J. J., & Moktan, S. (2020). Publishing and Promotion in Economics: The Tyranny of the Top Five. *Journal of Economic Literature*, 58(2), 419–470. <https://doi.org/10/ggznd>
 140 <https://doi.org/10/ggznd>
 ZSCC: 00000000

- Kim, E. H., Morse, A., & Zingales, L. (2006). What Has Mattered to Economics Since 1970. *Journal of Economic Perspectives*, 20(4), 189–202. <https://doi.org/10.1257/jep.20.4.189>
- 145 Kim, E. H., Morse, A., & Zingales, L. (2009). Are elite universities losing their competitive edge? *Journal of Financial Economics*, 93(3), 353–381. <https://doi.org/10.1016/j.jfineco.2008.09.007>

A. Results from different random seeds