

A Guide to Paradigmatic Self-Marginalization: Lessons for Post-Keynesian Economists

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Abstract

While many heterodox economic scholars hope for a paradigmatic change in economics due to the great financial crisis, this paper emphasizes that path-dependent elements and institutional factors within the economic community constitute a substantial barrier for paradigmatic change. Focusing on the citation behavior of economists in heterodox journals in general and in Post-Keynesian journals in particular, we discuss some structural reasons for the marginalization of heterodox economic thought in connection with the positive feedback mechanisms provided by the institutional framework of the economic discipline.

Keywords: Post-Keynesian Economics – Paradigmatic Dominance – Pluralism – Citation Behavior

JEL: A11, B20, B52

1 Introduction

As implied by the conference title, for many heterodox economic scholars the current economic crisis is also a crisis of mainstream economics and, hence, an opportunity for paradigmatic change. A common critique addresses the mainstream's failure to recognize the problems leading to the crisis and hence its inability of predicting it (e.g. Hodgson 2009, Friedman and Friedman 2009). This line of critique can even be found among economists not famous for their critical stance towards mainstream economics: Colander et al. (2009) for example, admit a "systematic failure of academic economics" and 83 German professors in the field of economics signed a petition for a methodological re-orientation of their discipline.¹

¹ See Frankfurter Allgemeine Zeitung, 5 May 2009. However, the petition was initiated and mostly signed by the associates of the ordo-liberal school of economic thought in defense of their tradition, while a counter-petition about one month later in the Handelsblatt (8 June 2009) titled "Baut die deutsche VWL nach internationalen Standards um!" („Rebuild German economics following international standards“) was signed by 188

Nevertheless, in this paper we argue that in spite of the partially acknowledged problems in neoclassical economic theorizing made obvious by the economic crisis, such a paradigmatic shift is still highly improbable for at least two reasons: *First*, many self-reinforcing mechanisms within the institutional structure of the discipline enable neoclassical economics to perpetuate its paradigmatic dominance. As we describe elsewhere (Dobusch and Kapeller 2009a), economic education and publishing cultures are highly standardized and exhibit positive network effects for those associated with the dominant paradigm, which are unaffected by the current crisis. Two statements of leading economic textbook authors might serve as a first illustration of our observations concerning the paradigmatic stability of the status-quo in economics:

„Despite the enormity of recent events, the principles of economics are largely unchanged. Students still need to learn about gains from trade, supply and demand, *the efficiency properties of market outcomes*, and so on. These topics will remain the bread-and-butter of introductory courses.“ (Gregory Mankiw; italics by the authors)²

„More economic research (and teaching), not less, is the best hope of both emerging from the current crisis and of avoiding future ones.“ (Doug McTaggart, Christopher Findley und Michael Parkin)³

Furthermore, a closer look at the suggestions put forward in Colander et al. (2009) exhibit – in spite of all self-critical intentions – no potential for seriously changing economic theorizing: while calling for more economic modelling, more accurate econometrics, and more complex mathematical models they do not even mention the institutional dominance of a destructive scientific paradigm (see also: Lawson 2009). In other words, the central axioms or the “hard core” (Lakatos 1970) of the neoclassical paradigm are left unchallenged, leading only to “new puzzles to solve” but not to “anomalies” as a precondition to fundamental paradigmatic change – the reaction to extensive empirical failure generally described by (Kuhn 1969/1996) and Feyerabend (1977).

Second, heterodox economic schools such as the Post-Keynesians fail to provide a comprehensive paradigmatic alternative to mainstream economics, which is a necessary precondition for such a paradigmatic change (Kuhn 1969/1996; Sterman and Wittenberg

economists; critical voices in economics still seem to be a minority consisting, in this case, of economists generally opposed to Keynesian arguments.

² see „That Freshman course Won't be quite the same“, New York Times, May 23, 2009.

³ see entry „The State of Economics“ in East-Asia Forum, Mai 21, 2009 online: <http://www.eastasiaforum.org/2009/05/21/the-state-of-economics/>, [10 July 2009].

1999). In what follows we try to assess why heterodox economic schools in general and Post-Keynesians in particular struggle to seriously challenge neoclassical hegemony in economics in spite of the obvious shortcomings of neoclassical theory. While we acknowledge the difficulties for dissenting or minority views posed by the institutional environment and by hegemonial strategies of mainstream researchers in favour of the incumbent paradigm (see Dobusch and Kapeller 2009a; 2009b), we also see a substantial tendency of “self-marginalization” within communities of heterodox economists. A general problem in this context is connected to the notion of paradigmatic change: Do different heterodox schools want to replace the neoclassical dominance (a) with their own school of thought or (b) with a pluralistic conception of economics as a discipline containing (and needing) a variety of theoretical starting points. Some kind of consensus on this point is – at least from a theoretical perspective following Kuhn (1969/1996) and Sterman and Wittenberg (1999) – a necessary precondition for paradigmatic change. This general ambivalence in the relationship of heterodox schools – are they partners or competitors – is also reflected in the daily routines of heterodox economists as illustrated by the results of our research.

Each of the following three sections addresses a set of practices common among heterodox schools that we see as particularly problematic in terms of the current paradigmatic struggle and call them “lessons for paradigmatic self-marginalization”: The first lesson, “be exclusive”, deals with a lack of pluralism and openness within and between different heterodox schools. The second lesson, “praise your enemy’s gods”, investigates the partially perverse consequences of following mainstream economics in their tendencies of (a) mathematizing economic research and (b) identifying “empirical research” with “econometrics”. The third lesson, “make your papers scarce”, analyzes how (lack of open) access to heterodox research influences its position in the current paradigmatic battle. For all three lessons we provide empirical data supporting our main arguments.

2 Be exclusive: Define true beliefs and ignore the heretics!

In this section we argue that the communication between different heterodox schools is too loose to compete with the mainstream. This fact constitutes a general problem for pluralism inside heterodox economics and is a strategic disadvantage from a paradigmatic perspective.

2.1 Problem

At least in principle, many heterodox scholars from different schools of thought seem to agree on demanding more theoretical pluralism within economics (e.g. Garnett, Olsen and Starr 2009; critical: van Bouwel 2005). As soon as it comes to the definition of pluralism, however, this unity disappears. At least for some heterodox economists, pluralism is a claim only raised vis-à-vis mainstream economics, leaving out the relationships to other heterodox schools.

The controversy between John E. King (2004a, 2004b) and the editor of the *Journal of Post-Keynesian Economics (JPKE)* Paul Davidson (2005) on pluralism in Economics may serve as an illustrative example: While King argues that there is no “single correct alternative to neoclassical economics”, Davidson is convinced that “[i]f one wishes to explain (describe) the production, exchange and financial features and operations of a market-oriented, money using, entrepreneurial economy, then Keynes’s ‘General Theory’ is the sole ‘correct’ alternative to neoclassical economics.” To him, neoclassical economics as well as all other schools such as “Sraffian, Kaleckian, and other heterodox theories” are just “special cases obtained by adding additional restrictive axioms to Keynes’s basic general theory”.

From Davidson’s point of view “pluralism” is at best a rhetorical vehicle to enhance the status of Post-Keynesian economics, by subsuming other heterodox traditions under the umbrella of Keynes’ “General theory”. This is actually a monistic attitude practically resulting in a form of “pluralism of disinterest” best described as “tolerant ignorance”. Since other heterodox schools of thought are seen as “dealing with special cases” and different aspects of the economy respectively working with alternative methods, their contributions are tolerated on the grounds of a common experience of academic marginalization, but rarely consciously integrated in a common framework. Articles like Lavoie (2006) or O’Hara (2007) trying to combine or compare diverse heterodox approaches are still exceptional.⁴ In contrast to this asserted “ignorant pluralism” stands the ideal of a “discursive pluralism”, where different heterodox schools consciously interact, discuss and integrate each other’s theoretical propositions and empirical results. Pluralism understood as an active scientific conversation between different heterodox schools as emphasized here would also reflect itself in a quantitative analysis of citation behavior: Heterodox outlets would form a tight citation network as a result of increased cross-school interaction.

⁴ Another example for such a contribution is Dugger and Sherman (1994).

“Discursive pluralism” as advocated here is currently not the case in heterodox economics as shown by our subsequent analysis of heterodox citation behavior. Nevertheless it holds the potential of strengthening heterodox economics from various perspectives: *First*, an increased debate on common theoretical grounds and perspectives of different heterodox economic schools seems to be a promising route for increasing the overall explanatory power of heterodox economic theories. *Second*, heterodox economics could – by adopting the idea of a discursive pluralism – serve as an archetype of pluralism in economics. *Third*, a common plurastic paradigm consisting of various heterodox traditions seems to have a much higher chance of succeeding against an already dominating theory, i.e. neoclassical economics, from the standpoint of a paradigmatical analysis (see Kuhn 1969/1996 and Sterman and Wittenberg 1999). *Fourth*, the tightening of heterodox citation networks seems to be a machiavellistic imperative in the face of modern research evaluation assessments, which are often based on the number of citations gathered by certain researchers, departments, publishers or outlets.

One main problem in this context is the ambivalence in the relationships of heterodox schools related to the question whether alternative heterodox schools should be seen as partners for cooperation or opponents in competition. This ambivalence leads to the curious situation that most heterodox schools have a very pluralistic attitude towards mainstream economists, with whom they communicate a lot, but are at the same time often insensible to contributions from other heterodox strands. An illustrative example for this attitude is represented by a contribution of Marc Lavoie (2006), in which he tries to integrate Sraffian, Marxian, Regulationist and Post-Keynesian concepts and thereby laments about the sectarian tendencies incorporated in some of these schools. While acknowledging some important contributions to the integration of these various schools of thought, we, as sympathetic bystanders of Post-Keynesianism, consider this article mainly as an exegesis: the alleged differences seem to be of a pure hermeneutical nature primarily useful for obscuring the common roots of these strands of thought and, from a more distanced perspective, we are surprised by the scrupulous efforts some authors make to separate the “right” from the “wrong” interpretation of some “sacred” texts. This attitude of defining “true beliefs” while ignoring “heretic” contributions is a paradigmatic weakness of heterodox economics, which is documented by the citation data presented in the following section.

2.2 Empirical Observations

As already mentioned, we observe several feedback mechanisms in the scientific institutions partially leading to path-dependent processes in the paradigmatic development of economics

as a scientific discipline (Dobusch and Kapeller 2009a). An important ancestor in this line of reasoning is Robert K. Merton (1968), who postulated the validity of the Matthew-principle, i.e. „those who already have, will earn more“, for the reputation of nobel-laureates. Merton’s asserted principle nowadays – due to the introduction of citation indices as the *Social Science Citation Index (SSCI)* – also holds für individual authors, departments and outlets. Especially in economics the introduction of citation metrics in the 1970s has benefited the neoclassical paradigm leading to a situation Hodgson and Rothman (1999, F180) characterized as an „institutional oligopoly“:⁵

„Institutions with an initial concentration of editors or authors may benefit from processes of positive feedback involving, for example, an increasing ability to attract research grants, increasing visibility and reputation, increasing capacity to recruit leading researchers, and increasing research output.”

This situation obviously carries some paradox or even perverse consequences. So are citations in heterodox articles set to criticize the dominant viewpoint obviously count *in favor of neoclassical economics* within the content-blind logic of citation metrics. On the other hand, the logic of citation metrics might prove an interesting starting point for discussing general paradigmatic strategies of heterodox economists.

In this spirit we have analyzed the citation behavior of core heterodox journals vis-a-vis a set of core mainstream journals in various ways. In total we use two datasets in this section: Whereas our main dataset is based on a twenty-year sample (1989-2008) from Thomson Scientific’s *Web of Science*⁶, we also utilize some data provided by Frederic S. Lee (for the latter see the details below). We mainly choose the SSCI as a primary data-source, since the calculation of the Journal Impact Factors, which have become the most important standard routine in quantitative evaluation, are principally based on the same data – thus the *Web of Science* has simply become a „powerful“ database.

We then use the data from Frederic S. Lee not only to corroborate our findings but also because of major shortcomings within the SSCI measure: First, the SSCI measures the influence of outlets within a given field, not the quality of individual journal publications (Amin and Mabe 2000) and is not a non-reactive methodology (Fröhlich 2008), which fundamentally questions its reliability and validity. This principled questions are

⁵ Also the famous “Diamond-List”, constituting core journals in economics, is based on citation metrics (Diamond 1989).

⁶ All citations to articles published between 1989 and 2008 are analyzed.

complemented by selection biases in terms of variables and publications as well as technical problems with the automatic scanning of reference lists (for an overview see: Kapeller 2009).⁷

Second, the SSCI partially discriminates against heterodox journals, since many of these journals are not even listed within the SSCI, resulting in a lower Impact Factor (Lee 2008). For our analysis, however, this is a minor point as we choose “thirteen of every branch” and analyze them relative to each other. Regarding the overall performance of individual journals, however, the SSCI measure rewards paradigm size: the larger the group of journals cross-referencing each other, the better for the individual journal.

Our sample selection rests upon the Journal Citation Report (JCR) 2007; it includes the top 13 journals of the JCR (i.e., the top 13 orthodox⁸) and the top 13 heterodox journals⁹ identified in accordance with Frederic S. Lee’s Heterodox directory (Lee 2009a). We choose 13 of each type since the JCR 2007 contains in total thirteen heterodox journals meeting our criterion among the top 150 positions in the category of economics journals. Both networks created this way show a comparable profile: Both sub-samples contain some general as well as some specialised journals and journals of distinctly different fields of orthodox resp. heterodox economics. The following tables created on this basis depict the citation behavior of the top 13 orthodox and top 13 heterodox journals according to the TS-Journal Citation Report 2007 and might help to focus on problems associated with heterodox citation networks.

	percentage of citations from top 13 heterodox journals	percentage of citations from top 13 orthodox journals
in top 13 heterodox	52.42% (intra-network)	47.58% (inter-network)
in top 13 orthodox	2.85% (inter-network)	97.15% (intra-network)

Table 1: Citation networks constituted by leading orthodox and heterodox journals

⁷ The use of the SSCI for evaluating individual publication portfolios is, though common, mostly misleading, as citations per article are far from being equally distributed: an article in a high-impact journal is not necessarily cited more often (Adler et al. 2008; Thomson Scientific 2008).

⁸ The following orthodox journals are included in our sample (Impact-Factors in brackets): *Journal of Political Economy* (4,190), *Journal of Economic Literature* (3,973), *Quarterly Journal of Economics* (3,688), *Journal of Accounting and Economics* (3,034), *Journal of Financial Economics* (2,988), *Econometrica* (2,972), *Journal of Economic Perspectives* (2,831), *Journal of Economic Geography* (2,679), *Review of Economic Studies* (2,539), *Journal of Economic Growth* (2,292), *American Economic Review* (2,239), *Economic Geography* (2,065), *Journal of Econometrics* (1,99).

⁹ The following heterodox journals are included in our sample (Impact-Factors in brackets): *Economy and Society* (1,678), *Ecological Economics* (1,549), *Work, Employment and Society* (1,051), *Review of international Political Economy* (1), *Journal of Economic Behaviour and Organization* (0,772), *New Political Economy* (0,702), *Cambridge Journal of Economics* (0,7), *Journal of Development Studies* (0,686), *Journal of Evolutionary Economics* (0,562), *Feminist Economics* (0,541), *Journal of Post-Keynesian Economics* (0,493), *Journal of Economic Issues* (0,47), *Economics & Philosophy* (0,444).

	percentage of Intra-network (heterodox/orthodox) citations excluding self citations	Percentage of self-citations within a community's network
in top 13 heterodox	13.46% (intra-network)	71.71%
in top 13 orthodox	68.79% (intra-network)	29.19%

Table 2: The role of self-citations within citation networks of leading orthodox and heterodox journals

Tables 1 and 2 are based on the cumulative citations within our SSCI-data. The comparison in Table 1 clearly demonstrates that the neoclassical citation network is much tighter, while heterodox economics proves to be “open” for mainstream research. The pluralist claim of heterodox economics is, thus, completely legitimate if directed at the relation of heterodoxy to mainstream economics, which is by far ignoring heterodox contributions. Table 2 on the other hand shows that the neoclassical citation network is not only tighter because of its ignorant attitude towards heterodox research, but also because their *intranetwork citations* do not so heavily rely on Journal-self-citations. While roughly 70% of all citations within the heterodox community are self-citations, the same value for the orthodox network is only about 30%. These are the main structural, i.e. size-independent, reasons for the relative weakness of the heterodox citation network.

These conclusions also hold when analyzing the completely different sample of heterodox journals provided by Frederic S. Lee (2009b). His sample is based on the years 1993-2003 and includes eleven heterodox journals, which he selected emphasizing post-Keynesian, socio-economic and radical traditions. Only three of these journals, namely the *Cambridge Journal of Economics*, the *Journal of Post-Keynesian Economics* and the *Journal of Economic Issues*, are also part of the above sample of the ‘JCR-top 13 heterodox’. So, while the sample used in Tables 1 and 2 is much more diverse in terms of paradigmatical viewpoints (marxist, post-Keynesian, ecological, evolutionary, feminist journals and a journal very close to the mainstream are included), the results derived from Lee’s much more coherent sample are very similar.¹⁰

¹⁰ A stronger content-oriented selection would intuitively imply stronger relationships in terms of citations.

<i>Journal</i>	<i>Total Citations</i>	<i>% Mainstream¹¹</i>	<i>% Self</i>	<i>% Buddies</i>	<i>% Allies¹²</i>
Cambridge Journal of Economics	21,363	9.7%	2.6%	1.6%	1.7%
Contributions to Political Economy	2,204	9.1%	1.4%	2.3%	1.0%
International Papers in Political Economy	2,164	7.1%	0.3%	2.9%	3.0%
Journal of Economic Issues	22,917	4.9%	7.1%	1.0%	1.2%
Journal of Post Keynesian Economics	10,918	13.1%	7.6%	2.7%	1.6%
New Left Review	10,451	0.0%	3.2%	0.2%	0.1%
Review of Black Political Economy	3,886	6.1%	3.2%	0.6%	0.1%
Review of Political Economy	9,580	9.3%	1.5%	3.0%	2.6%
Review of Social Economy	9,067	5.5%	2.3%	2.4%	1.9%
Review of Radical Political Economics	9,391	4.2%	4.1%	1.8%	2.9%
Science & Society	7,735	0.2%	3.2%	2.1%	1.4%
Average:	~9,187	6,29%	3,32%	1,87%	1,59%

Table 3: Citation behavior among a content-oriented selection of heterodox economic journals (the categories 'self' and 'buddies' have been added by the authors)

Table 3 gives another impression of our general argument: A stereotypical heterodox economist, and also – as evidenced by the values for predominantly Keynesian journals such as the *Cambridge Journal of Economics*, the *Journal of Post-Keynesian Economics* or the *Contributions to Political Economy* – a stereotypical Post-Keynesian economist, exhibits a rather standardized citation routine, which can be described as follows:

First: Cite your enemies, i.e. mainstream economic journals.

Second: Cite yourself, i.e. the journal you are submitting to.

Third: Cite your buddies, i.e. the two journals with the strongest connection to the journal, you are submitting to.

Lastly: Cite your allies, i.e. heterodox economic journals except the three already mentioned (i.e. the 17 remaining journals within this sample).

This fatal routine is subtly, but not in full detail, also present in Table 2 and can be (roughly) read as 45%-mainstream-citations, 40%-self-citations, 15%-citations of allies for heterodoxy compared to 70%-citations of allies, 27.5%-self-citations and 2.5%-heterodox citations for orthodoxy. These differences in network density are striking especially when taking into

¹¹ All Citations to twelve different mainstream journals have been counted: *American Economic Review*, *Economic Journal*, *Economica*, *Econometrica*, *International Economic Review*, *Journal of Labor Economics*, *Journal of Political Economy*, *Journal of Monetary Economics*, *Oxford Economics Papers*, *Quarterly Journal of Economics*, *Review of Economics and Statistics*, *Review of Economics Studies*.

¹² All Citations to twenty different heterodox journals have been counted (see Lee 2009b, p. 153-154).

account that the sample of *orthodox* journals used in Table 1 and 2 is less homogenous in terms of content than the *heterodox* sample used in Table 3 (the orthodox sample in Table 2 includes the *Journal of Accounting and Economics*, the *Journal of Economic Geography* and *Economic Geography*). In sum also our auxiliary data-set exhibit exactly the same implications as our main analysis.

From a pluralist perspective this leads to a result already sketched in the preceding section: Under the assumption that a pluralist attitude, as heterodox economists often invoke it, implies *talking to each other* (in contrast to “ignorant pluralism”) as reflected by mutual citation flows, we find that heterodox economics – when compared to mainstream economics – is actually very pluralistic (according to Table 1, roughly 45% of the citations in heterodox journals refer to mainstream journals). On the contrary, our analysis exempifies that the mainstream in economics is essentially closed, i.e. not open for alternative theoretical approaches and thus not pluralistic (according to Table 1, only about 2,5% of the citations in mainstream journals refer to heterodoxy). While this observation is compatible with a series of complaints about the discrimination of heterodox ideas within the mainstream journal culture (see Reardon 2008), it only holds for a broad understanding of “heterodox economics” as a single paradigmatical alternative to mainstream economics. If we focus on intra-fractional citation-behavior it becomes obvious that heterodox economists are more pluralistic in their relation to mainstream than in their internal discourse: Only about 15% of citations in heterodox journals refer to *other* heterodox journals in the same sample (see Table 2). Thus heterodoxy imports thrice as many citations from mainstream literature as it produces domestically, a situation calling for reversal if a paradigmatic change is really a substantial heterodox desire.

Taken together, the results of our citation analysis strenghtens what has already been explained on a general level, namely that heterodox economists should try to partially re-orient their pluralist attitude from mainstream journals to other heterodox branches. This might lead to a “win-win-situation”: an intensified discourse on theoretical or methodological questions between different heterodox schools of thought might improve the theoretical and empirical standards as well as the applicability of heterodox economics in general, but it would also lead to a significant improvement in terms of citation metrics.

<i>Top ten heterodox journals</i>	<i>Citations in top ten orthodox (export)</i>	<i>Citations of top ten orthodox (import)</i>	<i>Difference</i>	<i>Proportional Factor</i>
Economy and Society	46	69	-23	1.5
Ecological Economics	18	1022	-1004	56.78
Work, Employment and Society	17	47	-30	2.76
Review of international Political Economy	55	111	-56	2.02
Journal of Economic Behaviour and Organization	340	2605	-2265	7.66
New Political Economy	5	50	-45	10
<i>Cambridge Journal of Economics</i>	98	617	-519	6.3
Journal of Development Studies	72	672	-600	9.33
Journal of Evolutionary Economics	36	517	-481	14.36
Feminist Economics	7	198	-191	28.29
<i>Journal of Post-Keynesian Economics</i>	10	407	-397	40.7
Journal of Economic Issues	22	568	-546	25.82
Economics & Philosophy	27	153	-126	5.67
Total	753	7036	-6283	9.34

Table 4: Citation trade balance of 13 heterodox journal vis-à-vis the mainstream

In any case it seems necessary to alter the current situation, which is characterized by the fact that heterodoxy comparatively strengthens the orthodox position in the content-blind SSCI-logic. This is evidenced by the data based again on our SSCI-sample presented in Table 4, which examines the “cross-border” citation balance between heterodox and orthodox journals. For clarification should be mentioned that the majority of the 753 citations, which are exported from heterodoxy to orthodoxy, are created by the respective ”outliers” of each side: While 340 are exported by the *Journal of Economic Behavior and Organization*, another 273 are imported by the *Journal of Economic Geography* resp. *Economic Geography* (excluding those from the former to the latter journals).¹³ Thus only 140 export-citations within 20 years (7 per year) remain when subtracting those citations related to outliers on each side. This again illustrates that heterodox economists strengthen the neoclassical paradigm in terms of citation metrics (by factor 9 in this sample!), since they import much more citations from

¹³ Interestingly both Journals related to Economic Geography exhibit a very heterodox-friendly citations pattern (while *Economic Geography* cites heterodox and orthodox sources in more or less equal shares, the *Journal of Economic Geography* has at least a ratio 1:3 of heterodox to orthodox citations). The fact that heterodox journals do not import very much citations from these journals parallels our observations so far: paradigmatical enemies are much more cited than potential allies. In this case it is surprising to note that the sphere of Economic Geography is not even considered as “heterodox” in most accounts.

orthodoxy than vice versa. Table 4 also shows that citing behavior in this context is not reciprocal: Those journals gathering a proportional factor lower than 3, i.e. those with a relatively good citation trade balance, all cite only few articles from mainstream journals (maximum value: 111), while those with the highest proportional factors (> 10) all import more than 400 mainstream citations (with the exception of *Feminist Economics*).

Comparing the performance of two leading journals of Post-Keynesian research in this sample makes clear that both of these journals import a lot of citations from the top 13 mainstream journals, but only one of them – the *Cambridge Journal of Economics (CJE)* – manages to also export a not-negligible amount of citations. This is mainly due to the fact that the *CJE* maintains contact with the two Economic Geography Journals in the top 13 orthodox journals: 79 of 98 export-citations are imported by these two journals (4 out of 10 is the corresponding ratio for the *Journal of Post-Keynesian Economics [JPKE]*). Moreover, the *CJE* is also much more popular within heterodoxy: According to our data it exports 346 citations to the other twelve heterodox journals, while the *JPKE* only counts 192 of these intra-community export-citations. So the general observation is that the *CJE* does better in terms of network centrality – a result compatible to results from other, similar studies (see Cronin 2008 as an example). These results of course also reflect that the *CJE* is a more “general” journal as compared to the *JPKE*. Nonetheless, from a strategic point of view, Post-Keynesian journals should seek ways to improve their citation performance in both ways: regarding the questions (a) what to cite and (b) how to get cited. Regarding the former point citation patterns differ for non-formal, formal-theoretical and empirical articles – an issue we address in the following section.

In summarizing this section’s results one could say that – from the standpoint of citation metrics – “ignorant pluralism” is far worse than for example excessive flame wars between heterodox schools to determine the “unique and best suited” sole competitor to neoclassical economics. While such quarrelsome relationships would surely damage the partial institutional unity of heterodox economics it would lead to far more mutual citations than the status quo, characterized by a pluralism of disinterest. In this sense it would actually be better “to hunt the heretics down” (intellectually of course) than to ignore their false god’s play.

3 Praise your enemies’ gods!

In the following section we basically argue that a preferred set of methods also coins the theoretical content and paradigmatical character of a certain discipline or school of thought.

Focusing on the Post-Keynesian tradition in this context raises the question why the preferred set of methods within Post-Keynesianism is so similar to mainstream economics (especially when compared to other heterodox schools of thought) and whether this similarity has any effect on inter-paradigmatic relations.

3.1 Problem

The stronger focus on formal and econometric methods exhibited in Post-Keynesian thought as compared to other heterodox traditions parallels the methodological orientation of neoclassical economics. One could even say that from a purely descriptive perspective focussing solely on methodological orientation, Post-Keynesian economics is much more similar to mainstream economics than to most other heterodox schools of thought. This is evidenced by a short look on the articles in two leading Post-Keynesian journals, the Cambridge Journal of Economics (*CJE*) and the Journal of Post-Keynesian Economics (*JPKE*), where the former journal has a more general, the latter a more specialized character.

	“non-formal” articles	“formal” articles	“econometric” articles	Total articles
<i>CJE</i>	58 (58.0%)	16 (16.0%)	26 (26.0%)	100
<i>JPKE</i>	32 (38.5%)	22 (26.5%)	29 (35.0%)	83
<i>Total</i>	90 (49.2%)	38 (20.8%)	55 (30.0%)	183

Table 5: Non-formal, formal and econometric articles in two leading Post-Keynesian journals between 2007 and 2008¹⁴

Roughly one half of the articles depicted in Table 5 are of a non-formal character (about two thirds come from the *CJE*), while the other half focuses on formal or econometric work. This relation is quite surprising from the standpoint of the history of economic thought, since Keynes often opposed econometric techniques characterizing them as “black magic” (Keynes 1971-1973, XIV, 320). Keynes also was critical about the usage of mathematics within economics as already emphasized in the *General Theory*:

“Too large a proportion of recent ‘mathematical’ economics are merely concoctions, as imprecise as the initial assumptions they rest on, which allow the author to lose sight of the complexities and interdependencies of the real world in a maze of pretentious and unhelpful symbols.” (Keynes 1936/2007, 298).

¹⁴ We have surveyed all articles depicted in Table 5 and coded them according to our three subgroups: We counted all articles with a regression or similar analysis as “econometric” and all articles consisting primarily of formal theoretical arguments as “formal” articles, i.e. we did not count any article containing a “mathematical expression” as formal, but only those where formal theorizing is at the center of the argument. The remaining articles are interpreted as “non-formal” articles based on verbal arguments or simple descriptive statistics.

While it is true that Keynes also had made use of mathematical expressions in the *General Theory*, Patinkin (1976, 1094) argues that “in these instances, the mathematical formulation adds little to Keynes’ literary exposition, and so could be deleted without much loss of continuity”. The relationship of today’s methodological orientation in Post-Keynesian economics to its main intellectual antecedent is, thus, not without ambiguities.

However our concern is not a historical evaluation of methodological trends in Post-Keynesian thought but an examination of the effects of a certain methodological stance on a theory’s paradigmatical position. Intuitively one could argue that, despite the significant disagreements between Post-Keynesian and mainstream economics, Post-Keynesianism is, due to its methodological orientation, moving closer to neoclassical economics while at the same time partially departing from the heterodox community. The reliance on the a set of methods very similar to mainstream economics invokes the idea that Post-Keynesians are “praising their enemies’ gods”: Since formalism and econometric methods are often used by mainstream economists to maintain a demarcation line between „economics“ and „other stuff not economics“ (see also Dobusch and Kapeller 2009a), the strong reliance on these approaches in Post-Keynesian thought further strenghtens the neoclassical position. In principle Post-Keynesian economics seems to be in line with the sacred duet of „formal theory“ and „econometric testing“ constituting the „ideal code of conduct“ (Veblen 1898, 382) enshrined by mainstream economics.

Moreover, formal techniques often legitimize changing or modifying the essence of theoretical statements on its own sake. If a certain verbal, not yet formalized concept undergoes formalization such changes or modifications are often (seen as) necessary to accomplish the task at hand. Nonetheless within this procedure it is also possible that essential ideas may change throughout the formalization-process:

„What is often overlooked is that in making the theory more rigorous, the meaning of key concepts has changed. [Self-interested] Agents have become ‘rational’ profit and utility maximisers; freedom to bring one’s capital into competition with anyone else’s has become perfect competition; and so on. The theorem has changed into something very different from the original[.]” (Backhouse 1998, 1853)

A case related to this phenomenon of changing basic assumptions and to Keynesian economics is represented by John Hicks (in)famous article on the *General Theory, Mr. Keynes and the Classics* (1937). Hick’s argument is thereby based on an idiosyncratic formalization

of Keynes' theory resulting in the well-known IS-LM diagram, which became *the* standard model of macroeconomics within the neoclassical synthesis. In this sense a certain perspective on the formalization of the Keynesian theory allowed a theoretical modification and, in succession, the integration (or more critically: assimilation) of some Keynesian notions into neoclassical economic thought.

“Led by Paul Samuelson in the US and John Hicks in the UK, they set about mathematicising Keynes's theory. Or, more accurately, a part of his theory. They left out all those bits that were inconsistent with the neoclassical axioms. Their end product was a formalised version of Keynes that is like a Henry Miller novel without sex and profanity.” (Fulbrook 2007, 165)

While we do not oppose the use of formal or statistical techniques in general, we just ask intuitively for the paradigmatical effects of a methodological orientation similar to neoclassical economics. In other words, we suspect that „praising the enemies' gods“, i.e. a strong focus on formal and econometric methods, may result in adverse effects for Post-Keynesian paradigmatic positioning, which can be summarized as follows:

- (1) Post-Keynesian ideas are more easily incorporated, reinterpreted or modified by neoclassical economists, which are in succession understood as contributions to the mainstream paradigm.
- (2) Post-Keynesian Economics moves closer to mainstream and further away from heterodox economics, resulting in
- (3) less conversation, i.e. less citations, between Post-Keynesians and other heterodox schools and more conversation, i.e. more citations, between Post-Keynesians and mainstream economics.

The first point is not accessible from a quantitative perspective and must be evaluated on a qualitative level, primarily through accurate comparisons of (Post-)Keynesian and neoclassical models. In what follows, we want to address the second and the third point of the potentially adverse effects by using citation data from the *CJE* and the *JPKE*. Such an analysis might also provide helpful insights regarding the citation patterns of leading Post-Keynesian journals in general.

3.2 Empirical Observations

As already mentioned we surveyed all articles in the *CJE* and the *JPKE* published between 2007 and 2008. In a first round of coding we identified the general character of the article (see footnote 13 for details), while in a second round we counted all

- (1) citations to journals, which are part of our sample of top 13 orthodox journals (ORT),
- (2) journal self-citations (SELF),
- (3) citations to journals, which are part of our sample of top 13 heterodox journals minus the journal currently in question (HET),

appearing in those articles. The following Figures 1 and 2 give an overview about our findings concerning the citation behavior of the *CJE* and the *JPKE*:

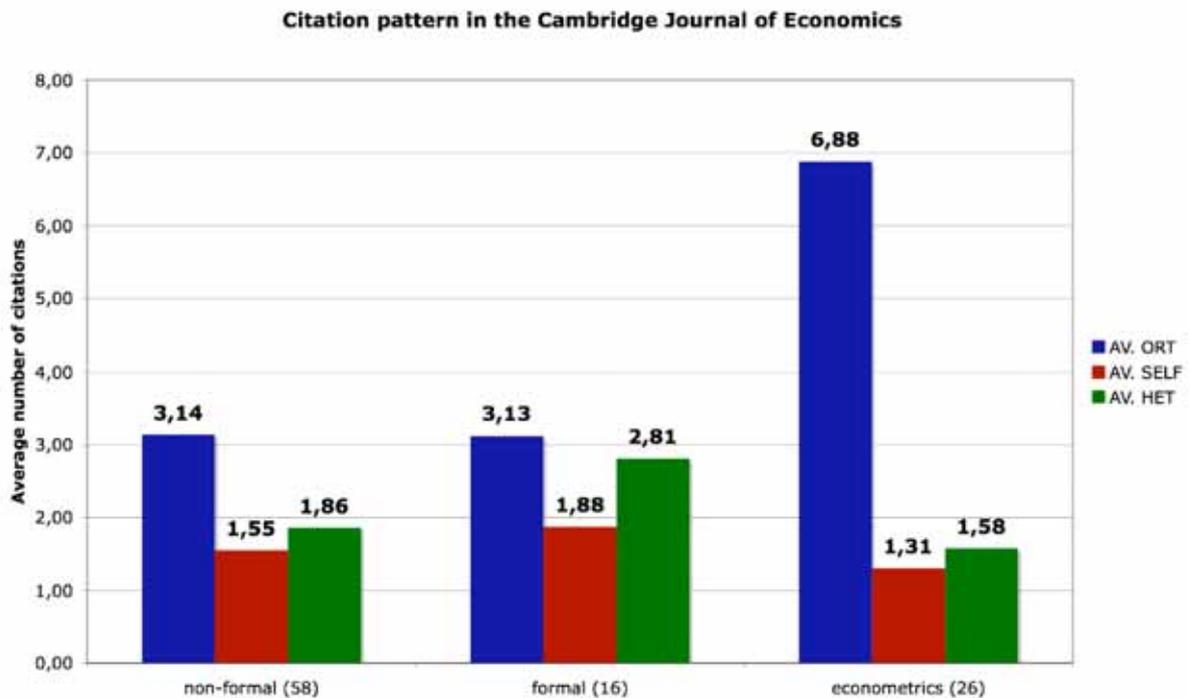


Figure 1: Citation patterns within non-formal, formal and econometric articles in the *CJE* (2007-2008)

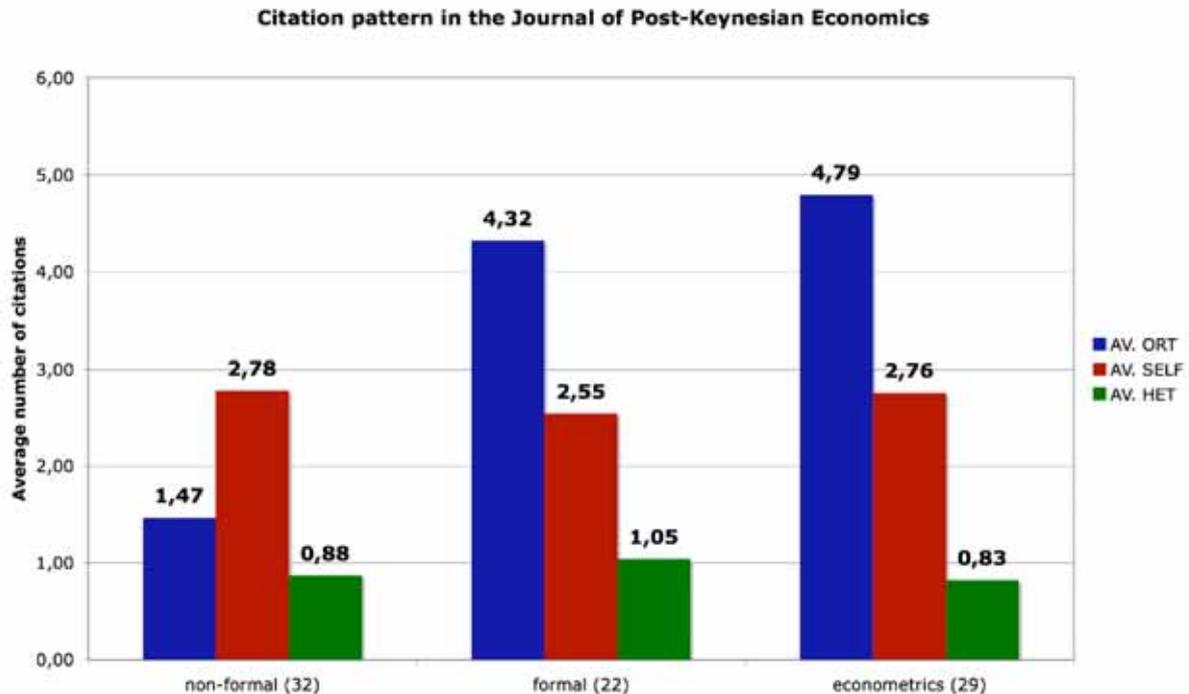


Figure 2: Citation patterns within non-formal, formal and econometric articles in the *JPKE* (2007-2008)

In both cases – with the exception of non-formal articles in the *JPKE* – orthodox articles are cited more often on average than heterodox articles or articles from the respective journal, regardless of the article type. This parallels our results from section 2.2, indicating that there are, from a strategic point of view, too many mainstream citations in Post-Keynesian articles. In this context it is noteworthy that, while Post-Keynesian journals do not import a significant number of citations from the two Journals relating to economic geography, i.e. most of the citations counted above refer to “pure” mainstream journals, those two journals import a huge amount of Post-Keynesian citations in our trade-balance analysis from section 2.2.¹⁵

While in the *JPKE* (Figure 2) the amount of self-citations and the amount of citations from other heterodox journals is fairly constant regardless of the particular article type, there are significantly more mainstream citations in formal and econometric contributions. This indicates that our intuitive assertion from section 3.1 was partially correct: While the *JPKE* does not cite less heterodox references in formal or statistical articles, i.e. prolongs the conversation with heterodoxy in this context, the rising number of citations from orthodox

¹⁵ According to our data-set from Section 2 the *CJE* (*JPKE*) imported only 12 (2) citations or 2% (0,5%) of its mainstream-import citations between 1989 and 2008 from the *Journal of Economic Geography* and *Economic Geography*, while it exported 79 (4) or 80,5% (40%) of its total mainstream-export citations to these journals.

articles suggest that the conversation with the mainstream is intensified when it comes to formal and econometric issues.¹⁶

In the *CJE* (Figure 1) on the other hand there are *less* self-citations in general, but more citations drawn from the heterodox community as a whole, when compared to the *JPKE* – an observation resulting from the more specialist (or critically: sectarian) orientation of the latter journal. However, while the *CJE* also suffers from the phenomenon of a rising amount of mainstream citations within econometric articles it somehow manages to avoid the same effect when it comes to formal articles. On the contrary citations from heterodox journals suddenly begin to rise in the category of formal articles in the *CJE*. A deeper investigation shows that the average number of citations in formal articles in the *CJE* is decisively influenced by only two specialized articles (namely: Skott and Ryoo 2008 and Araujo and Lima 2007). Without these two articles the average number citations in formal articles in *CJE* would change to 3,36:1,64:1,57 (orthodox:self:heterodox) and thereby deliver a pattern much more similar to the *JPKE*. One of these “exceptional” articles (Skott and Ryoo 2008) relies heavily on sources from the area of radical economics, while the other (Araujo and Lima 2007) emphasizes Post-Keynesian research and, thus, heavily cites the *JPKE*. These two articles could therefore serve as role-models of how Post-Keynesian economists could do formal theory, without disproportionately citing mainstream economic journals, i.e. “talking” to mainstream economists.

Summarizing the findings of this section does not lead to the conclusion that Post-Keynesians should quit doing formal theory or conducting statistical tests, but they should be aware of the fact that they – systematically – come closer to mainstream economics when employing these techniques. This results not only in a methodological similarity, whose merit is not generally discussed here, but also in a substantially stronger connection in terms of conversation, i.e. citation behavior. The fact that the introduction of quantitative evaluation schemes within the scientific community (partially) relies on such citation flows has given this purely descriptive account a machiavellistic dimension: How to compose a reference list has thus also become a strategical question – obviously even more in the case of formal and empirical research exhibiting a methodological orientation very similar to the lines of mainstream economics.

¹⁶ Nevertheless, as our analysis from section 2 suggests, the “intensified conversation” with neoclassical economics is still a “one-sided” conversation, since mainstream economists do not respond to the Post-Keynesians – at least in terms of actual citations.

4 Make your papers scarce!

While in the previous two sections strategic suggestions also required taking a stand in economic, content-oriented debates, in this section we are dealing with a problem relatively independent from the economic quality discourse: the mere access to the scientific works of heterodox economists.

4.1 Problem

An outlet's circulation is an important criterion influencing the presence and availability and, thus, citation frequency of an article. Hence the following section is devoted to the question how to increase the visibility and circulation of heterodox articles to increase citations and impact factors of these articles and the associated heterodox journals.

As, for example, Thomson Scientific's most influential performance figure, the Journal Impact Factor (JIF), is calculated from SSCI data within a the two-year time-span, it is obvious that the availability of articles is crucial for the JIF of an individual journal. Some form of pre-print publication – for example, a working paper version prior to revisions – is therefore essential, otherwise the outlet is “hurting itself” in terms of the JIF-calculation. The importance of pre-print availability of journal articles can be illustrated with a simple example: An article published in December (say: 2009) will be counted in the denominator for the 2010 JIF and citations to this article in 2010 will be counted in the numerator. But most articles being published in 2010 will already be under review at the end of 2009. So most articles appearing 2010 couldn't even consider an article published in December 2009 if it had not been accessible earlier via pre-print channels.

But publishing pre-print working paper versions is not the only possibility of increasing circulation and citation performance by individual authors. Similarly important is making works openly available after they have been accepted in form of post-print versions, which include revisions. While many publishers prohibit publishing post-prints shortly after the first “official” publication of an article, the bigger problem is the reluctance of researchers to care about this issue at all.

Related to this problem is the already mentioned, relatively low number of heterodox journals included in the SSCI as well as in total. Fully utilizing the capacities of the heterodox economic community could very well require founding new journals in, for example, overlapping or fringe areas, where rejection rates are high. At least in the case of founding a new journal but also in case of existing journals, running the journal as an open access outlet

with free and immediate online access to all published works would combine low costs with higher circulation (see Harnad et al. 2003; Brody and Harnard 2004).

But even if for an established journal a complete switch to an open access model is not feasible, it might participate in one of the optional open access programs offered by most large publishing houses. Publishers like the Oxford University Press (“Oxford Open”)¹⁷, Taylor & Francis Group (“iOpenAccess”)¹⁸, Sage (“Sage Open Scheme”) or Springer (“Open Choice”) offer authors or their institutions¹⁹ to pay for the open availability of their articles. Not all journals, however, of these publishers participate in these programs and, of course, not all research funding institutions are willing to pay the sometimes substantial amounts necessary to secure this form of open access. Table 6 gives an overview of journal related possibilities for increasing article circulation.

<i>Strategy</i>	<i>Description</i>
Pre-prints	Making un-refereed versions of an article available as soon as possible
Post-prints	Making final, revised versions of an article available
Open Access option	Paying for open access to articles in non-open journals
Open access journal	Founding new or converting existing journals into full open access journals

Table 6: Strategies for increasing article circulation

A common feature of all online and freely available research, ranging from open access journals and institutional repositories over authors’ homepages to papers disseminated in digital research platforms (like RePEc or SSRN), is that it gathers significantly more citations (Bergstrom and Lavaty 2007). Furthermore, Novarese and Zimmermann (2008) report that heterodox articles posted on the RePEc-platform and distributed via the “New Economic Papers”(NEP)-mailing lists are on average downloaded more often than mainstream articles. Thus it seems reasonable to consciously improve the dissemination of heterodox work through digital channels such as research platforms or mailing-lists.

The possibilities of doing so, however, are regularly restricted (severely) by the institutional circumstances of the publication process, above all by overly strict copyright regulation. So while any heterodox economist can to a certain extent contribute to a wider dissemination of

¹⁷ See <http://www.oxfordjournals.org/oxfordopen/>; list of journals: http://www.oxfordjournals.org/oxford-open/open_access_titles.html [both: 8.9.2009]

¹⁸ See <http://www.tandf.co.uk/journals/iopenaccess.asp> [8.9.2009]

¹⁹ In Germany, for example, the Max Planck Society forced Springer to generally provide open access to all articles by Max Planck researchers in form of “Open Choice” by threatening to cancel all its Springer subscriptions (see online: <http://www.mpg.de/bilderBerichteDokumente/dokumentation/pressemitteilungen/20-08/pressemitteilung20080204/genPDF.pdf> [06.09.2009]). Besides, more and more research grants (e.g. by the European Union or the German Research Foundation) include special funds devoted to such author-pays publication models to enhance open access.

heterodox research, journal editors are in a particularly privileged position to do so: it is them who have the possibility to (re-)negotiate with publishing houses under what conditions authors are allowed to (re-)publish their works.

4.2 Empirical Observations

As both cross-disciplinary (e.g. Harnad et al. 2003; Brody and Harnard 2004; Antelmann 2004) and economic (e.g. Novarese and Zimmermann 2008) studies unanimously and unsurprisingly find higher citation impact for openly available research, we do not want to reproduce such a study here. Instead we look at the open access policies in ten leading journal outlets for Post-Keynesian research (see Table 7).

The reason for comparing journals is twofold: First, while of course it is the publishing houses that draft the copyright agreements, it is the journal editors that not only choose the publisher but are also in the position to (re-)negotiate such copyright terms. Second, we find substantial differences among the journals under study with regard to the extent that they allow or prohibit open access publication of their articles.

Journal title	Publisher	Pre-print*	Post-print**	Open access***
Cambridge Journal of Economics (CJE)	Oxford	Allowed only before acceptance	24 months after first publication	None
Contributions to Political Economy (CPE)	Oxford	Allowed only before acceptance	24 months after first publication	None
Intervention	Metropolis	Allowed	None	Possible on request
Journal of Economic Issues (JEI)	M.E. Sharpe	18 months after first publication	None	None
Journal of Post-Keynesian Economics (JPKE)	M.E. Sharpe	18 months after first publication	None	None
Metroeconomica	Wiley	Allowed	None	None
Review of International Political Economy (RIPE)	Taylor & Francis	Allowed	12/18 months after first publication	None
Review of Political Economy (ROPE)	Taylor & Francis	Allowed	12/18 months after first publication	None
Review of Radical Political Economics (RRPE)	Sage	Allowed	12 months after first publication	None
Review of Social Economy (ROSE)	Taylor & Francis	Allowed	12/18 months after first publication	None

* defined as as un-refereed author version of the article

** as being the final draft author manuscript as accepted for publication, following peer review, but before copyediting and proof correction process

*** option to pay for open access of individual article (e.g. "Oxford Open", "Sage Open Scheme")

Table 7: Copyright policies of outlets for Post-Keynesian research

In our sample of ten more or less Post-Keynesian journals we have six different publishers. While four of these publishers (Oxford, M.E. Sharpe, Taylor & Francis Group, and Sage) have optional open access programs for some of their journals, none of the six journals

participates in such a program. Interestingly, Metropolis – a publisher without such a standardized open access option – offered such a possibility on inquiry.

With regard to allowing the publication of pre- and post-print versions of an article on an author's homepage or an institutional repository, M.E. Sharpe – publisher of JEI and JPKE – has by far the most restrictive policy: M.E. Sharpe not only forbids post-print versions of its articles but also requires authors to wait for an “18-month POST-PUBLICATION EMBARGO”²⁰ before they are allowed to publish online a pre-print version of their article. Also very restrictive are Wiley and Metropolis, which forbid any publication of post-prints, but at least allow the publication of pre-print versions.

Contrary to the ridiculously long “embargo” period of M.E. Sharpe, Sage and Taylor&Francis Group – the latter being the owner of “Routledge” – generally approve the publication of pre-print versions and allow post-print publication not later than 12 to 18 months after the first publication. At Oxford University Press, home of the CJE and the CPE, the pre-print policy is a little more tricky, as only pre-prints are allowed that had been available online already before the final acceptance decision. Hence, the imperative for authors submitting their articles to Oxford journals is to publish a working paper version online parallel to the submission. Otherwise they have to wait 24 months before they are allowed to publish a post-print version – a period way too long for citations to be included in standard JIF measures.

In sum, the ten journals under study are relatively weak in terms of open accessibility. What is more, most of the journal homepages do not offer much information online on their respective copyright policies – if there is any information available at all. While from a publisher's point of view this might be to some extent understandable, from an editor's point of view it is not: increasing circulation and hence citation of the journal's article is crucial for surviving in a world of journal evaluation by citation metrics. Especially if Post-Keynesians want to attract researchers to adopt their research program and to join the Post-Keynesian community a wider dissemination of Post-Keynesian articles is a relevant precondition.

²⁰ Taken from the official „Journal PDF Policy”, capital letters as in the original document.

5 Conclusions

The main implication of this article is obviously to intensify and foster the discourse within the heterodox economics community. Such an intensified discourse could lead to the creation of a common paradigmatic umbrella for the different heterodox schools in order to overcome the notion of „ignorant pluralism“ identified in section 2. As emphasized throughout the paper, we neither advocate for a „pluralism for its own sake“ nor for a purely strategically motivated pseudo-pluralist behavior, but gave a variety of epistemological reasons for our pluralistic stance. In this context the analysis of citation behavior has proven to be a suitable instrument to access theoretical and methodological pluralism from an empirical perspective.

There are at least four main reasons for developing a more pluralist notion within heterodox economics, two of them stem from a strategic and another two from a theoretical perspective: A very general strategic argument is that in case of interparadigmatic conflict (as in economics), a single competitor to the dominating paradigm has a much higher chance of survival or even success than a variety of competitors (see Sterman and Wittenberg 1999, Dobusch and Kapeller 2009a). This is why we argue to form a unified pluralist paradigm consisting of a series of heterodox traditions as a main competitor to neoclassical economics. The analysis of citation behavior not only helps to evaluate whether this claim is currently considered by heterodox economics, but it is itself of strategic importance: Since the introduction of quantitative evaluation routines in economics has led to self-reinforcing feedback-mechanisms, even critical citations of mainstream works may further strengthen the latter's institutional dominance.

From a theoretical perspective we strongly believe that an intensified discourse between different heterodox traditions would also improve the theoretical and empirical work conducted in the subfields of heterodox economics, i.e. the individual heterodox schools of thought. Thus, our argument is basically that intensifying discourse among heterodoxy is a merit on its own, independently of any citation metric logic. Moreover, there is also an epistemological advantage associated with a pluralist conception of science. Since the units of analysis in the social sciences are subject to historical and cultural contingency, it is probable that we need a variety of analytical perspectives and conceptions to fully grasp and analyze most (if not all) aspects of a particular social phenomenon. The diversity of heterodox traditions would allow for such a diversity of viewpoints within a common paradigmatic

framework, coinciding with what Sheila Dow (1990, 143) called the „Babylonian“ mode of thought in economics.

Concrete suggestions related to these arguments include efforts to increase the number of articles concerned with integrating or comparing different heterodox traditions, to create special issues or commentary sections in heterodox journals specifically aimed at bringing such contributions together on a common platform or to identify main ideas behind the varying methodological conceptions of heterodox economic thought. All this would help to further broaden and unify the theoretical and methodological basis on which the convergence of different heterodox theories might continue – or at least begin.

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