

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

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ABSTRACT *While many heterodox economists hope that the recent financial crisis will lead to paradigmatic change in economics, we argue that path-dependent processes and institutional factors within the economic community hinder such a change. Focusing on the citation behavior of economists in heterodox journals in general and in Post-Keynesian journals in particular, we discuss structural reasons—connected to positive feedback mechanisms within the institutional framework of the economics discipline—for the marginalization of heterodox economic thought.*

1. Introduction

For many heterodox economists the current economic crisis is also a crisis of mainstream economics and, hence, an opportunity for paradigmatic change (e.g., Davidson, 2009; Hodgson, 2009; Lawson, 2009). A common critique addresses the mainstream's failure to recognize the problems leading to the crisis and its inability to predict it (e.g. Bezemer, 2009). This line of critique can even be found among economists not famous for their critical stance towards mainstream economics (for example Colander et al. 2009).

Nevertheless, in this paper we argue that in spite of the partially acknowledged problems in neoclassical theory that have been 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

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economics to perpetuate its paradigmatic dominance. As we describe elsewhere (Dobusch & Kapeller, 2009a), economic education and publishing cultures are highly standardized and exhibit positive network effects that the current crisis has left largely unaffected. The paradigmatic stability of the status quo is nicely illustrated by a comment by N. Gregory Mankiw (2009), author of two widely used textbooks: ‘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.’

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 accurate econometrics and more sophisticated mathematical modelling, they do not even mention the institutional dominance of a discredited scientific paradigm. The central axioms or the Lakatosian ‘hard core’ of the neoclassical paradigm are left unchallenged, leading only to ‘new puzzles to solve’ but not to ‘anomalies’ that require fundamental change—the reaction to extensive empirical failure generally described by Kuhn (1969) and Feyerabend (1975).

Second, heterodox economic schools such as the Post-Keynesians fail to provide a comprehensive alternative to mainstream economics, which is a necessary precondition for such a paradigmatic change (Kuhn, 1969; Sterman & Wittenberg, 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. While we acknowledge the difficulties for dissenting views posed by the institutional environment and by hegemonic strategies of mainstream researchers in favour of the incumbent paradigm (see Dobusch & Kapeller, 2009a, 2009b), we also see a substantial tendency of ‘self-marginalization’ within communities of heterodox economists. A general problem is 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 perspectives? Some kind of consensus on this point is 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; we 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 (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 struggle. 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 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 economists from different schools of thought seem to agree on demanding more theoretical pluralism within economics (e.g. Garnett, Olsen & Starr, 2010; 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 Paul Davidson (2004), editor of the *Journal of Post Keynesian Economics*, 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 ‘If 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 Davidson, 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’s General Theory. Such a monistic attitude practically results in a ‘pluralism of disinterest’ best described as ‘tolerant ignorance’. Since other heterodox schools of thought are seen as ‘dealing with special cases’ and as related to different aspects of the economy, and as working with alternative methods, their contributions are tolerated on the grounds of a common experience of academic marginalization, Davidson sees no need to integrate them into a common framework. Efforts like those of Lavoie (2006) or O’Hara (2007) which try to combine or compare diverse heterodox approaches are still exceptional; Lee (2010) provides a survey of such contributions. In contrast to this ‘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 is, thus, understood as an active scientific conversation between different heterodox schools and would therefore be observable in a quantitative analysis of citation behavior.

Discursive pluralism as advocated here is currently not typical within 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, increased debate on common theoretical grounds and perspectives among different heterodox economic schools seems to be a promising route for increasing their overall explanatory power. Second, heterodox economics could thereby serve as an archetype of pluralism in economics in general. Third, a common pluralistic paradigm consisting of various heterodox traditions may have a better chance of succeeding against the neoclassical approach in the struggle for paradigmatic dominance. Fourth, the tightening of heterodox citation networks seems to be a Machiavellian imperative in the face of modern research evaluation assessments, which are often based on the number of citations gathered by researchers, departments or publication outlets.

2.2. Empirical Observation

We observe several feedback mechanisms in scientific institutions and these mechanisms contribute to the formation of path-dependent processes in the development of economics as a scientific paradigm (Dobusch & 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. Nowadays – due to citation indices such as the *Social Science Citation Index (SSCI)* – this also holds for individual authors, departments and outlets. In economics, the introduction of citation metrics in the 1970s—notably the so-called 'Diamond List' of core journals in economics compiled

by Arthur M. Diamond (1989)—has benefited the neoclassical paradigm leading to a situation of ‘institutional oligopoly’ (Hodgson & Rothman, 1999, p. F180):

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 paradoxical consequences: citations in heterodox articles that criticize the dominant viewpoint are 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 provide an interesting starting point for discussing general paradigmatic strategies of heterodox economists.

In this spirit we analyze the citation behavior of core heterodox journals vis-à-vis a set of core mainstream journals in various ways. In this section we use two datasets. Our main dataset is based on a twenty-year sample (1989–2008) of citations among 26 economic journals (13 orthodox and 13 heterodox) from Thomson Scientific’s *Web of Science*.¹ We also utilize some data provided by Frederic S. Lee (see the details below). We choose the SSCI as a primary data source, since the calculation of Journal Impact Factors, which have become the most important figures for quantitative evaluation, is based on the same data.

Lee’s data is used not only to corroborate our findings but also because major shortcomings within the measures provided by Thomson Scientific raise fundamental questions about their reliability. First, the Journal Impact Factor measures the influence of outlets within a given field, not the quality of individual journal publications (Amin & Mabe,

¹ Data from Web of Science suffers from an idiosyncratic definition of ‘citations’. Because it only displays ‘citing articles’, an article in journal A that cites two articles from journal B is counted as one citation for journal B.

2000). Second, it is not a non-reactive methodology (Fröhlich, 2008). These problems are complemented by selection biases in terms of variables and publications as well as technical problems with the automatic scanning of reference lists.² Third, the SSCI discriminates against heterodox journals, many of which are not even listed within the SSCI, resulting in a lower Impact Factor (Lee, 2008b). In our analysis, we partially accounted for the latter problem by choosing ‘thirteen of every branch’ and analyzing them relative to each other. Regarding the overall performance of individual journals, the SSCI measure rewards paradigm dominance: 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 orthodox) and the top 13 heterodox journals covered in the JCR 2007, identified in accordance with the third edition of Frederic S. Lee’s Heterodox Economics Directory (Lee 2008a).³ We choose 13 of each type since the JCR 2007

² For an overview see Kapeller (2010). The use of the SSCI for evaluating individual publication portfolios, though common, is 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).

³ The following orthodox journals are included in our sample (Impact Factors in parentheses): *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* (1.990).

The heterodox journals included in our sample are: *Economy and Society* (1.678), *Ecological Economics* (1.549), *Work, Employment and Society* (1.051), *Review of International Political Economy* (1.000), *Journal of Economic Behavior and Organization* (0.772), *New Political Economy* (0.702), *Cambridge Journal of Economics* (0.700), *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* (0.470), *Economics & Philosophy* (0.444).

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: they contain general as well as specialized journals and journals of distinctly different fields within the two categories of orthodox and heterodox economics. The following tables depict the citation behavior of these journals and help can help us to identify the 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

	percentage of Intra-network (heterodox/orthodox) citations excluding self citations	Percentage of journal-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 shows clearly that the neoclassical citation network is much tighter and largely ignores the heterodox literature, while heterodox economics proves to be ‘open’ by including a lot of citations to mainstream research. Heterodox economics can legitimately be characterized as pluralistic in the sense that it acknowledges and takes seriously the arguments of the mainstream. Table 2, on the other hand, shows that the neoclassical citation network is not only tighter because it ignores heterodox research, but also because their *intranetwork citations* do not rely so heavily on journal-self-citations. While roughly 70% of

all citations within the heterodox community are journal-self-citations, in the orthodox network the self-citation rate is only about 30%. These are the main structural, i.e. size-independent, reasons for the relative weakness of the heterodox citation network, which we subsume under the label of ‘ignorant pluralism’.

These conclusions also hold when analyzing the completely different sample of heterodox journals provided by Frederic S. Lee (2009). 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 (CJE)*, the *Journal of Post Keynesian Economics (JPKE)* and the *Journal of Economic Issues (JEI)*, are also part of the ‘JCR-top 13 heterodox’. While the sample used in Tables 1 and 2 is much more diverse in terms of paradigmatic 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. (A stronger content-oriented selection would intuitively imply stronger relationships in terms of citations.)

Table 3 gives another impression of our general argument. We see here that a stereotypical heterodox economist exhibits a rather standardized citation routine:

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).

These differences in network density are striking especially when taking into 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 for example the *Journal of Accounting and Economics*, the *Journal of Economic Geography* and *Economic Geography*). In sum also our auxiliary data-set exhibits the same implications as our main analysis.

<i>Journal</i>	<i>Total Citations</i>	<i>% Mainstream</i>	<i>% Self</i>	<i>% Buddies</i>	<i>% Allies</i>
<i>Cambridge Journal of Economics</i>	21,363	9.7%	2.6%	1.6%	1.7%
<i>Contributions to Political Economy</i>	2,204	9.1%	1.4%	2.3%	1.0%
<i>International Papers in Political Economy</i>	2,164	7.1%	0.3%	2.9%	3.0%
<i>Journal of Economic Issues</i>	22,917	4.9%	7.1%	1.0%	1.2%
<i>Journal of Post Keynesian Economics</i>	10,918	13.1%	7.6%	2.7%	1.6%
<i>New Left Review</i>	10,451	0.0%	3.2%	0.2%	0.1%
<i>Review of Black Political Economy</i>	3,886	6.1%	3.2%	0.6%	0.1%
<i>Review of Political Economy</i>	9,580	9.3%	1.5%	3.0%	2.6%
<i>Review of Social Economy</i>	9,067	5.5%	2.3%	2.4%	1.9%
<i>Review of Radical Political Economics</i>	9,391	4.2%	4.1%	1.8%	2.9%
<i>Science & Society</i>	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; in contrast to the other tables the given percentage-values are calculated relative to total citations within a certain outlet). All Citations to twelve mainstream and twenty heterodox journals have been counted (see Lee, 2009, pp. 53, 153–154).

Under the assumption that a pluralist attitude, as heterodox economists often invoke it, implies *talking to each other* (in contrast to ‘ignorant pluralism’) and that this should be reflected in mutual citation flows, we find that heterodox economics, when compared ‘en bloc’ to mainstream economics, is actually very pluralistic (47.5% of the citations in heterodox journals refer to mainstream journals). On the contrary, our analysis indicates that the mainstream in economics is essentially closed, i.e. not open to alternative theoretical approaches and thus not pluralistic (only about 3% of the citations in mainstream journals refer to heterodoxy). While this observation is compatible with a series of complaints about the discrimination against heterodox ideas within the mainstream journal culture (see

Reardon, 2008), it only holds for a broad understanding of ‘heterodox economics’ as a single paradigmatic alternative to mainstream economics. If we focus on intra-factional citation behavior it becomes obvious that heterodox economists are more pluralistic in their relation to mainstream than in their internal discourse: only about 13.5% of citations in heterodox journals refer to *other* heterodox journals in the same sample (68.79% is the corresponding value for orthodox journals; see Table 2). Thus heterodoxy imports thrice as many citations from mainstream literature as it produces domestically, a situation that needs to be reversed if a paradigm shift is ever to take place.

Taken together, the results of our citation analysis strengthen what has already been explained on a general level, namely that heterodox economists should try to partially re-orient their pluralist attitude away from mainstream journals to other heterodox approaches. This might lead to a ‘win-win-situation’ in which an intensified discourse on theoretical or methodological questions between different heterodox schools of thought leads not only to improved theoretical and empirical standards, but also to better citation outcomes for heterodox research.

In any case it seems necessary to alter the current situation, where heterodoxy comparatively strengthens the orthodox position in the content-blind SSCI logic. This is evidenced by Table 4 (again based on SSCI data), which examines the ‘cross-border’ citation balance between heterodox and orthodox journals.⁴ Table 4 also shows that citing behavior in

⁴ Additionally, it should be mentioned that the majority of the 753 citations, which are exported from heterodoxy to orthodoxy, are related to one of the three ‘outliers’ within our sample. These outliers are the *Journal of Economic Behavior and Organization* (a fringe journal coded as heterodox here) as well as the *Journal of Economic Geography* and *Economic Geography* (two interdisciplinary journals coded as orthodox). While 340 citations are exported by the *Journal of Economic Behavior and Organization*, another 273 are imported by the journals on economic geography (excluding those exported by *JEBO*). Thus only 140 export-citations within 20 years (7 per year), which is less than

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*).

<i>Top 13 heterodox journals</i>	<i>Citations in top 13 orthodox (export)</i>	<i>Citations of top 13 orthodox (import)</i>	<i>Difference</i>	<i>Proportional Factor</i>
<i>Economy and Society</i>	46	69	-23	1.5
<i>Ecological Economics</i>	18	1022	-1004	56.78
<i>Work, Employment and Society</i>	17	47	-30	2.76
<i>Review of international Political Economy</i>	55	111	-56	2.02
<i>Journal of Economic Behavior and Organization</i>	340	2605	-2265	7.66
<i>New Political Economy</i>	5	50	-45	10
<i>Cambridge Journal of Economics</i>	98	617	-519	6.3
<i>Journal of Development Studies</i>	72	672	-600	9.33
<i>Journal of Evolutionary Economics</i>	36	517	-481	14.36
<i>Feminist Economics</i>	7	198	-191	28.29
<i>Journal of Post Keynesian Economics</i>	10	407	-397	40.7
<i>Journal of Economic Issues</i>	22	568	-546	25.82
<i>Economics & Philosophy</i>	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

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

20% of total exports, are independent of these outliers. Interestingly both journals related to Economic Geography exhibit a very heterodox-friendly citation 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 many citations from these journals parallels our observations so far: paradigmatical enemies are much more cited than potential allies.

mainstream journals, but only one of them, the *CJE*, manages also to 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 *JPKE*).⁵ 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. This result of course also reflects the fact that the *CJE* is a less specialized as compared to the *JPKE*. Nonetheless, from a strategic point of view, Post-Keynesian journals should try to improve their citation performance.

This section's results suggest that 'ignorant pluralism' is even worse than outright warfare between heterodox schools to determine the 'unique and best suited' sole competitor to neoclassical economics. While such quarrelsome relationships can damage the tenuous institutional unity of heterodox economics it would also generate many more mutual citations than the status quo, which might be described as 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!

⁵According to our data set the *CJE* imported only 12 citations, or 2%, of its mainstream-import citations between 1989 and 2008 from the *Journal of Economic Geography* and *Economic Geography*, while it exported 79, or 80.5%, of its total mainstream-export citations to these journals. The *JPKE* imported only 2 citations, or 0.5%, of its mainstream-import citations between 1989 and 2008 from the two Economic Geography journals, while it exported 4, or 40%, of its total mainstream-export citations to these journals.

In the following section we argue that a preferred set of methods shapes the theoretical content and paradigmatic character of a discipline or school of thought. Focusing on the Post-Keynesian tradition in this context raises the question whether methodological similarities between Post-Keynesian and mainstream research have any effect on inter-paradigmatic relations.

3.1. Problem

The greater focus on formal models and econometric methods exhibited in Post-Keynesian thought as compared to other heterodox traditions parallels the methodological orientation of neoclassical economics. This is evidenced by a short look at the articles in two leading Post-Keynesian journals (again the *CJE* and the *JPKE*); the findings are presented in Table 5.⁶

	<i>'non-formal' articles</i>	<i>'formal' articles</i>	<i>'econometric' articles</i>	<i>Total articles</i>
<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 2008

Roughly 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 himself opposed the use of econometrics, which he characterized as ‘black magic’ (Keynes, 1971–79, Vol. XIV, p. 320), and he was distrustful of mathematics in economics

⁶ We counted all articles with a regression or similar analysis as ‘econometric’ and all articles consisting substantially of formal theoretical arguments as ‘formal’ articles. The remaining articles are interpreted as ‘non-formal’ articles based on verbal arguments or simple descriptive statistics. Not every article containing mathematical expressions was classified as ‘formal’; only those in which formal theorizing is at the center of the argument were included in this category.

(see Keynes, 1936, p. 298). The relationship of today's methodological orientation in Post-Keynesian economics to its main intellectual antecedent is, thus, not without its ironies (see King, 2002, pp. 30–34).

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. One could argue that, despite its significant disagreements with mainstream economics, Post-Keynesianism is, through its increasingly formal methodological orientation, moving closer to neoclassical economics while at the same time partially separating itself from the rest of the heterodox community. The reliance on 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 King, 2002, pp. 192–195; Dobusch & Kapeller, 2009a). At least a part of Post-Keynesian economics seems to be in line with the sacred duet of 'formal theory' and 'econometric testing' enshrined within mainstream economics as the 'ideal code of conduct' (Veblen, 1898, p. 382; see King, 2002, p. 258).

Moreover, formal techniques often legitimize the modification of a theoretical statement. Once a verbal argument undergoes formalization, modifications introduced in the formalization process often come to be seen as necessary to accomplish the theoretical task at hand. It is likely that essential ideas may change as a result of the formalization process (see Backhouse, 1998, p. 1853). An example of this phenomenon is John Hicks's famous article on 'Mr Keynes and the Classics' (1937). Hicks's argument is there based on an idiosyncratic formalization of Keynes's theory, the well-known IS-LM diagram, which became *the* standard model of macroeconomics and allowed for the the assimilation of some Keynesian notions into neoclassical economic thought.

While we do not oppose the use of formal or statistical techniques in general, heterodox economists ought to be sensitive to the paradigmatic effects of a methodological orientation similar to neoclassical economics. For there is a real risk 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, among which are the following:

- (1) Post-Keynesian ideas could be more easily incorporated, reinterpreted or modified by neoclassical economists, and then interpreted as contributions to the mainstream paradigm.
- (2) Post-Keynesian economics could move closer to the mainstream and further away from heterodox economics, resulting in less conversation, i.e. fewer 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 quantitatively accessible and must be evaluated on a qualitative level, primarily through accurate comparisons of Post-Keynesian and neoclassical models. In what follows, we address the second of the potentially adverse effects by using citation data from the *CJE* and the *JPKE*. Such an analysis might also provide insights regarding the citation patterns of leading Post-Keynesian journals in general.

3.2. Empirical Observation

Surveying all articles in the *CJE* and the *JPKE* published between 2007 and 2008, we identified the general character of each article in a first round of coding (see note 6 above for details); in a second round we counted within those articles:

- (1) all citations to journals in our sample of top 13 orthodox journals (ORT);
- (2) all journal self-citations (SELF); and

(3) all citations to journals part of our sample of top 13 heterodox journals minus the journal currently in question (HET).

Figures 1 and 2 give an overview of our findings concerning the citation behavior of the *CJE* and the *JPKE*. In both cases (with the exception of non-formal articles in the *JPKE*), orthodox articles are cited more often than heterodox articles or articles from the respective journal, regardless of 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.

[Insert Figures 1 & 2 here]

While in the *JPKE* the amount of self-citations and the amount of citations from other heterodox journals is fairly constant regardless of the particular type of article, there are significantly more mainstream citations in formal and econometric contributions. This indicates that our intuitive earlier assertion was partially correct: while the *JPKE* does not cite fewer heterodox references in formal or statistical articles, i.e. it prolongs the conversation with heterodoxy in this context, the rising number of citations from orthodox articles suggest that the conversation with the mainstream is intensified when formal and econometric issues are the focus of attention.

In the *CJE*, on the other hand, there are fewer self-citations in general, but more citations drawn from the heterodox community as a whole, as compared to the *JPKE*—an observation probably explained by the more specialized orientation of the *JPKE*. However, while the *CJE* also suffers from the phenomenon of a rising incidence of mainstream citations within econometric articles, it somehow manages to avoid the same effect when we consider 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 only two articles decisively influence the average number of citations in formal articles in the *CJE* (namely,

Skott & Ryoo, 2008; and Araujo & Lima, 2007). Without these two articles the average number citations in formal articles in *CJE* would change to 3.36 for orthodox citations, 1.64 for self-citations, and 1.57 for heterodox citations, delivering a pattern much more similar to the *JPKE*. One of these ‘exceptional’ articles (Skott & Ryoo, 2008) relies heavily on sources from the area of radical economics, while the other (Araujo & 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 make use of formal methods of analysis without disproportionately citing mainstream journals.

The findings of this section do not mean 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. The fact that the quantitative evaluation schemes now widely used within the scientific community partially rely on such citation flows has given this purely descriptive account a Machiavellian dimension: the composition of a list of references has become a strategic question, obviously even more in the case of formal and empirical research exhibiting a methodological orientation similar to the lines of mainstream economics.

4. Make Your Papers Scarce!

This section deals is not directly concerned with the content of economic discourse but with the problem of ensuring access to the scientific works of heterodox economists.

4.1. Problem

An outlet’s circulation is an important criterion influencing the presence, the availability and, consequently, the 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.

Since the above-mentioned Journal Impact Factor (JIF), is calculated from SSCI data within a two-year time-span, it is obvious that the early availability of articles is crucial for the JIF of an individual journal. Some form of publication in advance—for example, a working paper version prior to revisions (‘pre-print’)—is therefore essential, otherwise the outlet is ‘hurting itself’ in terms of the JIF calculation. However, making works easily available in post-print versions, which include revisions, is also important.

Another aspect of this problem is that 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 (Brody & Harnad, 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’) Taylor & Francis Group (‘iOpenAccess’), Sage (‘Sage Open Scheme’) or Springer (‘Open Choice’) offer authors or their institutions the option to pay for the open availability of their articles. 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 on authors' homepages to papers disseminated in digital research platforms like RePEc or SSRN, is that it gathers substantially more citations (Bergstrom & Lavaty, 2007). Furthermore, Novarese & 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 advisable to extend the dissemination of heterodox work through greater utilization of such digital channels.

The possibilities of doing so, however, are routinely and severely restricted by the institutional circumstances of the publication process, above all by overly strict copyright enforcement. So while any heterodox economist can contribute to the wider dissemination of heterodox research, journal editors are particularly well placed to do so, insofar as they have the possibility to negotiate with publishing houses under what conditions authors are allowed to publish and disseminate their work.

4.2. Empirical Observations

Both cross-disciplinary (e.g. Brody & Harnad, 2004; Antelmann, 2004) and economic (e.g. Bergstrom & Lavaty, 2007) studies unanimously find higher citation impacts for openly available research. Here we shall 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 often

the case that journal editors not only choose the publisher but are also in the position to 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***
<i>Cambridge Journal of Economics (CJE)</i>	Oxford	Allowed only before acceptance	24 months after first publication	None
<i>Contributions to Political Economy (CPE)</i>	Oxford	Allowed only before acceptance	24 months after first publication	None
<i>Intervention</i>	Metropolis	Allowed	None	Possible on request
<i>Journal of Economic Issues (JEI)</i>	M.E. Sharpe	18 months after first publication	None	None
<i>Journal of Post Keynesian Economics (JPKE)</i>	M.E. Sharpe	18 months after first publication	None	None
<i>Metroeconomica</i>	Wiley	Allowed	None	None
<i>Review of International Political Economy (RIPE)</i>	Taylor & Francis	Allowed	12/18 months after first publication	None
<i>Review of Political Economy (ROPE)</i>	Taylor & Francis	Allowed	12/18 months after first publication	None
<i>Review of Radical Political Economics (RRPE)</i>	Sage	Allowed	12 months after first publication	None
<i>Review of Social Economy (ROSE)</i>	Taylor & Francis	Allowed	12/18 months after first publication	None

* defined 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. Sharpe not only forbids post-print versions of its articles

but also requires authors to wait for 18 months 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.

In contrast to the unduly 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 *CPE*, the pre-print policy is a little trickier, as only pre-prints are allowed that had already been available online 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 far too long for citations to be included in standard JIF measures.

In sum, the ten journals under study do not score well in terms of open accessibility. Moreover, most of the journal homepages do not offer much information on their respective copyright policies—if there is any information available at all. 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 an important precondition.

5. Conclusions

This article makes clear the importance of intensifying and fostering 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’ delineated in Section 2 in favor of a ‘pluralist paradigm’ in which cross-school interaction plays a central role. We advocate neither ‘pluralism for its own sake’ nor pseudo-pluralist behavior driven by purely strategic motives. Instead we offer a

variety of epistemological and strategic reasons for our pluralistic stance. In this context the analysis of citation behavior has proven to be a suitable empirical instrument to assess pluralism. But a 'pluralist paradigm' requires the adoption of pluralism as a central paradigmatic cornerstone. The current situation of 'tolerant ignorance', instead of building on common ground, has resulted in a disinterested 'pluralism of heterodox paradigms' in which the paradigmatic foundations of the individual traditions are designed to differentiate them from one another.

There are various strategic and theoretical rationales for developing a 'pluralist paradigm' based on 'discourse pluralism' within heterodox economics. A very general strategic argument is that in case of inter-paradigmatic conflict (as in economics), a single competitor to the dominating paradigm has a much higher chance of survival, and possibly of success, than a variety of competitors. This is why we argue for the formation of a unified pluralist paradigm consisting of several heterodox traditions as a main competitor to neoclassical economics.

From a theoretical perspective we strongly believe that an intensified discourse between different heterodox traditions would also improve the theoretical and empirical work conducted within the individual heterodox schools of thought. Thus, intensifying discourse among heterodoxy has merits on its own, independently of any citation metric logic. Moreover, there is 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 aspects of any particular social phenomenon. The diversity of heterodox traditions would allow for such a diversity of viewpoints within a common paradigmatic framework, a pluralist paradigm, coinciding with what Sheila Dow (1990, p. 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 of or commentary sections in heterodox journals specifically aimed at bringing such contributions together on a common platform or to identify main ideas behind the various 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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