



## Commentary

# Is the journal Ecological Economics really in itself a poor and misleading guide to what ecological economics is about? A reply to “Influencing the perception of what and who is important in ecological economics”

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## 1. Introduction

We investigate what articles, journals, authors and institutions are influential in a combination of fields in agricultural, ecological, environmental and resource economics (Hoepner et al., 2012). The fields all investigate the natural environment, be it from different perspectives. Influence is based on the impact factors as reported in Thomson Reuter's Web of Knowledge. We analyze 6597 articles in fourteen economics journals for the period 2000–2009. In his comment, Professor Clive Spash states that “the journal *Ecological Economics* is in itself a poor and misleading guide to what ecological economics is about, exactly because it has devoted so much space to mainstream methods, studies and approaches.” Furthermore, he suggests that our work is biased by its framing and sensitive to changes in key definitions.

Here, we plead guilty as we do have in mind an assessment of what is influential academic research in particular fields of economics. Given that we provide an historical account, the findings are restricted to the period we investigate and subject to our criteria, which are clearly stated in the paper. We are pleased that Spash can

replicate the results although he disagrees with the criteria. However, we plead not-guilty to the suggestion that we override, belittle and dismiss alternative thought. For all the 6000+ articles that fulfill the criteria, we use exactly the same approach. We do not suggest that ecological economics is the same as agricultural, resource or environmental economics. It is not, just like agricultural economics is not the same as environmental economics. Nor is it a subfield of resource and environmental economics, just like environmental economics is not a subfield of ecological economics. We do not think our study advocates a limited perspective on social, environmental and economic problems and that we include political and ideological framing. The only framing we use is that we focus on economics. It especially is here that we clash with Spash. We think that our study shows what articles in environmental, agricultural, resource and ecological economics are influential in a particular timeframe and academic context.

The structure of this reply is as follows. In ‘Science or Sorcery’ we discuss the use of citations. In ‘Noun or Adjective’ we discuss the position of the different fields of economics investigated in our paper. In ‘Karl and Groucho’ we address the main remaining remarks of Spash. In the conclusion, we briefly conclude.

## 2. Science or Sorcery

The analysis of citations helps to improve the understanding of the development of science. It also helps to investigate the influence of works, authors, and outlets. Some characteristics of citations are of importance as they impact the meaningfulness of the information derived from them. These are that it can ignore the influence of work outside academia. For example, policy makers and opinion leaders can have an impact on the development of particular fields. Our paper is subject to this flaw too as we limit ourselves to those who actually publish in economic journals in particular economic fields. Second is that it usually focuses on articles in academic journals and much less so on books, chapter, newspaper articles, etc. In our paper, we focus on journals and not on other outlets. This is because the journals in our analysis have a clear reviewing procedure which sets academic criteria for publication. With books, policy papers, newspaper articles, etc., commercial and political motives often interfere with the decision to publish. Third is a bias against more recent

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work. Here, an innovation of our research is that we adjust for the age effect of publications. Fourth is that one might confuse the amount of citations with the quality of the work. This is a risk indeed, but we are well aware of this risk in our paper and do not suggest that the most influential paper is the best. However, in our view, many papers that are highly influential also are excellent examples of high-quality, worthwhile and relevant academic analysis.

We think that the emerging field of bibliometrics is useful to investigate various aspects of economic research and that it is a valid scientific approach and not sorcery in the hands of wicked managers as Spash seems to suggest. We apply citation analysis to environmental and ecological economics, which have become increasingly important fields in both research and policy in the 21st century due to climate change, globalization, and the rapid advance of renewable energy. As such, we aim to complement and advance previous research in this field as undertaken by Costanza et al. (2004), Kim et al. (2006) and Ma and Stern (2006) who also are confident of the virtues of citation analysis to base their study on. These studies about environmental and ecological economics mainly analyzed 20th century publications. By focusing on the 21st century publication, and by accounting for the age bias, we think we add value to this literature. We are very well aware of the fact that citations and rankings do not tell the whole story. But they do provide a useful spur.

### 3. Noun or Adjective

A second issue is the position of ecological economics, a term that qualifies the noun economics with the adjective ecological. Ecological economics is of great concern to Spash but he does not provide a definition or coherent description of the field. To our surprise, he even suggests that “the journal *Ecological Economics* is in itself a poor and misleading guide to what ecological economics is about, exactly because it has devoted so much space to mainstream methods, studies and approaches.” Here, it seems to us as if Spash would consider his own perspective of what ecological economics is to be more accurate than the perspective of the editor(s) of the journal *Ecological Economics*. This view could be regarded as somewhat arrogant. Instead, Spash could have referenced literature on the distribution of different views on the content and purpose of ecological economics but chose to entirely rely on his own view.

In contrast, Hussen (2013) provides a classification of the various fields and argues that environmental economics seeks to assess the damages inflicted on the natural environment when it is used for the disposal of waste. The focus is on finding the most efficient way(s) to reduce environmental damages. Resource economics focuses on determining the rate of extraction of non-renewable resources and the harvest of renewable resources over time. It identifies the time path of the withdrawal rate of resources to maximize their total economic value (Hussen, 2013). Ecological economics is regarded as an alternative paradigm within economics for the investigating natural resources, as it deliberately includes the physical environment and does not reduce it purely to its economic value (Hussen, 2013).

In this respect, Rezai et al. (2012) criticize ecological economics for not paying sufficient attention to the macroeconomic level. In their view, a macroperspective is essential to analyze key topics like sustainable consumption, reduction in working time, the degrowth debate, the energy–exergy link, and rebound effects (Rezai et al., 2012). Similarly, Anderson and M'Gonigle (2012) study 148 articles and investigate how mainstream (i.e. neoclassical economic) methodologies dominate the discourse about climate change in the economic literature. They argue that the mainstream approach, by its success, marginalizes more critical politically motivated analyses. Consequently, the influence of ecological economic studies in the climate debate has only been marginal. Anderson and M'Gonigle (2012) conclude that ecological economics faces a problematic future and that it will have to address its internal contradictions and reinvent

itself in ways relevant to the contemporary societal context. We think this research is worthwhile and we look forward to more studies in this area. However, it is an issue that we do not investigate in our paper, as it predominantly relates to the content of the research, not to its impact.

In line with these studies, we disagree with Spash about the role of different fields of economics. We focus on the noun (i.e. economics) where Spash concentrates on the adjective (i.e. ecological). We are interested in studies that look into environmental, ecological, resource and agricultural problems from an economic perspective. As such, we focus on articles and journals that rely on economic approaches, and that use economic techniques and databases. Thus, we think that economics really is – and should be – key in an investigation about the influence of studies in specific fields of economics. At the same time, we are very well aware of the fact that many journals do have a particular idea about what is sound research that can be published. This will be impacted by the view of the editors and the editorial board and be reflected in the papers published.

There is, of course, merit in other disciplines and in multidisciplinary approaches, and often non-economists have wiser words to say about ecological, environmental, energy and resource issues than economists. However, we argue that the academic work of economists can be assessed on the influence in their own fields. And this is what we aim at with our paper.

### 4. Karl and Groucho

Spash self-references extensively to show the sensitivity of the sample selection process of our paper. He is right in that this process is sensitive to the criteria used. If we would have included other journals, if we would have looked into policy papers, internet tweets, and books, if we would have chosen a different time period, this for sure would all have affected the tables we present. We thank Spash for pointing out the issue of longevity of citations. In our future research, we will try to include this too in our metrics.

We feel Spash is irritated about the use of two decimals in our analysis. He suggests that this really shows the pseudo-scientific character of the results. It does not. We could have reported with zero, ten or twenty decimals. This does not affect the ranking of authors, articles, journals, and institutions.

Furthermore, Spash is critical regarding our assessment about the influence of institutions. He agrees that the top institutions are very influential but is more interested in their politics. Apparently, Spash follows the maxim of Karl Marx, namely that it is more important to change the world than to study it. We respect his position on this and want to point out that our scope is much more limited in the paper, namely to establish what articles are influential.

Spash goes to great lengths to show under what conditions he would have ended up in the tables. From a personal perspective, it is sad that he did not make it. But we did not frame the research in such a way as to include or exclude particular authors. He correctly points out where things can go wrong. A decisive factor that kept him out of the list was that his paper with the highest cites per year is classified by *Ecological Economics* as ‘Preface’. This is the reason we do not take it into account. Maybe it is misclassified, but we neither feel that we are to blame here nor that this issue is “clearly generalizable” as claimed by Spash. However, the third paper in his table, which also got a large number of cites, is included in our analysis.

An issue that we do not fully understand and that makes us curious is why Spash goes to great length to prove that he also should be included among the influential authors. If we would have expanded the time period and have calculated the citations in a different way, he could have ended up higher (but it would impact on the citations of others as well). Then, Spash could have joined the ranks of the ‘mainstream economists’ he so despises! Groucho Marx, in any case, would not have cared to belong to a club that accepts people like him as members.

## 5. Conclusion

We thank Spash for his provocative comment. We agree that our study is context specific. We also agree that our metric is not suitable to assess the societal relevance of academic research. We disagree on how the influence of economic studies should be analyzed. We disagree with Spash's statement that "the journal *Ecological Economics* is in itself a poor and misleading guide to what ecological economics is about." We also disagree on that we would belittle, override and dismiss ecological economics. We think that our society requires thorough economic analysis of a host of pressing ecological, environmental, agricultural, resource, land and energy problems. Our aim is to contribute to this research.

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