

METHODS

The rhetorics of ecological economics

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Abstract

Since the early 1980s, there has been a lively discussion about the rhetoric of economics. Ecological economists, however, so far have not tried to incorporate this discussion into their work. This paper is a first step towards including the discourse on rhetoric into the self-awareness of ecological economics. After a brief outline of what this discourse is about, the importance of metaphors as one aspect of rhetoric is examined. Connections of the rhetorical discourse to ecological economics as a post-normal science are shown. It is argued that two rhetorics of ecological economics can be distinguished: internal and external rhetoric. While the former refers mostly to methodological issues, the latter is of particular importance for the political impact that ecological economics can have. Finally, some suggestions for research are made. © 1998 Elsevier Science B.V. All rights reserved.

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1. Ecological economists should care about rhetoric

This article is a first step toward incorporating an important discourse into the self-awareness of ecological economics. There was and is an intense discussion about the rhetoric of economics, and I hold that much can be learned from this discourse and that it can contribute to improved ecological

economics. Before turning to the application to ecological economics, the very idea of economic rhetoric has to be elaborated. I will try to give an impression of what this discourse is about in order to create common ground for its application to ecological economics. The aim of this paper is itself a rhetorical one, namely to convince the audience that it is indeed worthwhile to take rhetoric seriously on both a methodological and a political level.

The current discourse on rhetoric started in 1983, when McCloskey's essay 'The rhetoric of

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economics' was published in the *Journal of Economic Literature* (McCloskey, 1983). With this article McCloskey launched a project which aims "at a radical reassessment of the nature of economics as a science" (Mäki, 1995, p.1300) and especially its practice. Economists must, according to McCloskey, "become more self-conscious about their rhetoric" (McCloskey, 1985, p. 482). In many scientific disciplines, there has been an increasing awareness of the rhetorical aspects of inquiry (e.g. Nelson et al., 1987 and the references in McCloskey, 1994, pp. 395f). Many social (and natural) scientists become aware that they use rhetoric. Actually, everyone who is producing a text (be it written or oral) employs rhetoric. The rhetorical character of economics was emphasized especially by McCloskey and Klamer, and they were joined by many critics and supporters. The 'rhetoric of economics' has become a central issue in the field of economic methodology. Ecological economists have, to my knowledge, so far not taken this discourse very seriously. However, a newly developing field, about to approach its 'second stage' (Duchin, 1996a,b), should take notice of this inspiring and provoking discussion.

What, to begin with, is rhetoric? In common language, of course, rhetoric is something negative, in the sense of 'mere rhetoric' or 'heated rhetoric' of the politicians. This is not what I have in mind here. There is no 'mere' rhetoric, for every statement employs rhetoric. McCloskey confuses the reader with her² multiple definitions. Rhetoric, in her writings, is conversation, is persuasion, is the use of arguments, is the study of conversation, persuasion, arguments. It seems that rhetoric, like postmodernism or democracy, is a concept not easy to define. For my purpose it is appropriate to employ a broad definition of the term. Following the synthesis undertaken by Mäki (Mäki, 1995, p. 1303) I will use 'rhetoric' for the social process which involves a persuader, a persuadee, the intention of persuasion, arguments, conversation *and the study thereof*.

² Donald N. McCloskey is now Deirdre N. McCloskey (McCloskey, 1995b). I have decided to refer to *her*, also when quoting texts that were written by the author Donald McCloskey.

2. A brief history of the discourse on economic rhetoric

While the current discourse on economic rhetoric was clearly launched by McCloskey, there were of course publications concerned with language and economics before 1983. One of the most successful works of Keynes is his 'Essays in Persuasion' (Keynes, 1931). Machlup (1963) published a collection of his 'Essays on Economic Semantics'. There are other examples. None other than Adam Smith lectured on rhetoric. "Even after the Reverend Thomas Malthus became the first economics professor in the English-speaking world (in 1805), economic writing continued to be practised by men (and they were almost exclusively men, then as now) who were not professional economists but rather rhetoricians, like all those other men of letters—preachers, poets, statesmen, singers—whom the *Wealth of Nations* explicitly excludes from the category of economically productive labour" (Heinzelman, 1995, p. 171). As for the productivity of the idea of economic rhetoric, I hold that discussions on this topic can increase the productivity of ecological economics.

The book on 'The Rhetoric of Economics' was published in 1985; it is now a modern classic (McCloskey, 1985). According to McCloskey, economists have an official, explicit and an unofficial, implicit attitude toward their discourse, and she is concerned with the unofficial part, "how economists actually argue" (McCloskey, 1985, p. 5). The official methodology is 'modernist', that is 'scientific', Milton Friedman's article (Friedman, 1953) being the most important source for this attitude. The crucial point of her argument, however, is that the official methodology is not practiced in the first place, and fortunately so, for a "modernist methodology consistently applied (...) would probably stop advances in economics" (McCloskey, 1985, p. 18). It should be added that the same is probably true for the natural sciences. McCloskey rejects prescriptive methodology, for it would constrain scientific work. As the alternative to "modernist methodology", McCloskey offers "the conversational norms of civilization", or the Habermasian *Sprachethik* (McCloskey, 1985,

p. 24): “What distinguishes good from bad in learned discourse (...) is not the adoption of a particular methodology, but the earnest and intelligent attempt to contribute to a conversation” (McCloskey, 1985, p. 27).

McCloskey is well aware that such a perspective provokes charges of irrationalism. “The invitation to rhetoric is not,” she emphasizes, “an invitation to ‘replace careful analysis with rhetoric’, or to abandon mathematics in favor of name-calling or flowery language” (1985, p. 36). McCloskey does not invite us to adopt a new methodology, for rhetoric in her interpretation is anti-methodology (p. 51). In a nutshell, McCloskey’s message is the following: economists do not, in their daily work, pay attention to their ‘official methodology’, and rightly so. What really counts in scientific discourse is good argument: rhetoric.

McCloskey’s undertaking is criticized for proposing an outright neglect of methodology. Solow, for example, fears that the McCloskey–Klamer view will lead to the idea that one argument is just as good as the other: “It seems *too* permissive” (Solow, 1988, p. 33; his emphasis). However, a critical attitude towards methodology does not necessarily imply that one cannot have standards of what ‘good’ scientific work is. Acknowledging the implications of rhetoric does not necessarily lead to the rejection of any methodology.

As for the practical consequences for economics, McCloskey claims that “realizing that a language game is being played, with certain elaborate rules, does not imply that one wants to stop the game *or even change its direction*” (McCloskey, 1994, p. 338; my emphasis). Taking the rhetoric of economics into account will not lead to a revolution with respect to the content of economic theories. Her point is that science moves forward not by methodology but by good conversation, and so does economics (McCloskey, 1985, p. 174). McCloskey holds that “[r]hetoric is consistent with any number of beliefs about the economy” (McCloskey, 1988, p. 291). For McCloskey, rhetoric is neither revolutionary nor conservative: “It is not intrinsically anything” (McCloskey, 1994, p. 339).

Some authors, however, argue against the supposedly ‘neutral’ character of the rhetorical project, at least in the McCloskey-version. This is because McCloskey is not critical whatsoever about the content of mainstream economics: she holds that it is good and successful science. Not surprisingly, then, McCloskey’s rhetoric is criticized for being part of a “conservative undertaking in economics” (Bellofiore, 1994, p. 80). While McCloskey emphasizes the agreement among economists, Klamer is more interested in disagreement. Klamer wants to change the conversation. He emphasizes the different spheres among which communication is often problematic, and that in different economic worlds, different languages are spoken (Klamer, 1984, p. ix). Similar to McCloskey, Klamer sees economics as an art of persuasion. Klamer, however, also criticizes the content and the assumptions of neoclassicism.

McCloskey uses the metaphor of the market for her notion of economic discourse. For her, the market for ideas is, after all, a market. McCloskey is content with the ‘market mechanism’ in both the academic and the social realm. As Mäki puts it, for McCloskey, “a *herrschaftsfrei* social order is the liberal market order” (Mäki, 1995, p. 1311; his italics). McCloskey is frequently referring to *Sprachethik*, and a critical concept for this ethics is of course a dominance-free discourse (*herrschaftsfreier Diskurs*). Hence, if one views the market as not being a dominance-free institution, the market metaphor for economic discourse appears clearly out of place. “The persuasion within the marketplace could not be further from Habermas’s ideal in which ‘no force except that of the better argument is exercised, and... as a result, all motives except that of cooperative search for truth are excluded’” (Wisman, 1990, p. 124; quoting Habermas). On this account, it appears incoherent indeed that McCloskey employs a market metaphor for the communicative process within the economics profession. On the other hand, it could well be that this metaphor is appropriate in a sense quite different from McCloskey’s account: the ‘market for ideas’ is not perfectly competitive, just like the economic market. Capitalist institutions like the market impede rather than support open and equal discourse among participants (Wisman, 1990, p. 120).

A line of criticism that is of special interest to ecological economics is that McCloskey is not using the critical potential of her approach. Heilbroner criticizes that McCloskey's analysis fails to "identify the particular aspects of reality that are blocked out by scientific metaphors and tropes" (Heilbroner, 1990, p. 108). Hence, political aspects remain unquestioned in the McCloskey version of rhetoric. Economics, however, is normative for the simple reason that it embodies the constitutive beliefs of the society in which it is located (Heilbroner, 1990, p. 109). As Ferber and Nelson put it, if we "recognize that the discipline we call economics has been developed by particular human actors, it is hard to see how it could fail to be critically influenced by the limitations implicit in human cognition by the social, cultural, economic, and political milieu in which it has been created" (Ferber and Nelson, 1993, p. 1). Indeed: our theorizing is fundamentally shaped by our social and natural environment. This is of particular importance to the context of discovery, where the pre-analytic vision of the scientist cannot be escaped. Paradigmatic thinking shapes the way we do science. Metaphors are an important factor in this context.

3. The power of metaphors

Metaphors, as Lakoff and Johnson (1980) argue, are crucial for the human understanding of experience, and these metaphors are closely related to the physical experience of human beings. Consequently, metaphors can also provide new understandings of experiences. Lakoff and Johnson therefore hold that "[n]ew metaphors have the power to create a new reality" (Lakoff and Johnson, 1980, p. 145). Hence, new metaphors can influence our way of looking at things and consequently affect our *actions*.

Another important aspect of the use of metaphors is that they not only highlight certain aspects of reality, but also downplay and hide other aspects (Lakoff and Johnson, 1980, p. 149). The metaphor "love is a physical force", to give an example, highlights and hides other aspects of love than the metaphor "love is a collaborative

work of art" (Lakoff and Johnson, 1980, p. 149). This hiding and highlighting is also true for scientific theories (Lakoff and Johnson, 1980, p. 227). Ecological economists are well aware of this: the famous circular flow diagram (found in every introductory textbook) highlights the monetary ('circular'!) flows between households and firms, but at the same time it completely downplays the (entropic) matter-energy-flows between the anthroposphere and the environment. Daly has repeatedly pointed out this metaphorical misconception. Daly (1991), p. xi f., uses the Schumpeterian term "vision" and the Kuhnian concept of "paradigm". One could also describe this—and other—deficits as a wrong 'image', as Boulding (Boulding, 1971[1961]) has called it. Boulding's notion of an image refers to what we believe to be true—our subjective knowledge. Images govern our behaviour (Boulding, 1971[1961], p. 6), and consequently influence our scientific work. All these terms refer to the 'visual' aspect of doing science: the point is how economists view the world, and our conception of the world is patently shaped by metaphors (Lakoff and Johnson, 1980). We could describe the mainstream metaphor of a circular flow as a 'virtual flow' in which the natural environment has no role to play. The ecological economic metaphor of an entropic metabolism is far better suited as a starting point to analyse the coevolution of the anthroposphere and its environment.

Economists use metaphors all the time (Klamer and Leonard, 1994; McCloskey, 1995a), and "[t]o say that markets can be represented by supply and demand 'curves' is no less a metaphor than to say that the west wind is 'the breath of autumn's being'" (McCloskey, 1985, p. 74). The invisible hand, price mechanism, production functions, multiplier, equilibrium and the like are not 'out there'; they are metaphors. This extensive use of metaphors in economics is no surprise, since human beings use them in their daily communications. And so do ecological economists: examples of ecological economic metaphors include important concepts such as natural capital, scale, ecological footprint, spaceship earth, industrial metabolism, ecological guardrails, and 'green' GDP. One of the best known ecological

economists, Herman Daly, has an especially idiosyncratic style due to his heavy use of metaphorical arguments. I think that his very style is one reason why he is, compared to other ecological economists, so well known to the public. At the same time, good writing “arouses a suspicion among economists that the writer is not a Scientist” (McCloskey, 1994, p. 125).

So why are metaphors important? For one, they are frequently the only way to know things, to conceptualize them (Lakoff and Johnson, 1980; Klammer and Leonard, 1994, p. 27). For another, the openness of metaphors makes them useful to scientific work: “New concepts do not come to us ready made; their novelty defies our existing language and conceptual schema. Science needs metaphor since it provides the cognitive means to chart the unknown” (Klammer and Leonard, 1994, p. 31). I think that ecological economics has to continue to provide metaphors (and visions) that can inspire scientific inquiry and can serve in the political discourse on sustainable development. Metaphors are important for both the ‘internal’ and the ‘external’ rhetoric of ecological economics.

4. Rhetorics of ecological economics

4.1. Rhetorical aspects of a post-normal science

Many ecological economists think that our field should be a post-normal science. A basis for the call for a post-normal science is that “uncertainty and ignorance can no longer be expected to be conquered; instead, they must be managed for the common good” (Funtowicz and Ravetz, 1991, p. 146). In a post-normal science, “science is no longer imagined as delivering truth, and it receives a new organizing principle, that of quality. This is dynamic, systemic and pragmatic, and therefore requires a new methodology and social organization of work” (Funtowicz and Ravetz, 1994, pp. 197f).

I think there are two implications of rhetoric for ecological economics as a post-normal science. One is that rhetoric (or ‘discourse analysis’) can improve the self-awareness of economists and

thereby can contribute to a better quality of work, to a better conversation among economists. This is the issue that McCloskey, Klammer and others have in mind. The other implication is that making us aware of our rhetoric can help us to communicate more effectively with ‘outsiders’, that is, laypersons, journalists, politicians, etc. In normal scientific discourses these groups are indeed outsiders. Post-normal science, however, implies that extended peer communities become important. In other words, ‘outsiders’ become ‘insiders’. It is also important to include non-scientists into decision making processes to avoid a ‘scientific bias’ which is often dominated by mainstream-approaches: “As long as discourse remains limited to experts who represent the mainstream of disciplinary (or interdisciplinary) thinking, the discourse process may simply reinforce biases of the status quo as familiar definitions of critical rationality remain unchallenged” (O’Hara, 1996, p. 101).

I thus claim that there are two fields where being aware of rhetoric can be fruitful for the ecological economic discourse. Firstly, it can be utilized for the methodological discussions in the field and in transdisciplinary communication. In a situation where ecological economics enters its second stage, an increased self-awareness about how ecological economists work can make it more effective. This can be called *internal* rhetoric. Secondly, rhetoric can help us to improve the communication with politicians and the public. This can be called *external* rhetoric. One crucial lesson of the discussion about rhetoric in science is: pay attention to your audience. Internal and external rhetoric address different audiences (see also Sachs, 1995). I am aware that the internal/external-distinction is (and must be) blurred. I think, however, that it makes sense for a discipline that is explicitly political.

4.2. Internal rhetoric: methodological issues and the problems of transdisciplinarity

It is impossible to have no rhetoric. Giving a presentation at a conference or writing a journal article involves the use of language. Therefore, since *one* goal of oral/written production of texts

is to persuade, everybody uses rhetoric. It seems to be characteristic for scientific articles to employ a style of having no rhetoric (McCloskey, 1985, p. 98). The appeal of such arguing is often “I am a Scientist: give way” (McCloskey, 1985, p. 122). This style is of course just as rhetorical as the explicit use of metaphors and stories.

Facts do not speak for themselves. “Rhetoric of inquiry is needed precisely because facts themselves are mute. Whatever the facts, *we* do the speaking—whether through them or for them” (Nelson et al., 1987, p. 8; their emphasis). Thus, we are not passive onlookers of nature but are choosing our kind of worldmaking (McCloskey, 1990, p. 78; McCloskey, 1994, p. 41). This is of course also true for our conception of the natural environment and has important implications for ecological economics.

As stated in the programme for the inaugural meeting of the European Society for Ecological Economics, the ecological economics movement has “sometimes neglected the fact that scientific representations and explanations of ecological economic processes are themselves the expression of endogenous socio-cultural and political processes, manifested in particular institutional forms and social games, *which cannot be considered as a simple reflection of the pre-existing biophysical world*” (N.N., 1996, p. 3; my emphasis). Obviously, this also has bearing on the discussion on ‘limits to growth’. Norgaard stresses that such limits hardly ever actually exist, they are not ‘out there’ (Norgaard, 1995, p. 130f.). He fears that the ‘limits’-metaphor, so central to the discourse on ecological issues, might have reached its limits.

Norgaard has pointed out to me that the limits-metaphor is a good example for the distinction between internal and external rhetoric. Limits can be a very helpful external metaphor, but is probably too simple for ‘internal’ purposes. However, when external metaphors are successful (and the limits-metaphor was overwhelmingly successful), one might feel compelled to use it also internally. Another example how internal work responds to external rhetoric is the demand for cost-benefit-analysis, which reduces the economic model to accounting and thereby biases economic analysis against questions of equity.

Being aware of the use of rhetoric can improve transdisciplinary work. Nearly 40 years ago, C.P. Snow introduced the notion of the ‘two cultures’. He pointed out that the communication between these cultures is a difficult undertaking: “Literary intellectuals at one pole—at the other scientists, and as the most representative, the physical scientists. Between the two a *gulf of mutual incomprehension*—sometimes (particularly among the young) hostility and dislike, but most of all lack of understanding” (Snow, 1993[1959], p. 4; my emphasis). When ecological economics is a transdisciplinary field, the existence of two cultures is obviously important for us. Clearly, communication among social scientists and among natural scientists is easier than communications *between* them. Understanding the rhetorical aspects of these differences might help to close the gap between social and natural scientists.

Another important aspect of internal rhetoric is the distinction between normative and positive statements, so strongly emphasized by mainstream economics. Rhetoric can raise the consciousness about the use of rhetorical figures in this respect. “The metaphors of economics often carry in particular the authority of Science and often carry, too, its claims to ethical neutrality. It is no use complaining that we didn’t *mean* to introduce value premises. We do” (McCloskey, 1985, p. 82; her emphasis). Thus, with respect to keeping our values in the open and at the same time being aware of such values in other texts, rhetoric can help ecological economists.

Finally, being conscious about rhetoric is likely to promote methodological pluralism, a principle well acknowledged in ecological economics. According to Jacobs, “there are no absolute truths, only alternative ways of understanding, each of which may offer some insight from a particular perspective and in relation to particular problems” (Jacobs, 1996, p. 16). I think this also holds for environmental indicators. We must be aware that constructing indicators always implies political decisions. All this demands, among other things, a recognition of the importance of language and therefore of rhetoric.

I think that rhetoric, or discourse analysis, can contribute to a better understanding and evalua-

tion of different perspectives. A methodological pluralism that “acknowledges the limits, and hence the appropriateness, of specific methods to specific questions” (Norgaard, 1989, p. 53) might well benefit from *explicitly* including rhetoric in its tool box. Of course, being aware of our rhetoric will not bring us closer to any ‘absolute truth’, for no approach can serve as an Archimedian point of knowledge. But that is just the strongest argument for a methodological pluralism.

4.3. External rhetoric: political issues and the problems of creating a successful theory

While the McCloskey–Klamer et al. approach is well aware of the role of economics as part of the ‘conversation of humankind’, it is primarily *methodological*. There is, however, another dimension of rhetoric which has so far not been elaborated much. This cannot come as a surprise, considering the ‘normality’ of economic science. But *ecological* economics, as represented by the ISEE, strives to become a post-normal science, and one critical feature of this is the importance of extended peer communities.³ I think that these communities are an audience different from fellow scientists. Give a presentation on sustainable development to an average NGO in a style you employ at a conference session, and you will find out. Addressing the public is a task quite different from producing texts for the scientific community. When talking to a wider public, “the economist is embarked on a wilder sea” (Bellofiore and Silva, 1994, p. 3). A post-normal scientific discourse should be open to non-scientists. It is clear that such an effort demands communication different from scientific papers.

What is more, ‘rhetorical awareness’ may help ecological economics become more successful in the political arena. The economic discourse, so far

dominated by neoclassicism, has ‘overwhelming power’ (Bruner and Oelschlaeger, 1994, p. 391). Economics is instrumental in defining the terms of public (environmental) discourse and “whoever defines the terms of the public debate determines its outcomes” (Bruner and Oelschlaeger, 1994, p. 391). Political power is consequently closely related to the power of imposing metaphors on public discourse (Lakoff and Johnson, 1980, p. 157). Ideologies, be they political or economic, are often presented in metaphorical terms (Lakoff and Johnson, 1980, p. 237). Therefore, “[o]ne of the pressing needs in the environmental movement today is for a metaphor or an alternative discourse paradigm that resonates with the lived experiences of non-elite publics” (Bruner and Oelschlaeger, 1994, p. 395).

“Anti-environmental politicians have been effective in accomplishing their objectives at least in part because of their ability to articulate persuasive rationales through slogans, myths, and narratives” (Bruner and Oelschlaeger, 1994, p. 379). The use of language is obviously important for any participation in public discourse. Promoting social change—for instance, sustainable development—demands that one gets a hearing before a large audience. Bruner and Oelschlaeger observe that in this respect, environmental ethics has not been effective. I think the same can be said for ecological economics. We are not yet having a satisfactory impact on practical environmental and economic policy. This is in part due to the fact that ecological economics is a young field. Another reason might be that so far a wider audience has not been reached effectively: “Rarely does the Congress, the executive branch, or the media turn to one of our ranks for an opinion, either because we are still invisible, or perhaps worse and equally likely, *because we have not persuaded them we are relevant*” (Viederman, 1994, p. 469; my emphasis). But how is successful persuasion possible?

Bruner and Oelschlaeger identify three criteria that an ecophilosophical project must meet from a rhetorical perspective in order to contribute to a sustainable society, and I think these criteria may be useful for ecological economics as well: Plausibility, the ability to evoke sentiment, and the

³ Of course, ‘normal economics’ should just as much be concerned with what I call external rhetoric: “Economists of international eminence are frequently forced to resort to the most bland and misleading of slogans when publicly confronting the problems of modern economic life, because the discipline they represent is incapable of providing a language for rational debate and decision making” (Tribe, 1988, pp. 4f).

capacity to “reach a majority of the people, that is, gain a wide audience and hearing” (Bruner and Oelschlaeger, 1994, p. 397). How do we do by these criteria? I think ecological economics performs quite well with respect to the first and second criteria, but I have doubts regarding the third. Yes, *Ecological Economics* has an impact (Costanza, 1996). But do we reach a large number of people? We are still far from influencing the reigning economic paradigm and politicians in a way that would appear satisfying to most ecological economists.

The impact of ‘good rhetoric’ for influencing politics, however, should not be overestimated. According to McCloskey, mainstream economics is completely unaware of its use of rhetoric. Nevertheless, it is extremely successful in terms of its impact on economic policy. The reason is that of course rhetoric is not the only determining factor for the political success of a theory. According to Walther, there are several conditions that a theory has to meet in order to have a political impact (Walther, 1996, pp. 21ff). Its central theses must be communicable, must be tied to specific interests, must be able to legitimize a need for action, must stabilize expectations and raise hopes and must, finally, define political responsibility. Hence, eloquently written papers are not enough to be successful in political terms. At the same time, all the criteria named by Walther have clearly rhetorical aspects. Hence, persuasion is definitely one important factor for the political impact of scientific theories. A science that wants to contribute to real societal changes should be aware of this fact.⁴

5. So what?

Rhetoric is one important factor for the political success of theories. At the same time, a good

style that is not immediately identified as ‘scientific’ makes it harder to reach an audience among mainstream economists. Is there, then, a trade-off between successful external and successful internal rhetoric? Duchin emphasizes the dual aspect of rhetoric: “Ecological Economists have an obvious responsibility to the non-specialist public that involves speaking in a language that is straightforward and free of jargon. However, skilled rhetoric needs to complement analysis, not replace it” (Duchin, 1996a, p. 22) indeed. But analysis is rhetorical. The dichotomy between internal and external rhetoric, as I have emphasized, is not a clear-cut demarcation line. In both science and policy, “propositions come to be believed and acted upon if and only if they are persuasive” (Maxwell and Randall, 1989, p. 239). But even though there are increasing overlappings between the scientific and the political discourse (especially in the field of sustainable development!), the existing differences might indeed demand two different rhetorics.

“A critical economic science would strive to demystify or dereify socio-economic institutions to reveal the extent to which, as human products, they are capable of being transformed to improve the human condition” (Wisman, 1990, p. 127). Being rhetorically aware can help a critical ecological economics. As Bruner and Oelschlaeger point out, a critical rhetoric “reveals the *discourse of power* that overdetermines discussion of the environmental agenda, that is, contextualizes the issues in ways which lead to narrowly defined debates over policy that inevitably lead to pre-established ends that are themselves never discussed” (Bruner and Oelschlaeger, 1994, p. 389; their emphasis). Of course, economic growth is a case in point here. Escobar, in his critique of sustainable development, finds that it is “growth (read: capitalist market expansion), and not the environment, that has to be sustained” (Escobar, 1995, p. 195). He reads the Brundtland-report as “a tale that a disenchanted (modern) world tells itself about its sad condition” (p. 198). Escobar’s critique points to the fact that one indeed has to be cautious in using this term. If we want to contribute to the theory and practice of sustainable development, we must engage in the embat-

⁴ As Richard Norgaard has pointed out to me, it would be interesting to analyze this question within a Habermasian perspective of society as a communicative system, in which (ecological) economists play only a small part. However, to elaborate on this approach is clearly beyond the scope of this paper.

tled field of language. Theory, policy and language are closely intertwined. Being rhetorically aware can help in this context.

A telling example for mainstream rhetoric is an article by Nordhaus (1991) about the economics of the greenhouse effect. In that piece, he ‘calculates’ the (economic) changes resulting from the anthropogenic greenhouse effect. The implied author of his text is obviously the scientist, and he plays this role by displaying calculations that appear exact and proper, at first sight at least. However, “[b]y the time that the author has admitted the manifold oversimplifications and uncertainties in his analysis, and has shown how strong are the ad hoc adjustments and hunches which are needed to bring his numbers back into the realm of plausibility, we might ask whether the statistical exercises are totally redundant except for rhetorical purposes” (Funtowicz and Ravetz, 1994, p. 201) exactly. The calculations *are* done for rhetorical purposes. We shouldn’t wonder whether scientists do things for rhetorical purposes: *they do it all the time*. The case of Nordhaus is just a particularly interesting example (because of his style and intellectual, as well as political, influence), but not unique in the discourse about growth and sustainability.

I think it is helpful for the further development of our field to utilize the critical potential that lies in the analysis of rhetoric. Since this paper is meant to be a *first step* to show the benefits of ‘rhetorical awareness’ for ecological economics, I have concentrated on McCloskey’s work. There are of course authors engaged in the rhetorical discourse that are far more critical of mainstream economics (e.g. Klamer, 1984; Amariglio, 1990; Heilbroner, 1990; Samuels, 1990). For ecological economists, their work can possibly provide important insights for further work. We want to change economics, and rhetorical awareness can help us toward this goal.

I dare to suggest a few areas in which the two rhetorics might prove to be helpful for ecological economics. As for internal rhetoric, I have already emphasized that it is important for a pluralistic post-normal science and especially for improving transdisciplinary work. Rhetoric may also improve teaching in ecological economics. More-

over, one could think of further elaborating the metaphorical character of economic reasoning with respect to the natural environment. One of the most important points, however, might be the critique of the ideology of “sustainable growth”. The same goes for “global competitiveness”, which is “frequently a thought-substituting slogan” (Daly, 1994, p. 187).

The latter issues directly lead to external rhetoric: ‘sustainable growth’ is frequently used to legitimize growth-oriented policies that in effect are no more sustainable than macroeconomic policies of the 1970s. ‘Globalization’, in a similar fashion, is used as an argument against environmental policy and for cutting social security. In Germany, for example, the debate about globalization was accelerated by industry, and this campaign is extremely successful in that it serves as an argument for the reduction of social security measures. To take a more positive example of external rhetoric: *Leitbilder* (guiding principles or models for sustainable lifestyles) can play an important role in promoting sustainable consumption (Hinterberger et al., 1996, pp. 247ff.). Finally, one might speculate whether a good rhetoric would also be helpful for acquiring funds for ecological economic research projects and programmes.

As for style—the issue most people think about when they hear the word ‘rhetoric’—why not write a scientific paper as a dialogue? Plato did. McCloskey herself wrote an entire chapter of a book as a dialogue (McCloskey, 1994, pp. 340–363), and it is not only fun reading but also very instructive. I think we should try out alternative forms of presenting our thoughts. I have tried it and it seems to work (Luks, 1997).

Rhetoric is not ‘mere talk’; it is about the way human beings argue. Of course, good arguing does *not* at all imply that we should not use ‘scientific’ methods. Rhetoric implies that we become aware that even this kind of work has important rhetorical aspects. This awareness can help us in our theoretical work as well as in our efforts to create a post-normal science that goes beyond the normal science that has so far failed to contribute significantly to a sustainable development.

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References

- Amariglio, J., 1990. Economics as a postmodern discourse. In: Samuels, W.J. (Ed.), *Economics as Discourse. An Analysis of the Language of Economics*. Kluwer, Boston/Dordrecht/London, pp. 15–46.
- Bellofiore, R., 1994. The poverty of rhetoric: Keynes vs. McCloskey. In: Marzola, A., Silva, F. (Eds.), *John Maynard Keynes: Language and Method*. Edward Elgar, Aldershot/Vermont, pp. 76–127.
- Bellofiore, R., Silva, F., 1994. Introduction. In: Marzola, A., Silva, F. (Eds.), *John Maynard Keynes: Language and Method*. Edward Elgar, Aldershot/Vermont, pp. 1–12.
- Boulding, K.E., 1971 [1961]. *The Image*. University Michigan Press, Ann Arbor, MI, 175 pp.
- Bruner, M., Oelschlaeger, M., 1994. Rhetoric, environmentalism, and environmental ethics. *Environ. Ethics* 16, 376–396.
- Costanza, R., 1996. The impact of ecological economics. *Ecol. Econ.* 19, 1–2.
- Daly, H.E., 1991. *Steady-State Economics*, 2nd ed. Island Press, Washington, DC/Covelo, 297 pp.
- Daly, H.E., 1994. Fostering environmentally sustainable development: four parting suggestions for the World Bank. *Ecol. Econ.* 10, 183–187.
- Duchin, F., 1996a. Ecological economics: The research challenge. *Ecol. Econ. Bull.* 1 (1), 8.
- Duchin, F., 1996b. Ecological economics: The second stage. In: Costanza, R., Segura, O., Martinez-Alier, J. (Eds.), *Getting Down to Earth: Practical Applications of Ecological Economics*. Island Press, Washington, DC/Covelo, pp. 285–299.
- Escobar, A., 1995. *Encountering Development. The Making and Unmaking of the Third World*. Princeton University Press, Princeton, NJ, 290 pp.
- Ferber, M.A., Nelson, J.A., 1993. Introduction: The social construction of economics and the social construction of gender. In: Ferber, M.A., Nelson, J.A. (Eds.), *Beyond Economic Man. Feminist Theory and Economics*. Chicago University Press, Chicago/London, pp. 1–22.
- Friedman, M., 1953. The methodology of positive economics. In: *Essays in Positive Economics*. University Chicago Press, Chicago/London, pp. 3–43.
- Funtowicz, S.O., Ravetz, J.R., 1991. A new scientific methodology for global environmental issues. In: Costanza, R. (Ed.), *Ecological Economics. The Science and Management of Sustainability*. Columbia University Press, New York/Oxford, pp. 137–152.
- Funtowicz, S.O., Ravetz, J.R., 1994. The worth of a songbird: ecological economics as a post-normal science. *Ecol. Econ.* 10, 197–207.
- Heilbroner, R., 1990. Economics as ideology. In: Samuels, W.J. (Ed.), *Economics as Discourse. An Analysis of the Language of Economics*. Kluwer, Boston/Dordrecht/London, pp. 101–116.
- Heinzelman, K., 1995. The last georgic: wealth of nations and the scene of writing. In: Copley, S., Sutherland, W. (Eds.), *Adam Smith's Wealth of Nations. New interdisciplinary essays*. Manchester University Press, Manchester/New York, pp. 171–194.
- Hinterberger, F., Luks, F., Stewen, M., 1996. *Ökologische Wirtschaftspolitik. Zwischen Ökodiktatur und Umweltkatastrophe*. Birkhäuser, Berlin/Basel/Boston, 342 pp. (English edition forthcoming: *Ecol. Econ. Policy*)
- Jacobs, M., 1996. What is socio-ecological economics? *Ecol. Econ. Bull.* 1 (2), 14–16.
- Keynes, J.M., 1931. *Essays in Persuasion*. Macmillan, London, pp. 377.
- Klamer, A., 1984. *Conversations with Economists. New Classical Economics and Opponents Speak Out on the Current Controversy in Macroeconomics*. Rowman and Allanheld, Totowa, 265 pp.
- Klamer, A., Leonard, T.C., 1994. So what's an economic metaphor? In: Mirowski, P. (Ed.), *Natural Images in Economic Thought: 'Markets Read in Tooth and Claw'*. Cambridge University Press, Cambridge/New York, pp. 20–51.
- Lakoff, G., Johnson, M., 1980. *Metaphors We Live By*. University Chicago Press, Chicago/London, 242 pp.
- Luks, F., 1997. Zukunftsfähigkeit, kapitalismus, (post) fordismus: Ist ökologische politik möglich? In: Strutynski, P., Klages, J. (Eds.), *Kapitalismus am Ende des 20. Jahrhunderts*. VSA, Hamburg, pp. 139–151.
- Machlup, F., 1963. *Essays on Economic Semantics*, Miller, M.H. (Ed.), Prentice-Hall, Englewood Cliffs, NJ, pp. 304.
- Mäki, U., 1995. Diagnosing McCloskey. *J. Econ. Lit.* XXXIII (September 1995), 1300–1318.
- Maxwell, J.A., Randall, A., 1989. Ecological economic modelling in a pluralistic, participatory society. *Ecol. Econ.* 1, 233–249.
- McCloskey, D.N., 1983. The rhetoric of economics. *J. Econ. Lit.* XXI (June 1983), 481–517.
- McCloskey, D.N., 1985. *The Rhetoric of Economics*. University Wisconsin Press, MD, 209 pp.
- McCloskey, D.N., 1988. The consequences of rhetoric. In: Klamer, A., McCloskey, D.N., Solow, R.M. (Eds.), *The*

- Consequences of Economic Rhetoric. Cambridge University Press, New York, pp. 280–293.
- McCloskey, D.N., 1990. If you're so smart. The Narrative of Economic Expertise. University of Chicago Press, Chicago/London, 180 pp.
- McCloskey, D.N., 1994. Knowledge and Persuasion in Economics. Cambridge University Press, Cambridge/New York/Melbourne, 445 pp.
- McCloskey, D.N., 1995a. Metaphors economists live by. *Social Res.* 62 (2), 215–237.
- McCloskey, D.N., 1995b. Some news that at least will not bore you. *East. Econ. J.* 21 (4), 551–553.
- Nelson, J.S., Megill, A., McCloskey, D.N., 1987. Rhetoric of inquiry. In: Nelson, J.S., Megill, A., McCloskey, D.N. (Eds.), *The Rhetoric of the Human Sciences. Language and Argument in Scholarship and Public Affairs*. University Wisconsin Press, MD, pp. 3–18.
- N.N., 1996. Programme of the Inaugural Conference of the European branch of the International Society for Ecological Economics. *Ecology, Society, Economy—In pursuit of sustainable development*, Paris, 1996.
- Nordhaus, W.D., 1991. The economics of the greenhouse effect. *Econ. J.* 101, 920–937.
- Norgaard, R.B., 1989. The case for methodological pluralism. *Ecol. Econ.* 1, 37–57.
- Norgaard, R.B., 1995. Metaphors we might survive by. *Ecol. Econ.* 15, 129–131.
- O'Hara, S.U., 1996. Discursive ethics in environmental valuation and environmental policy. *Ecol. Econ.* 16, 95–107.
- Sachs, W., 1995. Zählen oder erzählen. Wechselwirkung, December, 1995, 20–25
- Samuels, W.J., 1990. Introduction. In: Samuels, W.J. (Ed.), *Economics as Discourse. An Analysis of the Language of Economics*. Kluwer, Boston/Dordrecht/London, pp. 1–14.
- Snow, C.P., 1993 [1959]. *The Two Cultures*. With Introduction by Stefan Collini. Cambridge University Press, Cambridge/New York/Melbourne, 107 pp.
- Solow, R.M., 1988. Comments from inside economics. In: Klamer, A., McCloskey, D.N., Solow, R.M. (Eds.), *The consequences of economic rhetoric*. Cambridge University Press, New York, pp. 31–37.
- Tribe, K., 1988. *Governing Economy. The Reformation of German Economic Discourse 1750–1840*. Cambridge University Press, Cambridge, 225 pp.
- Viederman, S., 1994. Public policy: challenge to ecological economics. In: Jansson, A.M., Hammer, M., Folke, C., Costanza, R. (Eds.), *Investing in Natural Capital. The Ecological Economics Approach to Sustainability*. Island Press, Washington, DC/Covelo, pp. 467–478.
- Walther, H., 1996. Ökonomische doktrinen als werkzeug politischer legitimation: das beispiel des keynesianismus. In: Eicker-Wolf, K., Käpernick, R., Niechoj, T., Reiner, S., Weiß, J. (Eds.), *Wirtschaftspolitik im theoretischen Vakuum*. Metropolis, Marburg, pp. 19–41.
- Wisman, J.D., 1990. The scope and goals of economic science. A Habermasian perspective. In: Lavoie, D. (Ed.), *Economics and Hermeneutics*. Routledge, London/New York, pp. 113–133.