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The rhetoric of policy relevance in international economics

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Abstract This paper addresses the link between the generation of economic knowledge and economic policy conclusions. Focusing on the case of research in international trade, it establishes a taxonomy of rhetorical practices used to make such a link. The flexibility observed in these practices contrasts markedly with the rigidity of the conventions of theoretical and empirical knowledge creation. A survey of articles on international trade from four major journals from 1988 to 1992 shows that most policy-relevant research is entirely theoretical, but the incidence of rhetorical practices legitimating policy conclusions depends on the nature of the research method (theoretical or empirical), and the journal in which the research is published. The survey data support the conclusion that the flexibility of rhetorical practices is integral to the legitimation of the knowledge generated by international trade economists.

Keywords: Rhetoric, methodology, trade policy, new international economics, epistemology

1 INTRODUCTION

In this paper I address a question rarely asked by economists, policy makers or philosophers of science: how are the policy conclusions of international economics legitimated? There is a widespread belief that economic policy prescriptions, perhaps especially in international economics, are of grave importance for individual and national well-being. The positive theory of trade (what determines the commodity composition and direction of trade), from its inception, has always been closely tied to the question of welfare (what are the gains from trade); indeed, the rationale for liberalized Anglo-Portuguese trade in Ricardo's famous example was that such trade would bring benefit to both trading partners. International economists have thus always been under pressure from other economists and policy makers to establish the policy relevance of their work. More than in any other branch of economics, the *laissez-faire* view in international economics ('free trade') is recognized as a policy choice. Thus theory and policy are closely linked and the policy conclusions, especially the free trade version, have received considerable public attention since Ricardo first stated his views.

Given this tradition of concern with policy and the policy relevance of

international economics, it is surprising how little discussion has focused on the scientific or epistemological status of such policy conclusions. Economists and philosophers of science spend much time debating the status of truth claims generated from theory in the social sciences, yet little thought is given to the status of policy prescriptions that 'follow' from the theory. Generally such policy conclusions are seen to follow 'straightforwardly' from theoretical insights. The move from theory to policy conclusion is perceived as completely natural and thus rarely receives any scrutiny. This paper is a contribution to the development of an understanding of how theoretical or empirical knowledge is used to validate and support policy conclusions. The focus is on the rhetorical practices – that is, the types of arguments – used to link theory to policy prescription in international economics.

A survey of the major U.S. academic journals in the field of international trade over the period 1988–92 reveals a wide variety of such validating practices. There is a looseness of language and argument in the linking of theory to policy prescription which is in stark contrast with the rigidity of discourse in conventional economic analysis. Robert Baldwin puts the distinction in terms perhaps more familiar to economists. He chides trade economists for 'using a different model to reach policy conclusions from the one they employ in analyzing most trading situations. The first model is much less formal than the latter' (Baldwin 1992: 827).

The purpose of this paper is to analyze in detail the rhetoric of the less formal of these models and to show that this type of model is not an accidental methodological discrepancy, but a necessary modeling strategy for legitimating policy conclusions generated by the more formal type of model. McCloskey (1991: 16), one of the few economists to take up this issue, notes 'the lack of rigor in the opening and closing paragraphs of theoretical papers. Great rigor in the middle; touchie-feelie on the ends.' But while McCloskey's conclusion is that policy-legitimating language is applied in a 'sloppy' (1991: 10) manner, I argue that the rhetorical contrast implies that the discourse of optimization theory and econometrics is 'unstable', lacking sufficient persuasive power in the legitimation of international economic policy. That is, this methodological discrepancy occurs not because policy conclusions matter so little, but precisely because they are crucial to the legitimation of the field itself. At issue is not the logic of policy conclusions or even the validity of the assumptions that may crucially determine the structure of the model and its policy implications. Instead, I focus on the rhetorical practices used to link assumptions, models and empirical tests to policy conclusions. I do not address the question of the direction of causality between policy recommendations and choice of theory or method. I consider policy positions to be implied by the narrative that precedes the policy conclusions according to the traditional structure of the academic journal article.¹

2 THE RHETORIC OF ECONOMICS AND CONTEMPORARY TRADE THEORY

Two recent developments in economics render unacceptable the passive acceptance of the theory/policy links in international trade research. The first is the methodological upheaval brought on by McCloskey's (1983) claim that economics is inevitably rhetorical – rooted in argument and persuasion, not any absolute standard. Rhetorical is not a pejorative term, but embodies the recognition that facts do not make arguments; the arguments are critical. Such arguments entail a variety of strategies and techniques including metaphor, hierarchy of discourse, and appeals to authority.² According to McCloskey:

Economic stories depend on rhetoric. The point is not to expose the rhetoric and then condemn it for being rhetoric. Rhetoric is unavoidable. An economist or historian cannot avoid writing rhetorically since any argument has a rhetoric, a style of argument, taking 'argument' to mean 'any designs on the reader.' A collection of random facts and assorted bits of logic does not add up to an argument; but as soon as a writer advocates a model or a story in which the facts and logic are to fit, he has begun to argue. If one is to argue in favor of this or that story there is no way of being non-rhetorical.

(McCloskey 1990: 56)

This anti-modernist portrayal of economics, inspired by the philosophical work of Rorty and Habermas, has encouraged some economists to scrutinize the language (including mathematics and econometrics) used in economic argument to better understand how economic 'science' functions.³ The link between theoretical or empirical analysis and policy conclusions is an obvious candidate for examination along these lines.⁴

The second development lies within international economics itself. The sterility and narrowness of the basic neoclassical model of international trade, the Heckscher-Ohlin or factor endowments model, came under increasing scrutiny in the 1970s. Most important, neoclassical economists began to question the usefulness of this standard model. The inability of factor endowments to explain a number of widely observed phenomena put the framework of the model itself under attack by policy makers and business experts and then by mainstream economists. These phenomena were

- 1 intra-industry trade, that is the abundance of instances of simultaneous export and import by a country of similar goods (e.g. France's simultaneous exporting and importing of automobiles); and
- 2 the apparent success of selective protection, subsidies and industrial policy, especially in the cases of Japan and South Korea.

The response to this explanatory failure led to the development of 'the new international economics', beginning in the late 1970s. This new approach

3 A TAXONOMY OF THE RHETORIC OF THEORY-POLICY LINKS

The leap from theory to policy is taken, of course, only if it is believed that theory is 'relevant' – that is, necessary to guide the making of actual economic policy. Many articles in academic journals, both theoretical and empirical, never make such a claim and in fact are concerned strictly with non-policy related issues, such as the effect of exchange rate variations on prices or the importance of international trade in international productivity convergence. I am interested, therefore, only in those articles with explicit policy relevance. There, I have identified five types of arguments for policy relevance in international economics:

I 'No frills – theory'

Under this practice the policy conclusions follow directly from the logic of the theoretical model and do not go beyond this. No attempt is made to argue for the relevance of the theoretical model as a guide for policy conclusions or to establish the presence of the *ceteris paribus* conditions needed to secure its intended outcome. Instead, these conclusions involve the simple reporting of mathematical results (for example, comparative static results involving the effects of a change in the exogenous tariff variable). Mai and Hwang present their model results in a table and state:

all the established results on the price effects of tariffs, ratio quotas and volume quotas can be summarized in table 1. Our results indicate that, in general the three alternative trade restrictions result in non-equivalence, as it depends upon the behavior patterns of firms in the industries.
(Mai and Hwang 1989: 182)

In similar fashion, Lapan states:

We have shown that if production lags are present and tariff precommitment is not feasible, then the time-consistent tariff equilibrium is Pareto inferior to the precommitment equilibrium, and the second-best solution will include a production tax on importables.
(Lapan 1988: 400)

Less modest, but equally true to the model, Grossman and Helpman state:

Concerning policy, we find for the first time a link between trade intervention and long-run growth. Any (small) trade policy that switches spending toward the consumer good produced by the country with comparative advantage in R&D will cause long-run growth rates to decline... Once we recognize that comparative advantage can be acquired as well as natural, we find a role for country size and demand-size

stresses economies of scale, imperfect competition and strategic interaction among rival firms and governments, and has increasingly provided a rational basis for phenomena previously unexplained by neoclassical thought.⁵ While solving some important problems, the new international economics has created dilemmas of its own. In particular, by devising theoretical models in which selective trade protection (so-called 'strategic trade policy') is welfare-enhancing for a nation under certain conditions, the new international economists are faced with the necessity of prescribing policies which run counter to the longstanding free trade position of international economists. But instead of defying the neoclassical tradition, many of these economists have backed away from the logical conclusions of their models. Robert Lucas (1990), hardly a critic of neoclassical economics, remarks at length about this contradictory voice in his review of Elhanan Helpman and Paul Krugman's (1989) *Trade Policy and Market Structure*. Lucas states:

Throughout *Trade Policy and Market Structure*, Helpman and Krugman exhibit what strikes a reader as extreme discomfort with the policy implications of the new trade theory. At one point they even protest that 'this book is about theory and methods, and not about policy,' (p. 8) as though someone else had chosen the title of the book! The clearest statement of the source of the discomfort comes in the concluding chapter. 'Is the case for free trade, so long a central tenet, now invalidated? Despite what we have said about the effects of trade policy we do not think so' (p. 185)... Helpman and Krugman seem not so much to be defending the validity of what they are calling the 'central economic tenet' of free trade as trying to avoid the blame for being the first to expose its emptiness!

One can sympathize with this discomfort... I take disclaimers such as 'strategic trade policy arguments have already appeared in support of views none of the concept's originators hold' (p. 8) as attempts by the authors to avoid such responsibility. This is certainly a defensible personal stance, but what does it have to do with economic theory?
(Lucas 1990: 666)⁶

Lucas is thus critical of the 'two separate models' of economic analysis identified by Baldwin (1992), one a highly sophisticated model of the economy and the other a highly simplified model of the state. The latter is invoked in the formulation of policy conclusions. A related tendency is to scrutinize relatively more carefully those policy conclusions which conflict with the *laissez-faire* view, to the point where completely new criteria are established for the legitimization of policy conclusions.⁷ The result is to place in the spotlight the rhetoric of – that is, the argumentative basis for – the link between theory and policy conclusions.

bias in determining the long-run effects of policy.

(Grossman and Helpman 1990: 814)

Behind what I have called the *No Frills - Theory* mechanism is a reliance on Pareto optimality derived from axiomatic, choice-theoretic models. It is on this premise that international economists can claim a 'rational basis' for economic policy, since there is no truth or relevance claim beyond the logic of the rational choice model. In this view, the purpose of economics is simply to state the 'results' of the theory, with the implicit assumption that the setting of the 'real world' will not affect these results.

II 'No frills - empirics'

Under this practice the policy conclusions follow from the logic of a theoretical model and are bolstered or weakened by an empirical test of the model. This is the classic sophisticated positivist methodology, derived from Popper's 'conjectures and refutations'. The author generates a refutable hypothesis and then puts this hypothesis to empirical test. Markusen and Wigle (1989), for example, base their policy conclusions on a theoretical model and a simulation of a computable general equilibrium model calibrated to actual data for the United States and Canada, showing that the optimal tariff for the United States is greater than that for Canada. Khan and Knight (1988) develop a theoretical model which reveals how import compression can reduce export growth and foreign exchange earnings. They then test the model using regressions and simulation.

III 'Casual empirics'

Under this practice, policy conclusions follow from the logic of the theoretical model *plus* an assertion of the relevance of the results based on (a) their compatibility with some casually observed phenomenon or (b) the addition of a stylized fact or facts. Bagwell and Staiger (1990), for example, move directly from their theoretical conclusions that 'periods of unusually high trade volume present countries with unusually strong incentive to defect from cooperative trading arrangements' to the claim for relevance that:

The 'safeguards' provisions of the GATT, whereby countries are given the right to raise protection in the event of unforeseen developments, *may to some extent represent an explicit institutional manifestation of our ideas.*

(Bagwell and Staiger 1990: 794, emphasis added)

This is a 'cart before the horse' type argument for policy relevance: it is casually observed that governments (or individual agents) undertake a certain type of action and deem it welfare-enhancing. Thus a theoretical model that supports such a policy has policy relevance.

The preceding quotation is followed in the text by a footnote in which the authors add additional support for their claim by quoting a 1970 institutional study of GATT. The authors then restate their policy conclusion and implicitly invoke its empirical relevance in order to further legitimate the (casually observed) policy conclusions:

Our analysis suggests a role for safeguard provisions when trade volume is unexpectedly high as a means of avoiding a reversion to noncooperative interaction among countries. *In this light*, the recent proliferation of safeguard 'substitutes', for example VERs and OMAs, *may reflect* the general inadequacy of the existing safeguards provisions to maintain the credibility of the rest of the GATT system.

(Bagwell and Staiger 1990: 794, emphasis added)

Gardner and Kimbrough (1989), in a purely theoretical article, summarize their results:

More specifically, it has been shown that in contrast to conventional wisdom, both permanent and temporary tariffs may worsen the trade balance. For instance, in an example characterized by identical and homothetic tastes, it was demonstrated that a temporary tariff may worsen the trade balance if the intertemporal elasticity of substitution in consumption is low enough ($\sigma < 1$) and the tariff-imposing country is running a deficit.

(Gardner and Kimbrough 1989: 109)

With the use of stylized facts and broad characterizations of behavioral processes, they move, without transition, to a discussion of 'policy makers', who:

persuaded (sic) by the conventional wisdom, are *inclined* to use tariffs in times of trade balance difficulties in an attempt to improve matters. . . . [B]oth permanent and temporary tariffs may worsen the trade balance and *policy makers should be aware of this possibility. . . . [P]olicy makers need to realize that* while once enacted a tariff may improve the trade balance, *lengthy debates that lead consumers to anticipate the tariff* will cause the trade balance to deteriorate prior to its enactment.

(Gardner and Kimbrough 1989: 109, emphasis added)

Andersen (1992: 81) leaps from a theoretical model to a discussion of U.S. anti-dumping law. He asserts without argument that the model 'may be useful for designing codes for trade policy, such as the Uruguay Round attempt to design anti-dumping codes'. Note that such leaps are also possible (but much less common) from largely empirical studies. Morrison (1988: 286), for example, describes her regression results as 'provocative', allowing her to extrapolate as follows: 'If Japan is more flexible this could have been an important advantage during the volatile 1970s, contributing to its relatively strong productivity growth and other economic performance.' Staiger *et al.*

(1988: 491) appeal explicitly to 'casual evidence'.

The language of *Casual Empirics* is such that it may be difficult to determine if it is the model or the observed world that is being discussed. Gruenspecht (1988), for example, admits the 'practical' difficulties in operationalizing his model and then asserts:

These difficulties should not obscure the message that the availability of a current cost antidumping standard changes the behavior of both domestic and foreign firms in internationally competitive industries where learning is important. This impact is likely to be pernicious from both a national and world welfare perspective where the markets under consideration are roughly 'parallel' in terms of market size, production cost and concentration.

(Gruenspecht 1988: 247)

The implication is that this is a practical, policy relevant, claim. The move from theoretical result to actual policy relevance is almost invisible.

Casual Empirics also includes a strong reliance on allegory, in which highly abstract concepts, processes, or analytical categories are named to correspond to real-world entities. For example, a 'North-South' theory of trade and development is generally based on a two-region model with regions distinguished by a single characteristic such as innovative capacity or market structure. Or, competition is said to 'drive profits to zero', as if this occurs over historical time, and in spite of the fact that the context is a model without capital or firms. All language is of course figurative, in that no word (signifier) has any natural connection to a particular thing (signified). But the strong reliance on allegory serves to encourage a linkage between theoretical constructs and actual institutions and policy situations.⁸

Note that this practice comes close, but is not, a justification of policy conclusions based on explicit argument for the realism of the assumptions of the model. Instead, the legitimization of the policy conclusions is based on allegorical emphasis or the claim that the results seem to have relevance for the casually observed phenomenon.

IV 'Modesty'

Under this practice the policy conclusions follow from the logic of the model, plus an assertion of relevance based on (a) the admission of the narrowness of the model's assumptions or (b) a warning of the likelihood of government abuse if the prescribed policy is implemented. Case (a) is in effect a perversion of *Casual Empirics*. The argument for policy relevance takes the form of a self-serving modesty, in which the author admits the narrowness of the model and at the same time asserts its 'real-world' relevance. This tactic is a trademark of policy relevance arguments in the new international economics. Cheng (1988: 757), for example, qualifies his results because the

assumption of linear demand 'is a special case' ... and because of 'the abundance of equilibria from different oligopoly strategies.' This admission of narrowness is used to assert the legitimacy of the theoretical result.

Case (b) involves a denial of the usefulness of the policy conclusions because of potential misuse of such knowledge by the state, presumably because the state is dominated by special interest groups. The case invokes the caveat that the results 'can be misused in practice' (Panagariya, 1992: 146).⁹ Often, *Modesty* cases (a) and (b) are used in tandem. Clemenz (1990: 111) states his theoretical results that free trade may not be optimal for attaining desired R&D levels and then asserts that 'this conclusion has to be treated with care', because the model is partial equilibrium (case (a)) and because problems specific to various policy measures ... have not been accounted for. This is an example of case (b). In particular, 'Subsidies create problems of their own' and 'there may be cheaper ways of doing this' than protection.¹⁰ Matsuyama (1990) also uses a combination of cases (a) and (b) of the *Modesty* practice. In his concluding remarks he first summarizes the theoretical result, a game-theoretic model in which:

rather surprisingly, optimal temporary protection can be supported by a subgame-perfect equilibrium... In this equilibrium, the government's payoff is smaller than the first best outcome, due to its inability to make a credible commitment.

(Matsuyama 1990: 490)

He then begins a list of caveats, admitting the model's narrow treatment of the state:

However, I do not mean to say that the government cannot make a credible commitment to the future liberalization in reality. There are several possibilities which the liberalization game fails to take into account. First, the government might be aware of 'the demonstration effect' of liberalization... Second, the governments might be able to sign a contract with a third party (perhaps, the GATT)... Third, the domestic government might want to ask a foreign government to exert *diplomatic pressure* to liberalize the domestic market (as some observers suspect that Japanese Ministry of International Trade and Industry (MITI) has done with the United States... Perhaps the most problematic feature of the model is its treatment of the domestic government as a unified, coherent body of decision makers. In reality, any economic policy is a product of complex interactions among different parts of the government, each of which has its own objectives.

(Matsuyama 1990: 490-1, emphasis added)

Note that the admission of the model's limitations involves the use of a casual empiricism reminiscent of practice III. *Modesty* is similar to *Casual Empirics* in that the conception of the state invoked is a stylized fact, never developed

(theoretically or empirically) in the article. Illusionism of language is also common under the *Modesty* practice.

V 'Empirics Only'

Under this practice the policy conclusions follow from an empirical test of a model with little theoretical content. Important here is that the policy conclusion has no explicit root in a rational-choice framework. *Empirics Only* is often used in cases where the theoretical hypothesis is already well established in the literature. Noland (1989), for example, verbally states the argument for the J-curve effect and then moves quickly to the econometrics. He concludes with a simple reporting of the regression estimates and the following policy conclusion:

The estimates reported in this paper indicate that if policy makers wish to target the trade balance, policies which affect the level of economic activity would be more effective than those which operate through the exchange rate.

(Noland 1989: 178)

Under the *Empirics Only* mechanism, policy relevance depends on the relation to policy of the empirical test, and is established with the simple reporting of empirical results. Dinopoulos and Kreinin (1988), for example, conclude their article as follows:

In 1982, the total social cost of the VER was put at \$4 billions and the VER saved an estimated 22,358 jobs. This works out to an annual cost of \$181,000 per job saved – a multiple of the average annual compensation of U.S. auto workers.

(Dinopoulos and Kreinin 1988: 491)

Sometimes *Empirics Only* is used for hypotheses that do not have a strong microfoundation, choice theoretic basis, even in the pure theory literature. On occasion the hypotheses tested are developed using simple accounting identities or general functional forms, and thus are immediately translated to regression models (e.g. Audretsch and Yamawaki 1988). Often they are stated simply as having a tradition in the literature (e.g. Dinopoulos and Kreinin 1988). That is, the hypothesis may or may not be well established on optimization grounds. The key is that a verbal rendition of the hypothesis is sufficient to justify moving on quickly to empirical testing.

I have also divided those articles which have no direct policy relevance between those containing only theoretical content (*No Policy – Theory*) and those using empirical analysis as well (*No Policy – Empirics*). These are entered as rhetorical particles VI and VII in the results reported below.

4 SURVEY RESULTS

In this section I summarize and interpret the survey results, first consider the full sample, then the results broken out by journal. The survey includes four major U.S. academic journals containing articles on international trade – *The American Economic Review (AER)*, *The Journal of International Economics (JIE)*, *The Journal of Political Economy (JPE)* and *The Review of Economics and Statistics (RES)* – to determine the incidence of each of rhetorical practices described above.¹¹ The sample period is 1988–92, and includes all articles on international trade from the four journals, a sample size of 180.¹² The coding was done by examining the article to determine

- 1 if it was in the field of international trade;
- 2 if it had explicit or implicit policy implications;
- 3 if it contained empirical content or not; and
- 4 the rhetorical practice used to legitimate the policy implications. This variable usually located in the concluding section of the article, although not every case.

The data are presented in summary form in Table 1. Overall, 62.2 per cent of the articles sampled contained policy conclusions – either explicit prescriptions or direct policy implications. Of the total sample, 31.1 per cent contained empirical content and 68.9 per cent were entirely theoretical (significantly lower percentage of articles containing policy conclusions than empirical content compared to those without policy conclusions. Of articles containing no policy conclusions, 55.9 per cent included empirical studies. Of articles with policy relevance, only 16.1 per cent had empirical content. This is precisely the opposite of the expectation that policy-relevant research will tend to be grounded on empirical support, and that when such relevance is not at stake, empirical support will be less important. According to survey, empirical analysis is often used to explore positive issues, whereas policy-related issues are most often analyzed using purely theoretical arguments.¹³

Of all articles claiming policy relevance, 42.0 per cent used *No Frills Theory* to legitimate the conclusions and 32.1 per cent used *Casual Empirics* ranking as the two most popular rhetorical mechanisms used to legitimate policy results. *No Frills – Theory* represents the least complex link of the and policy; however, this should not be taken to mean most 'scientific' and policy. Regardless of the rhetorical practice chosen, each represents an effort to persuade persuasively and credibly present the policy implications of the analysis. In this sense, *No Frills – Theory* should be evaluated for what it does not include as well as what it includes. For example, it entails neither discussion of realism of assumptions nor any argument for the applicability of the analysis to a situation of actual policy making. In short, the value of the policy conclusions, and more generally of the knowledge generated in such articles

Table 1 Policy relevance survey results by rhetorical practice

	Number	As % of full sample	As % of those with policy relevance
I. No Frills - Theory	47	26.1	42.0
II. No Frills - Empirics	3	1.7	2.7
III. Casual Empirics	36	20.0	32.1
IV. Modesty	11	6.1	9.8
V. Empirics Only	15	8.3	13.4
VI. No Policy - Empirics	38	21.1	n.a.
VII. No Policy - Theory	30	16.7	100.0
TOTALS	180	100.0	100.0

ADDENDA:

Of full sample:
 % policy relevant 62.2
 % theoretical 68.9
 % academic 82.2
 % U.S. 72.2

Of sub-sample with policy conclusions:

% theoretical 83.9
 % academic 84.8
 % U.S. 69.6

Of sub-sample with no policy conclusions:

% theoretical 55.9
 % academic 77.9
 % U.S. 76.5

is based on the reader's acceptance of the 'economy' depicted in the model. As Summers notes with respect to macro models:

I suspect that there is a meta-theorem that any policy recommendation can be derived from some model of optimizing behavior... If empirical testing is ruled out, and persuasion is not attempted, in the end I am not sure these theoretical exercises teach us anything at all about the world we live in.

(Summers 1991: 144-5)

The high incidence of *Casual Empirics* as a rhetorical device is best understood by considering how economics argument persuades. While the analysis itself must follow very strict logical rules, the analytical framework, because of its narrowness, may preclude convincing links to institutions, policies and histories. *Casual Empirics* then serves to bring in a realism which is not permitted in the analysis proper. The looseness that characterizes the approach of *Casual Empirics* offsets the rigidity of theoretical modeling conventions and thereby allays any discomfort with the unpersuasiveness of

the model results in themselves. Such a technique is not unique to international trade research, as evidenced by Summers's comment on 'successful' (i.e. influential) empirical macroeconomic research:

First and foremost, in each case, the bottom line was a stylized fact or collection of stylized facts characterizing an aspect of how the world worked rather than parameter estimates or formal tests of a point hypothesis... The conclusion could prove to be persuasive or unpersuasive, but the reader was not in doubt that there was one.

(Summers 1991: 140)

Somewhat surprising is the low incidence of *Modesty* as a rhetorical stance, since this was previously the trademark of the new international economics. Most likely, such a stance was more common in the early and mid-1980s. By the late 1980s, the new international economics results are presented for the purpose of policy implications in a number of other forms, especially using the two *No Frills* approaches.

The new international economics in its early days relied heavily on *Modesty*.¹⁵ Increasingly, modelers of trade under various oligopoly conditions have turned to *No Frills - Theory* to articulate policy conclusions. This is consistent with an apparent admission on the part of new international economics economists that their aim is no longer to speak to policy makers but to provide other economists with an *ex post* rational basis for existing policy. In this sense the new international economics is a retreat on the part of international economists. The 'old' international economics proclaimed, 'If the world satisfies these assumptions, then the following will result and such-and-such policy will be optimal.' The new international economics, on the other hand, says 'We see the following phenomena in the world. If we then specify the model in this particular way, we can understand this world in terms of individual agents' rationality.' The aim of the new international economics is thus to prove that a given result can be derived from a model of rational choice. But this aim can be of interest only to those who need a rational-choice-theoretic justification, which is not likely to include policy makers.¹⁶ Thus the new international economics economists are increasingly encouraged to retreat into highly stylized models, with very particular functional forms or assumptions on conjunctural variations.¹⁷

Most surprising is the almost nonexistent use of *No Frills - Empirics*. Empirical work, most common in *RES*, was rarely preceded by substantial theoretical argument and was thus characterized as *Empirics Only*. But the *No Frills - Empirics* approach represents the classic Popperian conjecture and refutation methodology: Develop a new theoretical hypothesis and test it empirically. The fact that this methodology is so seldom used indicates that one must put stereotypes aside to understand how policy relevance is established in contemporary research.¹⁸

The results by journal are presented in Tables 2 and 3. Consistent with the

aggregate results, the empirical journal *RES* has a much lower percentage of articles with policy conclusions than does the largely theoretical journal *JIE*. But the table also yields some surprising insights. The *JIE* had a much higher percentage of articles with policy conclusions than any of the other journals surveyed. Moreover, of the articles claiming policy relevance, the *JIE* had a much higher incidence of the *No Frills - Theory* approach compared to the other journals. Some 55.4 per cent of policy relevant articles in the *JIE* use this practice to legitimate policy conclusions compared to only 31.3 per cent in the *AER*. That is, the *AER* contained a much higher incidence of the *Casual Empirics*, *Modesty* and *Empirics Only* practices. In other words, while a usual share of *AER* articles are of policy relevance compared to the *JIE*, *AER* articles are more likely to legitimate these conclusions in a variety of ways. In particular, leaps to loosely relate the model results to the 'real world' (*Casual Empirics*), *Modesty* and empirical argument (*No Frills - Empirics* and *Empirics Only*) are more common in the *AER* than in the *JIE*.¹⁹ These results are also important what might have been expected. We might have expected the *AER* to have a higher percentage of articles with policy relevance, since it is the *AER*'s official journal and thus to those outside the profession most visible and representative of the profession's relevance. At the same time, perhaps the desire on the part of the editors of the official journal of the *AER* to seek intuitively appealing policy relevance explains the higher incidence of *Casual Empirics* and *Modesty* in the *AER* compared to the *JIE*. Editors of the *JIE* have less concern about the how public. Moreover, the *JIE* is widely recognized as the 'top journal' in neoclassical international economics. It is obviously more narrowly focused than the *AER*, and the prevalence of *No Frills - Theory* in this context can be viewed as a reflection of the pure-theory orientation of the journal. The use of no-frills link to policy reflects both the unwillingness to go beyond statements directly emanating from the model and the lack of need for legitimization of policy conclusions to an audience broader than a group of neoclassical economists.

5 RIGID, FLEXIBLE AND UNSTABLE RHETORIC

One of the premises of this project is that the legitimization of policy conclusions must employ rhetorical conventions. While the *No Frills - Theory* and *Casual Empirics* strategies dominate the rhetoric of policy legitimization in international trade research in the four journals surveyed, survey results show that there is a wide variety of mechanisms used by international trade economists in their efforts to legitimate their policy conclusions. Moreover, the *Casual Empirics* and *Modesty* approaches can take a number of different forms, and are characterized by a looseness of link and institutional description. The looseness of much of the rhetoric of policy relevance stands in stark contrast to the rigor of the theoretical discourse

Table 2. Incidence of rhetorical practices by journal (total sample)

	Number			
	AER	JIE	JPE	RES TOTAL
I. No Frills - Theory	5	41	1	0
II. No Frills - Empirics	0	1	1	0
III. Casual Empirics	7	25	1	3
IV. Modesty	2	7	1	1
V. Empirics Only	2	0	1	12
VI. No Policy - Empirics	8	12	0	18
VII. No Policy - Theory	5	21	4	0
TOTAL	29	107	0	35

Percentage

	Percentage			
	AER	JIE	JPE	RES TOTAL
I. No Frills - Theory	17.2	38.3	11.1	0.0
II. No Frills - Empirics	0.0	0.9	11.1	2.9
III. Casual Empirics	24.1	23.4	11.1	8.6
IV. Modesty	6.9	6.5	11.1	2.9
V. Empirics Only	6.9	0.0	11.1	34.3
VI. No Policy - Empirics	27.6	11.2	0.0	51.4
VII. No Policy - Theory	17.2	19.6	44.4	0.0
TOTAL	100	100	100	100

Table 3. Incidence of rhetorical practices by journal

	% of total with policy conclusions (n = 112)			
	AER	JIE	JPE	RES TOTAL
I. No Frills - Theory	31.3	55.4	20.0	0.0
II. No Frills - Empirics	0.0	1.4	20.0	5.9
III. Casual Empirics	43.8	33.8	20.0	17.6
IV. Modesty	12.5	9.5	20.0	5.9
V. Empirics Only	12.5	0.0	20.0	70.6
TOTAL	100	100	100	100

discourse below that this looseness also compensates for the lack of persuasive force of theoretical and econometric discourse.

Rhetorical devices are the ways by which economists argue a theory's relevance - that is, establish the legitimacy of their policy conclusions. The formal institutional rhetorical approach is more scientific than another (that will attend on one's definition of science), but that the accepted rhetorical conventions for linking theory to policy conclusions are not of the same tenor as

the accepted conventions of theoretical or empirical discourse. As a result, in a field where writing structure and even methodology are otherwise extremely uniform, the rhetoric of policy relevance is diverse, flexible and unrigorous. Paradigmatic convention seems not to dictate this aspect of the discourse. Norms of systematic and logical analysis break down precisely where the most is at stake in economic analysis – the legitimacy of its policy conclusions.

There are a number of possible explanations for this absence of narrowly defined rules for establishment of policy relevance. Each of the many views we find is based on a different conception of the function of policy conclusions in the economics text. One view is that the policy conclusions simply do not matter – in other words, that the method of legitimating policy conclusions can vary widely precisely because it matters so little. This is one version of the 'sandwich theory': Scientific method applies only to the model construction and comparative static analysis that constitute the 'meat' of the article. Policy conclusions are the bread, placed in the conclusion where the effects can be ignored. To invoke another food metaphor, policy conclusions are simply frosting on a theoretical cake – decorative, not substantive. This view is supported by Solow (1991), who admits that 'Serious economics needs a bridge to the world of policy discussion because the people who do the research either cannot or will not build the bridge themselves.'

But the case for 'innocuous policy relevance' – an analogue to Blaug's (1980: 128) 'innocuous falsificationism' – is hard to make in a field which often defines its *raison d'être* as analysis of the welfare effects of alternative policies in international trade. Over 60 per cent of the articles surveyed contain such conclusions, and economists often complain about the unwillingness of policy makers to listen to their prescriptions.²¹

A second interpretation is that the lack of uniformity in the criteria for establishment of policy legitimacy reflects a deep-seated lack of agreement on the relation between analysis and policy prescription. Samuels (1980) conducted a survey of his colleagues at Michigan State University in 1977, asking: 'What do you think is the relationship between the pro-free trade position and the status of economics as a science?' He concluded that:

there was considerable diversity, especially regarding arguing with respect to policy on a 'scientific' basis. . . . There are enormous differences as to whether economics can properly address the policy issue at all; what economics can say on the issue, assuming it can speak to it; what considerations are relevant; and *inter alia*, the substance of any value premises involved.

(Samuels 1980: 179)

Samuels notes that such diversity is similar to that found in a review of literature on the same question from the 1870–1914 era. This explanation is plausible for the profession as a whole, but the views of Samuels's colleagues at Michigan State University are likely more diverse than those of economists

publishing in the four journals we surveyed, since the latter includes almost exclusively the work of neoclassical economists.

A third view is that policy conclusions matter so much they cannot be merely to the logic of optimization theory. The looseness of the policy legitimation rhetoric exists because policy conclusions are too important to be left to the mercy of a highly abstract, often specialized game-theoretic logic which lacks institutional grounding, has little intuitive appeal and unproven robustness. From this point of view, the recourse to different metaphorical argument, as evidenced by the high incidence of *Casual Empirics Modesty*, is an indication that the rhetoric of micro-based general equilibrium analysis and the Pareto efficiency criterion is insufficient to persuade readers of the practicality of the policy prescriptions based on them. The incidence of *No Frills – Empirics* shows that this is also true of economic argumentation. Weintraub (1991) has referred to this as evidence of 'instability' of such discourse. The instability of general equilibrium analysis has been located in its axiomatic roots, its Procrustean tendencies (Coddon 1975) and most recently in its careful construction in the historical economic thought (Weintraub 1991). The tenuous stability of economic discourse can be attributed to the acknowledged vagueness of most traditions of theory into empirical test (Leamer 1991), an awareness of pervasiveness of data mining (Leamer 1983; Caudill 1987), the difficult replication (Dewald *et al.* 1986), the use of the concept of statistical significance to imply economic significance (McCloskey and Ziliak 1991) and the relatively wide variation in the estimated value of many 'historical constants' (Mirowski 1992).

6 (POLICY) CONCLUSIONS: ECONOMIC KNOWLEDGE AND ECONOMIC POLICY

Rhetoric in economics is neither bad nor avoidable. It must be borne in mind that theoretical modeling and econometric estimation are rhetorical. Observing these forms of rhetoric in the establishment of policy conclusions increases our understanding of the construction of economic knowledge. This awareness, I hope, will not simply lead to a reconsideration of existing modes for establishing relevance. What is needed is a rethinking of why theoretical modes are necessary to make economics writing 'work' – that is, effective convey policy prescriptions. Rhetorical analysis of policy relevance in international trade research shows a looseness of argument forbidden within the theoretical or empirical portion of the text. I have argued that this reveals that the policy conclusions are too important to be left to these more rigidly unstable rhetorical conventions. Without this adaptability in policy-relevant rhetoric, policy conclusions would be less persuasive. To the degree that the social function of the economics article is to prescribe policy, reliance on methodology based on individualist Pareto optimality or economic

evidence is apparently insufficiently persuasive, even for economists.

Those dissatisfied with the prominence of this adaptability in the rhetoric of economic 'science' must ask what function its mechanisms have. If Boling (1989) is correct that the Popper-Samuelson criterion of testability is all that distinguishes the scientific economic model from a non-scientific one, then the crisis of policy legitimization is easier to understand. If the generation of new knowledge requires neither 'realistic' assumptions nor empirical falsification, then the basis for the legitimization of policy conclusions is an empirical matter. Still, there is an overriding sense among international economists that new knowledge should be policy-relevant, but considerable confusion over what constitutes such knowledge. What is the status of the knowledge generated from pure theory, whose resulting hypotheses are not tested and assumptions not defended? If 'the world' is perceived to be 'as if' the model assumes, then are its policy conclusions logically to be considered relevant to actual policy making? If a model's assumptions do not hold in practice, will not its conclusions be irrelevant, even misleading – a point raised in the forgotten literature on the theory of the second best? The range of rhetorical practices used to legitimate policy conclusions is not a sign of weakness, but of a search for necessary linkages not available by 'rigorous' methods. Raising the policy relevance of international economics may require reformulation of the conventional definition of rigor.

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ACKNOWLEDGEMENTS

I am grateful to Roger Backhouse, Lourdes Beneria, Ha-Joon Chang, Roy Duchin, Bruce Elmslie, Wade Hands, Robert Heilbroner, Dierdre McCloskey, Thomas Mayer, Phil Mirowski, Victor Mok, Warren Samuels, Nina Shapiro, Brian de Uriarte, an anonymous referee, and seminar participants at the New School and the University of New Hampshire for comments on earlier versions of this paper. I alone am responsible for the views presented.

NOTES

1. The interdependence of 'vision' and 'analysis' in economic thought is discussed in detail in Heilbroner and Milberg (1995).
2. See Milberg (1988) for a detailed treatment of these elements in the context of neoclassical trade theory.
3. There is now a vast literature of interpretation of economics texts as well as debate over the methodological implications and importance of McCloskey's 'rhetoric of economics'. Two excellent collections of articles are Samuels (1990) and Klamer, McCloskey and Solow (1988).
4. Mayer's (1993) 'principle of the strongest link' illustrates this point. See also McCloskey (1990: 73).
5. See Krugman (1983) for a concise explanation of the break from the traditional model. See Krugman (1986, 1987) for non-technical expressions of the

implications of the new international economics.

In his own defense, Krugman has stated first, that 'It was only as a sort of afterthought that new trade theorists began to talk about policy implications' (Krugman 1992: 428), and second, that empirically, 'the gains from deviating from free trade, furthermore, are very small' (Krugman 1992: 435). More recently, Krugman (1993) has been the most vocal supporter of a return to the theory of comparative advantage in guiding trade policy. Apparently the policy conclusions of the *New International Economics* were abused by policy makers. See Krugman's critique of 'strategic traders' in Krugman (1994: chapter 10). See, for example, Dixit (1986: 283). Heilbroner (1988) comments on this phenomenon generally in economic thought.

For more development of this point, see the discussion of metaphor in Milberg (1995) and the treatment of 'illusionism' in Milberg (1988: 44).

Krugman (1992: 429) describes his 'model' of GATT behavior ('GATT-think') as a simple set of principles that is entirely consistent, explains most of what goes on in negotiations, but makes no sense in terms of economics.

First of note that when free trade yields optimality in theory, there is never a discussion of treating the results 'with care'. See Dixit (1986).

They chosen only neoclassical journals in order to leave aside the (separate) question of how ideology influences the rhetoric of policy relevance. A potentially interesting extension would be to survey articles in non-mainstream journals (e.g. *The Journal of Post Keynesian Economics*, *The Review of Radical Political Economics*, *The Journal of Economic Issues*) to compare the incidence of rhetorical practices across schools of thought. Another useful extension would be to lengthen the time series, going back even to the Smithian era of debate with the mercantilists.

Each journal is quarterly. I excluded the proceedings issue of the *AER*, since most papers are short summaries of research. For 1992, only the first issue of each journal was used. The full data set is available from the author on request.

This is apparently not unique to international trade research. Discussing macroeconomics, Lucas (1980) described the role of theory as the 'provision of fully articulated, artificial economic systems that can serve as laboratories in which policies that would be prohibitively expensive to experiment with in actual economies can be tested out at much lower cost'. Note that this result should send a warning to those calling for more 'policy-oriented' training in graduate economics education as a way of introducing more realism and 'real-world' applications (Commission on Graduate Education Economy, 1991). The implication of the survey presented here are that greater emphasis on policy would, *ceteris paribus*, raise the percentage of graduate training devoted to theory. Morgan (1988) presents some evidence that empirical analysis may be gaining favor in the major academic journals. Learner argues that the lack of influence of empirical research in international economics is due, in part, to the low quality of the empirical work. He notes that 'There are many examples of work in international economics in which the translation of theory into an empirical exercise was casual and "intuitive", and which were later discovered to have been fatally flawed' (Learner 1991: 216).

McCloskey (1990: 56) writes, "'Just give me the facts" is itself a rhetoric, Stegiant Friday urging his case by claiming not to.'

See Krugman (1986).

Rhetorical practice I (*No Frills - Theory*) may include cases where the realism of the model's assumptions is defended. In this event, the author might not feel obligated to restate such a defense when stating his policy conclusions. The new international economics shows an ambivalence toward the realism of

assumptions. On the one hand, the models are said to contain more realism than the old international economics. On the other hand, the (interventionist) policy conclusions which logically follow from these models are discounted because they lack the generality of more conventional models. Note that there is also tension in the rhetorical approach to economics itself, which would insist that the question of realism is impossible to gauge. See Mäki (1988).

- 17 Thus the new international economics represents a degenerate research program in the sense of Lakatos. According to Dising (1991: 46), 'degenerating research programs do not predict new facts or produce new theories, but concentrate on adjusting their theories to events after they have happened.' Benseil and Elmslie (1992), it should be noted, come to a different conclusion, arguing that most of the new international economics is neither degenerative nor progressive.
- 18 This divergence between what economists say they do and what they actually do is discussed below. Extending our survey back in time would be useful to gauge if such a method was ever common in international trade research.
- 19 The sample of *JPE* articles is too small to draw conclusions of this nature although it shows a pattern more similar to the *AER* than the *JIE*.
- 20 The diversity and looseness of the rhetoric of policy relevance found in our survey is further evidence of the oft-noted divergence between the methodology economists preach and the one they practice (Blaug 1980; Caldwell 1982; Benseil 1991). International economists continue to insist that they do and should continue to practice science along logical positivist lines, as evidenced by Rassekh and Thompson's (1993) recent call for more empirical testing of the factor price equalization theorem in order to enhance its 'scientific status'.
- 21 For example, in his survey of 'The Normative Theory of International Trade' Max Corden (1984: 66) states:

The usefulness of normative trade theory depends on the readiness with which governments take the advice of economists who are trained in, and apply, this body of theory. The difficulty is that often the arguments of economists have 'fallen on stony ground'.

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