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Theory, Consistency and Rhetoric

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THEORY, CONSISTENCY AND RHETORIC¹

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ABSTRACT

This paper considers the role of theory in our understanding of economic phenomena. While theoretical findings are sometimes claimed to have direct, real world relevance, this is based on rhetoric rather than logic. Theory can and has been considered as analogy, metaphor or framing. These aspects are discussed, along with two examples. The examples are Sen on commitment in his paper on rational fools, and the Tversky and Kahneman life/death rational choice case. For both of these, the issue of consistency is considered, with alternative formulations and interpretation suggested. It is suggested that we may be misrepresenting the relevance of theoretical findings. Insufficient attention may be given to the simplifying assumptions, or to the possibility of alternative explanations that are also consistent with the evidence. The paper then discusses the question of acceptance and rejection of theory. Alternative positions are described, asking under what circumstances a theory might be effectively challenged or its limitations acknowledged.

Keywords: Theory, rhetoric, analogy, frames

JEL Classification Numbers: A10, B40

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1. INTRODUCTION

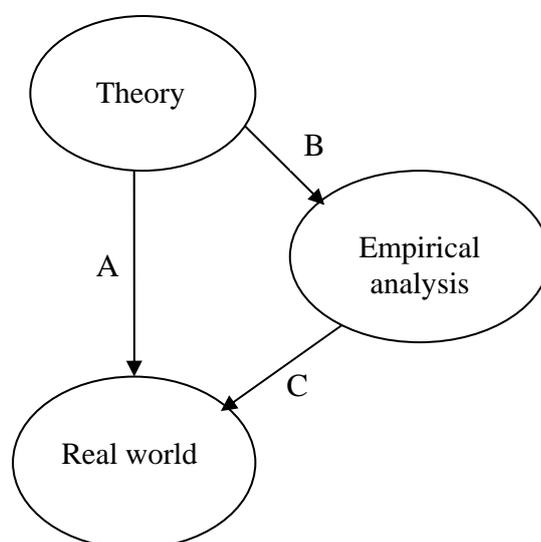
Although it may be desirable to consider economics as being entirely logical, there is a body of literature about the rhetoric of economics which has some validity. A longstanding advocate of this perspective is Deirdre McCloskey (McCloskey, 1998), and support has been given by others including Arjo Klamer (Klamer, 2007). In a discussion on the structure of argumentation in economics, Klamer refers to gaps in the reasoning:

Gaps between the theoretical and empirical arguments have not been bridged, policy implications do not necessarily follow and methodological arguments are, for the most part, seriously flawed.

(Klamer, 2007, p. 106)

Someone reading Klamer's book might briefly note this point and move on. More likely, its significance may simply be overlooked. In any event, the point made by Klamer has had little impact on the profession to date. The following diagram makes broadly similar points, but perhaps in a more persuasive manner. In particular, it should be noted that there are potential difficulties in the translation of results from one area of analysis to another:

Figure 1: Logical errors, Types A, B and C



It is to be hoped that any theory is internally logically consistent. Similarly, empirical analyses, such as the application of econometric techniques, should be based on sound methodology. These two requirements are not sufficient for us to be comfortable about the use of these approaches. There are problems with A, B and C. Theoretical findings, being based on specific assumptions, may not translate directly to the real world (path A). While they may be internally consistent, the assumptions can fail to

incorporate aspects that are important in the real world.³ These theoretical findings may also not be accurately described in empirical formulations (path B). Hence, relationships to be estimated using econometrics must be suitable for both the theory and the available data. Claims made about the real world implications of empirical analyses may be more than justified by the results (path C). A statistical association does not automatically translate into a desirable policy response. In all of these cases, the paths may not be based on logic. That they are accepted means that people are persuaded by the arguments. In other words, there is a rhetorical dimension to consider. People, without thinking, are prepared to accept flawed reasoning. Consequently, three types of error are highlighted through this structure:

A **type-A error** arises when theoretical results are assumed to be directly applicable to the real world.

A **type-B error** arises when an empirical formulation does not accurately reflect the underlying theory. This can be due to data problems, or difficulties specifying relationships, or functional forms that do not match the theory.

A **type-C error** occurs when incorrect conclusions are drawn from statistical results, either through a misinterpretation of the meaning of the results, or a failure to consider additional, relevant policy dimensions.

In this paper, the focus will be on type-A errors. A prominent example of such an error is Alan Greenspan's explanation of why he failed to anticipate and prevent the current international financial crisis triggered by the sub-prime mortgage problems in the US. To paraphrase his explanation, he found a flaw in his model or conceptual framework, such that his view of the world was not right (James, 2008). Section 2 will consider what is meant by 'theory'. Section 3 will give two examples of application of theory to the real world where there are alternative theoretical explanations that are also consistent with the evidence. Section 4 considers approaches to the acceptance and rejection of theories. Overall conclusions are then drawn.

2. WHAT IS THEORY?

Theory plays a central role in shaping our understanding of economic phenomena. It is worth considering the nature of this process. What are we doing when we use theory? What should we consider a theory to be, and hence, what can we conclude from theory-based analyses? Lipsey defines theory in his classic text:

A theory consists of (1) set of definitions that clearly define the **variables** to be used, (2) a set of **assumptions** that outline the conditions under which the theory is to apply, (3) one or more **hypotheses** about the relationships among the

³ To illustrate with one example, utility-based objective functions commonly consider individuals in isolation, focusing on goods and services while disregarding interpersonal relationships. These latter may be important.

variables, (4) **predictions** that are deduced from the assumptions of the theory, and that (5) can be tested against actual data.
(Lipsey, 1989, p. 22)

This description focuses on the structure of a theory. With the use of variables and the relationships between them, at its core there is a model. His description would fit a conventional view of theory in economics, although point (5) would not apply to pure theory. However, models are not unique to economics. A model is a simplified representation that is intended to highlight the main elements of a phenomenon under consideration. The approach that a person might take on any issue involves the adoption of a stylised or simplified representation of the real world. In this respect, theory is similar, except for possible differences in the level of formalisation.⁴

Alternative perspectives on theory and models might consider not their structure, but instead their function or use. First, theory can be used to specify the functional relationships in a model that relates policy instruments to target/objective variables.⁵ The variables are selected according to the objectives and the available instruments. This affects what we see and what is, possibly by default, excluded from the analysis.

Second, the use of theoretical findings might be considered as merely a ‘mode of argumentation’.⁶ The following discussions of models illustrate this alternative, considering them as forms of **analogy**, **metaphor**, and **attribute agenda setting**, or **framing**.

Klamer, in an economics context, describes a model as, “an explicitly, and in economics often formally, articulated **analogy**. A model is typically characterised by ‘as if’ reasoning.” (Klamer, 2007, p. 123)

Lakoff and Johnson, from a linguistic perspective, focus on the use of **metaphor**, where, “The essence of metaphor is understanding and experiencing one kind of thing in terms of another.” (Lakoff & Johnson, 2003, p. 5) With economic models, we generally see economic phenomena in terms of mathematical/mechanical systems. Lakoff and Johnson speak more generally:

In all aspects of life, not just in politics or in love, we define our reality in terms of metaphors and then proceed to act on the basis of the metaphors. We draw inferences, set goals, make commitments, and execute plans, all on the basis of how we in part structure our experience, consciously and unconsciously, by means of metaphor.
(Lakoff & Johnson, 2003, p. 158)

⁴ Additional requirements for theory may include internal consistency and testability.

⁵ Note also a link between models and planning: "We take the term 'planning' to refer to a purposive, means-ends process and we may define it as a deliberative manipulation of the parameters of a system in order to bring about a desired and specified alternation in the operation of the system." (R. A. Bowles & Whyne, 1979, pp. 1-2)

⁶ Dunn describes eleven such modes, with theory being covered by Mode no. 5, namely, reasoning from cause (Dunn, 2004, p. 395).

They distinguish between direct and indirect experience, where indirect experience involves some additional processing or interpretation of information. As such, even consumption activity, such as say watching a comedy film, can include indirect components, but broader policy issues can be entirely indirect. This is particularly relevant for the analysis here, because: “most of our indirect understanding involves understanding *one kind* of entity or experience in terms of *another kind* – that is, understanding via metaphor.” (Lakoff & Johnson, 2003, p. 178) It should be noted that the metaphor highlights certain aspects, “and what is not highlighted is downplayed or hidden.” (Lakoff & Johnson, 2003, p. 179) So models and theories could be considered as metaphors which shape our perceptions and understanding.⁷

Communication literature refers to **frames**. Hence Severin, discussing the new media and quoting a conference paper, writes: “A frame can be defined as ‘a central organising idea for news content that supplies a context and suggests what the issue is through the use of selection, emphasis, exclusion, and elaboration’.” (Severin, 1997, p. 320) As with analogy and metaphor, framing can be widely observed. However, the approach of selection, etc., could also be used to describe theories and models. Weaver, also in the communication literature, makes a connection between framing and agenda setting. He describes first-level agenda setting, where issues are selected (telling us *what* gets attention), and second-level agenda setting, where attributes of the issues are determined (telling us *how* it is presented/perceived). Linking this to other established terminology, the first level could be called simply agenda setting, with the second level being called framing (Weaver, 2007, p. 142). The New Zealand Treasury is also aware of framing and agenda setting, as well as the importance of persuasion, as components of the process of giving policy advice. It is not clear whether the framing implicit in the theories is also recognised, however:

We frame issues and help set the agenda...Advice is compellingly presented...[Advice] pitched to suit the target audience – uses appropriate language, style and level of detail.
(Whitehead, 2008, p. 26)

To summarise, various bodies of literature have their own terms for very similar phenomena. They all suggest that our understanding is influenced by the perspectives taken, and theories and models perform this function also. Gitlin makes the connection with theories explicit: “Frames are principles of selection, emphasis, and presentation composed of little tacit theories about what exists, what happens, and what matters” (Gitlin, 2003, p. 6). As they affect our perceptions, they may result in distorted understanding. While this could be considered to be bias, Schudson, referring to the news media, gives an alternative, more benign interpretation:

In the social sciences, the idea of bias has largely been replaced by that of ‘framing’...Framing is as central a concept as there is in the study of news. It

⁷ Two related extracts from Kuhn indicate a related dimension in the process of scientific investigation: “Scientists solve puzzles by modelling them on previous puzzle solutions...learning from problems to see situations as like each other” (Kuhn, 1970, pp. 189 & 190).

moves the analysis away from the idea of intentional bias. That is, to acknowledge that news stories frame reality is also to acknowledge that it would be humanly impossible to avoid framing. Every narrative account necessarily presents some things and not others; consciously or unconsciously, every narrative makes assumptions about how the world works, what is important, what makes sense, and what should be.

(Schudson, 2002, pp. 35-36)

Lastly, here is a quote from Richard Feynman, who was awarded the Nobel Prize for physics in 1965:

I would like to talk about one more thing, and that is, how do you get new ideas?...That you do by analogy, mostly, and in working with analogy you often make very great errors.

(Feynman, 1998, p. 114)

In summary, it is inevitable that theories and models will be used to assist in our understanding, but they are not accurate representations of the real world. In essence, theories could be considered as heuristics. Consequently, they are partial. They may distort, and they may mislead, depending on the use to which they are put.

3. EVIDENCE CONSISTENT WITH THEORY

In this section, two examples from the literature are given, one where evidence is given in support of a proposition and another where an interpretation is given to an observed result. In each case, it is shown that while the evidence and interpretation may be consistent, other consistent interpretations can be found, suggesting that caution is advised in drawing inferences from the analysis.

3.1 Commitment

There are several findings from economic theory that have been awarded great significance, purportedly being directly applicable to real world situations. Sometimes this is questioned, as by Sen (1977) on the desirability of a perfectly competitive economy, and by Tullock (1992) on the paradox of voting. Theory is based on simplification, and there may well be overlooked aspects that would result in a different interpretation of the issue under consideration.

This point may also be illustrated in Sen's paper above. He argues for the existence of a phenomenon that he calls commitment. My concern here is not whether commitment, as described by Sen, exists. Rather, are his supporting arguments sufficient, or might there be alternative explanations besides commitment. In other words, while a theory may appear plausible in that it is consistent with the evidence

presented, can the evidence be interpreted in other ways using other theories? Could the evidence consistent with several alternative theories?⁸

Sen gives an example of a one-off situation in which self-interested utility-maximising players would be dishonest:

"Where is the railway station?" he asks me. "There," I say, pointing at the post office, "and would you please post this letter for me on the way?" "Yes," he says, determined to open the envelope and check whether it contains something valuable.
(Sen, 1977, p. 332)

In practice, according to Sen, many people would not behave in this way. He then quotes Leif Johansen:

Economic theory...tends to suggest that people are honest only to the extent that they have economic incentives for being so. This is a homo oeconomicus assumption which is far from being obviously true, and which needs confrontation with observed realities.
(Sen, 1977, p. 332)

Supporting evidence for this position in the case of tax compliance in relation to penalties can be found in Torgler, Schnaffner and Macintyre (2008, p. 2) :

In many countries, the level of deterrence is too low to explain the high degree of tax compliance. Moreover, co-operation in tax compliance experiments is higher than neoclassical models would predict even after controlling for risk attitudes. Thus, the tax compliance literature has shown the necessity of going beyond the neoclassical approach when trying to understand why citizens pay taxes.

Sen then contends not only that the self-interested dishonesty assumption is questionable, but that observed behaviour leads to consideration of the existence of commitment: "The presence of non-gains-maximizing answers, including truthful ones, immediately brings in commitment as a part of behavior." (Sen, 1977, p. 332)

Sen includes a second example in support of commitment, involving two boys sharing two apples:

The contrast between sympathy and commitment may be illustrated with the story of two boys who find two apples, one large, one small. Boy A tells boy B, "You choose." B immediately picks the larger apple. A is upset and permits himself the remark that this was grossly unfair. "Why?" asks B. "Which one would you have chosen, if you were to choose rather than me?" "The smaller one, of course," A

⁸ Note: "Observed facts are necessarily finite in number; possible hypotheses, infinite. If there is one hypothesis that is consistent with the available evidence, there are always an infinite number that are." (Friedman, 1953, p. 9)

replies. B is now triumphant: "Then what are you complaining about? That's the one you've got!" B certainly wins this round of the argument, but in fact A would have lost nothing from B's choice had his own hypothetical choice of the smaller apple been based on sympathy as opposed to commitment. A's anger indicates that this was probably not the case.

(Sen, 1977, pp. 328-329)

In practice, the transaction may have a significance beyond the allocation of apples. Hence, A's dissatisfaction may arise from something other than, and B's behaviour may have implications beyond, the actual allocation.⁹ Some options are presented below.

A real-world example of changed behaviour in the context of the sub-prime mortgage crisis in the US can be found in Crook (2008). He refers to a change from previously conventional honest behaviour so that now borrowers with negative equity are simply posting their keys to the lenders, or so called "jingle mail". Crook's explanation for the honest behaviour coincides with several points discussed below.

Sen's case for commitment relies on assumptions implicit in the model, and these may not reflect real-world conditions. In other words, rather than the evidence supporting the claim, it may result from the characteristics of the test. As Desai has pointed out, "...in confronting theories with facts, the method of testing does not play a neutral role" (Desai, 1981, p. 96). A method of testing may be inappropriate for the hypothesis and the available information, or there could be false positives and false negatives, or Type I and Type II errors. In Friedman's terms, there could be alternative hypotheses that are also consistent with the observations.

Hence, a key question to raise is whether the same results might be observed for another reason. Are there alternative explanations, or can the same result be achieved under other circumstances? Theories specify artificial environments based on a few variables, where other factors are assumed away. The simple models used by economists to consider behaviour may not be suitable for handling issues of honesty and accuracy of information.

Sen's interpretations of his examples are based on a narrow view of the issues. For example, it could be assumed (as in the explanation of the first example) that people only learn from direct experience, so they are ignorant of all other things. If this applies in the real world, the resulting imperfect information would mean that markets are inefficient for all but the most mundane, routine transactions. In reality, information is spread by other means also.¹⁰ The significance of the simplifying assumptions of the game should be recognised. Here are four potential complicating

⁹ In this example, the focus is on A's anger because B did not behave in the expected way. It is not clear why this is evidence of commitment by A if it implies an expectation of reciprocal behaviour by B. Surely commitment would be observed through individual behaviour with no thought of reciprocal gains through similar behaviour by others. Sen's example appears to illustrate an expectation of a social convention rather than the existence of commitment.

¹⁰ Note, for example, Hardin's 'street-level epistemology' (Hardin, 2002).

influences that could be considered.¹¹ Signals can be given through reputation, or through appearance (a “Dorian Gray” effect), there can be social conventions (“rules of the game”), or there could be “potentially repeated” games:

First, a person’s *reputation* can be affected by past actions, and the information spread to people with whom future interactions may occur. In this sense, any game may be with someone in the informed and/or informing community. Similarly, significance could be attached to a person’s credit rating or criminal record, and effects on reputation can serve as a reason for name suppression and charges of defamation. The essence of human society and development is that information can be gained and shared without requiring direct personal experience. People’s behaviour can affect their reputations, and this can be important for them.

Second, even without interpersonal transmission of information, signals may be given to others through what could be termed a “*Dorian Gray*” effect. According to the story, “The Picture of Dorian Gray” by Oscar Wilde, Dorian got his wish that he be able to live life as he chose, with his appearance untarnished by his experiences, while instead, “the face on the canvas bear[s] the burden of his passions and his sins” (Wilde, 1993, p. 78). For the purposes of the point here, a person’s past actions may be reflected in their appearance. Others will perceive this according to the extent that they are able to read character traits such as honesty, consideration, or selfishness.

The information conveyed by these means may be inaccurate, or may not be a good predictor of future behaviour. Therefore there is still scope for players to misread a situation, or to mislead others through trickery or deceit, for example. Nevertheless, behaviour may shape appearance, and a person’s appearance may be interpreted by others as information about the person. Consequently some may place particular emphasis on behaving honestly so as to present a clear signal of honesty.

Third, there is an additional dimension in terms of there being generally accepted *rules of the game*. In other words, by some informal collective agreement or convention, it may be determined that people should behave honestly in such exchanges. The gain for all is an increased level of trust, reduced risk, and improved exchanges between members of society. A parallel in economics is common acceptance of money as a medium of exchange. Without trust, levels of co-operation would be much lower. This would cost everyone, including those who breach the trust. Society may also wish to stigmatise those who behave contrary to the rules, giving an additional incentive for compliance.

Fourth, there may be a difference in the optimal strategy in repeated games, as compared to one-off games. Possible reasoning is described for the prisoner’s dilemma in Luce and Raiffa (1957, pp. 94-102). Unlike the theory, real world situations can take the form of repeat games, or *potentially repeated* games (there

¹¹ Peer pressure or religious beliefs could also be relevant explanatory factors.

could be uncertainty as to whether one might have an additional encounter with a particular party).

These four possibilities could explain why some people might behave honestly out of self-interest even though it is contrary to the prediction of a game such as that considered by Sen whereby honesty suggests commitment.

While simple models may indicate some possibilities, they will ignore many aspects, some of which may be central to real world behaviour. We should not claim so much understanding of the world from basic theoretical findings in pared-down environments. It may be that the issue of honesty and behaviour cannot be resolved through recourse to simple models.

3.2 Theoretical rationality

Tversky and Kahneman are well known for a celebrated finding in behavioural economics which is often claimed to show that a basic assumption in economics does not hold. They suggest that people violate rational choice requirements of consistency and coherence due to ‘psychological principles that govern the perception of decision problems and the evaluation of options’, such that, ‘We have obtained systematic reversals of preference by variations in the framing of acts, contingencies, or outcomes’ (Tversky & Kahneman, 1981, p. 453). The use of the term ‘framing’ is worth noting. In their summary, they suggest that, ‘The dependence of preferences on the formulation of decision problems is a significant concern for the theory of rational choice’ (Tversky & Kahneman, 1981, p. 453).

Their finding is illustrated by their now classic example (with numbers and percentages of respondents in brackets):

Problem 1 [N = 152]: Imagine that the U.S. is preparing for the outbreak of an unusual Asian disease, which is expected to kill 600 people. Two alternative programs to combat the disease have been proposed. Assume that the exact scientific estimate of the consequences of the programs are as follows:

If Program A is adopted, 200 people will be saved. [72 percent]

If Program B is adopted, there is 1/3 probability that 600 people will be saved, and 2/3 probability that no people will be saved. [28 percent]

Which of the two programs would you favor?

The majority choice in this problem is risk averse: the prospect of certainly saving 200 lives is more attractive than a risky prospect of equal expected value, that is, a one-in-three chance of saving 600 lives.

A second group of respondents was given the cover story of problem 1 with a different formulation of the alternative programs, as follows:

Problem 2 [N = 155]: If Program C is adopted 400 people will die. [22 percent]

If Program D is adopted there is 1/3 probability that nobody will die, and 2/3 probability that 600 people will die. [78 percent]

Which of the two programs would you favor?

The majority choice in problem 2 is risk taking: the certain death of 400 people is less acceptable than the two-in-three chance that 600 will die.
(Tversky & Kahneman, 1981, p. 453)

They give one explanation for their findings. Here are two alternative hypotheses. Tversky and Kahneman suggest that the outcomes in the two problems are actually identical because the numbers living and dying in each option are the same. Hence they assume that the framing is distorting because it shapes perceptions differently.

Consider, as a basis for alternative hypotheses, that the payoffs to the decision maker may not be specified in terms of lives saved or lost (under which the two problems are identical), but are linked to perceptions of the choices. These may differ over the two problems. To illustrate, in problem 1, the focus is on the 200 who could be saved with certainty, in which event option B would involve risking the lives of these people. In problem 2, by contrast, the focus is on the 400 who would face certain death under program C, but who might be saved under program D. The choice of the risky option is then one of possibly saving these 400 from otherwise certain death.

For one hypothesis, Tyler (2000, p. 123) has suggested that people may accept different treatment of people according to group membership. Rawls (1999; 2001) also recognizes that social position (which could be as an individual or as a member of a group) can affect perceptions. Hence he draws on concepts of a 'veil of ignorance' and an 'original position' in order to develop his principles of justice. He sees this as a requirement for people to participate as equals, with "none known to be advantaged or disadvantaged by social and natural contingencies" (Rawls, 1999, p. 17). In the Tversky and Kahneman example, two groups are defined, with one group emphasized in the first formulation and the other emphasized in the second. If the decision makers are led to identify with the first group, the certain survivors, they may not wish to risk their lives. If they identify with the second group, the certain fatalities, they may choose the risky option in an attempt to save them.

For a second hypothesis, participants may interpret the difference in the framing of the options as reflecting society's preferences, and hence the payoffs they would face. Payoffs depend on other people's perceptions, and are measured in terms of these other people's responses. A choice of the risky option could then result in being seen as risking the lives of the 200, and possibly being blamed for causing their deaths. Alternatively, it could be seen as trying to save 400 from certain death, and being praised if the gamble pays off. Should they risk the lives of 200, or take a risk to try to save 400? There could be a difference in terms of praise or blame in the perceived payoffs for the two problems.

Tversky and Kahneman write of the importance of the 'reference outcome' against which other outcomes are 'perceived as positive or negative'. "The reference outcome is usually a state to which one has adapted; it is sometimes set by social norms and expectations..." (Tversky & Kahneman, 1981, p. 456). It is only a short step from there to suggest that the decision makers will also be judged, and rewarded or

penalized, according to those norms or expectations. Consideration of rationality should then focus not on the decision maker, but on the society and the institutions. It should be defined not within the simplified world of the theory, but in the actual context in which the decision makers are operating.

Differing incentive structures affecting payoffs and hence willingness to take risk are not unknown in economics. For example, William Niskanen has discussed the incentives faced by bureaucrats:

The rationality of budget maximisation by bureaucrats may best be illustrated by considering the consequences of contrary behaviour. Consider the probable consequences for a subordinate manager who proves without question that the same output could be produced at, say, one-half the present expenditures. In a profit-seeking firm this manager would probably receive a bonus, a promotion, and an opportunity to find another such economy; if such rewards are not forthcoming in a specific firm, the manager usually has the opportunity to market his skills in another firm. In a bureau, at best, this manager might receive a citation and a savings bond, a lateral transfer, the enmity of his former colleagues, and the suspicion of his new colleagues. Those bureaucrats who doubt this proposition and who have good private employment alternatives should test it...once.

(Niskanen, 1973, p. 23)

While Niskanen's example illustrates the point, it is also limited. He considers the situation of a bureaucrat, but this can only test half of the proposition, that relating to the situation of the bureaucrat. Is it really different in profit-seeking firms? There was a Feltex share float in 2004 at \$1.70 a share. The share price subsequently collapsed to 39c following very poor profit announcements. This raised some issues. In particular, why weren't people warned in advance of the precarious situation of the company?

Macquarie Equities research director Arthur Lim agreed it was difficult for brokers to publish research which went against information from a subject company.

"Analysts do their own work independent of what the company says," he said. "But there is a sense in which you are damned if you do, and damned if you don't."

"You could do work and come up with your own forecasts, but if companies come up with their own guidance, they will be the ones that the market – institutions as well as retail investors – will listen to. Because who is really in a better position to give a view of how things are going than the company?"

"Those who stick their necks out had better be right, because there are no prizes for being right and there is every punishment for being wrong. The company stops

talking to you and the fund managers and investors think you are an absolute wally."
(Sheeran, 2005)

In other words, the brokerage company would be taking a big risk by making a public prediction of the future performance of the company. Although employed in the private sector, the broker is unlikely to be rewarded for behaving in this way.

In summary, we should not be too quick to assume irrational behaviour simply because observed decisions do not match those hypothesised within the simplified environment of a model. The real world may be more complex. More generally, while a theory or conclusions may be consistent with our observations, there could be other theories that fit just as well. Consistency does not rule out other alternatives, and consequently may not mean as strong evidential support as might be imagined.

4. ACCEPTING OR REJECTING A THEORY

Theories serve as tools that may aid us in our attempts to understand our environment and to make decisions. As with any tool, care must be taken in its use. There are alternative views on the issue of criticisms of a theory. Three of these, described below, can lead to problems. A fourth option is then discussed. The options are:

- 1) Accept current theory as a matter of faith
- 2) Do not look outside current theory as long as it can give SOME explanation of an observed phenomenon
- 3) Do not reject a theory, even if flawed, unless the challenger can present a superior alternative (there are real problems with this – use something known to be harmful rather than admit ignorance???)
- 4) Take a more pragmatic approach

The first three views could be considered as being logically flawed. Alternatively, they could be described as rhetorical arguments that are persuasive for the target audiences and are used by people who want to maintain a particular position. The four views are discussed in turn.

4.1 Accept current theory as a matter of faith

Several writers have voiced concern at a perceived debasement of academic standards. Mark Bauerlein (2001), referring to social constructionism, is one:

When someone holds a belief philosophically, he or she exposes it to arguments and evidence against it, and tries to mount arguments and evidence for it in return. But in academic contexts, constructionist ideas are not open for debate. They stand as community wisdom, articles of faith.

E J Mishan's similar but more general assertion, eight years earlier, bears repeating:

Over the last three decades ideological doctrines have infiltrated the curricula of many of the larger universities. Spurious academic subjects ... putatively designed to 'raise consciousness' and strengthen commitment to credos of 'emancipation', manifestly fail to meet the stringent requirements of scholarship. Certainly the doctrines of these ideologically inspired 'studies' are not regarded by their proponents as provisional and refutable hypotheses. Clearly arrangements being made for their systematic propagation in these circumstances do not comport well with the idea of a university as a forum for open-minded enquiry and impartial scholarship.

(Mishan, 1993, p. 202)

Similar points have been made in relation to the academic environment in New Zealand with particular reference to requirements based on ethnic dimensions (Openshaw & Rata, 2008).

Nevertheless, similar criticisms could also be made against economists, although without such a clear political motivation. Greenspan is not alone when he takes an ideological stance. Of course, we could echo Schudson and say that this is not a matter of bias, but rather an effect of the framing of economic theory. The suggestion in this context would be that, while economic theory may be based on "provisional and refutable hypotheses", the basis may seldom be questioned, and it may even be considered that the issues have been fully debated and resolved, or, at least, so well entrenched as to be accepted as a starting point for any analysis.¹² It is interesting to note a paper by Joan Robinson in which she said the following:

Professor Ferguson, in *The Neoclassical Theory of Production and Distribution*, asserts that belief in neo-classical theory is a matter of faith. 'I personally have the faith', he declares...

(Robinson, 1970, p. 309)

In this instance, the topic was a problem of the indivisibility of capital, which then causes difficulties in relation to marginal analysis. Hence:

Professor Ferguson concludes his account of 'reswitching' thus: 'The question that confronts us is not whether the Cambridge Criticism is theoretically valid. It is. Rather the question is an empirical or econometric one: is there sufficient substitutability within the system to establish neo-classical results?' And he states

¹² There may be institutional biases favouring this approach. One text on undertaking research states of the literature search phase, "Where there is a copious literature the researcher may never have to go beyond this initial subject to amass sufficient references" (Sharp, Peters, & Howard, 2002, p. 87). Consequently, research may only be undertaken within the dominant frame. Similarly, Saville-Smith writes, "Because certain factors and/or certain dimensions have been extensively researched does not mean that those factors or dimensions are more important...than those that have not been extensively researched" (Saville-Smith, 2000, pp. 9-10).

in the Preface: ‘Until the econometricians have the answer for us, placing reliance upon neo-classical economic theory is a matter of faith.’
(Robinson, 1970, p. 315)

Robinson concludes:

No doubt Professor Ferguson’s restatement of ‘capital’ theory will be used to train new generations of students to erect elegant-seeming arguments in terms which they cannot define and will confirm econometricians in the search for answers to unanswerable questions. Criticism can have no effect. As he himself says, it is a matter of faith.
(Robinson, 1970, p. 317)

At least according to Robinson, students could be persuaded to accept such a view, although it is not based on logic. Dunn’s modes of argumentation could be consulted to consider why this may be possible, with argumentation by authority being a contender (Dunn, 2004).

About the same time, Sumner Rosen made a similar point to that made by Robinson:

Long ago economists opted for a separation of their studies from fundamentals. In so doing they adopted a prevailing American view that the fundamentals are not in question. The older fashion of joining economic and political concerns into political economy passed from the scene.
(Rosen, 1972, p. 417)

For an alternative explanation, Edward de Bono, in his book, *The Happiness Purpose* (de Bono, 1979), referred to religions as examples of meta-systems. It would seem that the body of economic thinking could serve some of the same functions.

Decision is easy when a powerful meta-system provides the values...It is in this area of simplifying decisions that meta-systems tend to be most powerful in action. And it is this practical power in action that gives meta-systems their appeal. People tend to take up a belief or meta-system because it reduces the confusion of their lives by making decisions so much easier.
(de Bono, 1979, p. 23)

As another parallel with economics, deBono’s proposed new meta-system is based on the principle that the legitimate purpose of life is happiness. However, he might disagree with economists as to how this is to be achieved.

In summary, and to use an alternative terminology, it could be said that economic theory provides frames that have come to be widely accepted among economists to shape perceptions of economic phenomena. Given the link between frames and agendas, we could take a step back and consider whether economic theory has tended to set the agenda itself. In other words, has economics specified not only the

approaches to issues, but the selection of issues and questions to be considered (and those to be overlooked) by economists?

4.2 Do not look outside current theory as long as it can give SOME explanation of an observed phenomenon

In the first chapter of his economics textbook, Eugene Silberberg attempted to show “the powerful nature of the economic paradigm” (Silberberg, 1990, p. 9). He took as an example the rise in women’s labour force participation in the generation up to 1990, seeking an economic explanation. He referred to constancy of tastes as a simplifying assumption in the neoclassical economic paradigm. Moreover, “to accept (changed tastes) as an explanation of observed events is to abandon the search for an explanation based on systematic, and therefore testable, behavior” (Silberberg, 1990, p. 7). Hence, “We reject out-of-hand any explanation based on changes in tastes” (Silberberg, 1990, p. 7).¹³

He identified, as a “wide ranging constraint that changed during the 1960s”, the ratio of young women to men a few years older. The post-WWII baby boom meant that there was a shortage of marriageable men for these women due to lower birth rates in the war years. Marriage was not an option for many young women, and so they pursued careers.

This is plausible, assuming low rates of divorce and no change in the relative ages of marriage partners. Silberberg goes further, predicting a return to more traditional lifestyles during the 1990s as the gender imbalance disappears. The economic paradigm may be powerful, but events in the 1990s did not support his prediction. There was a levelling off of female labour force participation, but no sharp drop in the 1990s, and there was increased participation by mothers.¹⁴

It could be asked why he found it so objectionable to consider the possibility of changes in tastes. They may not be unobservable, and even if they are difficult to identify, it could be wrong to disregard them simply because there is an alternative plausible explanation. The existence of one possible explanation does not exclude the possibility of others that are also consistent with the evidence. If each generation has its own perceptions, possibly distorted as discussed in (Birks, 2005), then why shouldn’t tastes change?

Silberberg illustrates “paradigm-based reasoning”¹⁵, whereby it is important to explain events within a particular paradigm (or frame). The result is then considered to be sufficient, even though there may be alternative explanations.¹⁶ Not only is the

¹³ Note, however, Bowles (1998).

¹⁴ See Davis (2002).

¹⁵ While the term “paradigm” is widely used to describe a body of theory, the terms “analogy” or “metaphor” incorporate the sense that theories are not direct representations of the real world.

¹⁶ Kuhn suggests that existing specialists will resist the adoption of alternative paradigms because to do so “reflects upon much scientific work they have already completed” (Kuhn, 1970, p. 7). Also,

presence of alternative consistent hypotheses possible, but, according to Milton Friedman, it is inevitable.¹⁷

In terms of reasoning, Silberberg's approach allows people to cling to a paradigm until it fails so badly that it has to be rejected. This may hinder, rather than assist, understanding. Perhaps more dangerously, it could lead us to have an inflated view of our level of understanding.

At an extreme, it may be that a theory will never fail to the extent that it is rejected by its adherents. Lakatos, criticising scientific methodology, constructs an example to illustrate his contention that "the most admired scientific theories simply fail to forbid any observational state of affairs" (Lakatos, 1970, p. 100), so they cannot be disproved. Any contrary evidence can be explained in some way that allows continued acceptance of the theory. If a planet does not follow the expected orbit, there is an unobserved planet causing the deviation, for example. (See (Lakatos, 1970, pp. 100-101) Desai (1981) describes the difficulties in resolving disputes about theories, suggesting that the techniques available are such that it may be very difficult to conclusively show that a theory fails to fit our observations.¹⁸

4.3 Do not reject a theory, even if flawed, unless the challenger can present a superior alternative

Kuhn contends that paradigm shifts have required two characteristics;

Their achievement was sufficiently unprecedented to attract an enduring group of adherents away from competing modes of scientific activity. Simultaneously, it was sufficiently open-ended to leave all sorts of problems for the redefined group of practitioners to resolve.

(Kuhn, 1970, p. 10)

Writing on econometrics in *The Economic Journal*, Peter Phillips quotes Hoover, who makes a claim about scientists: "even accumulated falsifications or anomalies do not cause scientists to abandon an approach unless there is the prospect of a better approach on offer." (Phillips, 2003, p. C27)

There is a parallel in one legal view on the approach to econometric evidence in court (with supporting case law cited on both sides):

"Men whose research is based on shared paradigms are committed to the same rules and standards for scientific practice...and continuation of a particular research tradition" (Kuhn, 1970, p. 11).

¹⁷ Also note: "[A] hypothesis is rejected if its predictions are contradicted ("frequently" or more often than predictions from an alternative hypothesis); it is accepted if its predictions are not contradicted; great confidence is attached to it if it has survived many opportunities for contradiction. Factual evidence can never 'prove' a hypothesis; it can only fail to disprove it, which is what we generally mean when we say, somewhat inexactly, that the hypothesis has been 'confirmed' by experience." (Friedman, 1953, p. 9).

¹⁸ See Chapter 3 on "The methodology of testing economic theories".

The standard for evaluating the probative value of econometric evidence is very much under debate. Some courts have stated that '[w]here the defendant adduces no evidence of alternative methodologies or statistics, but merely criticizes those employed by the plaintiff's expert, acceptance of the projections of the plaintiff's expert is appropriate, since they do have a rational basis.' Other courts have rejected [this] notion...
(Harkrider, 2005, p. 7)

In law and economics, Swanson, writes:

To contest the good judgement of judges and juries does not seem constructive criticism to me, unless there is some alternative decision-making device that is shown to perform more acceptably.
(Swanson, 2002, p.540)

Swanson is supported by Grofman who is defending economics:

...you can't beat something with nothing, and so it is not enough to show that some given rational choice model does not fit the data, it is necessary to show that some other perspective leads to a model with better fit and predictive power.
(Grofman, 1993, p. 240)

The failure to present an alternative body of theory has also been given as an explanation for the low level of attention given to Coase's point on transaction costs:

Oliver Williamson has ascribed the non-use or limited use of my thesis in *The Nature of the Firm* to the fact that it has not been made "operational", by which he means that the concept of transaction costs has not been incorporated into a general theory.
(Coase, 1991)

There are problems with the viewpoint that a superior alternative is required. Should people use something that is known to be harmful rather than admit ignorance? Is it unacceptable to identify a problem unless a solution can also be offered?

Lakatos, discussing Popper, says, "He still construes 'falsification' as the result of a duel between theory and observation, without another, better theory *necessarily* being involved" (Lakatos, 1970, p. 181). Similarly, Sowell said of Stigler, "When shattering theories with gusto, Stigler seemed utterly uninhibited by the question, 'But what would you put in its place?' Nor should he have been." (Sowell, 1993, p. 787)

4.4 Take a more pragmatic approach

At the AWH Phillips symposium held in Wellington, New Zealand, in July 2008, keynote speaker Sir Clive Granger reiterated the point that the best forecast is a mix of forecasts. His 1969 paper with Bates contended, in particular, that this is likely to

be the case where different variables or information are used for the alternative forecasts (Bates & Granger, 1969). A similar point could be made about theories. If, as for the blind men of Indostan (Saxe, 1878), each theory is a simplified, partial perspective on an issue, a superior understanding may be gained from a combination of theories.

The information for the public on the 2008 award of the Nobel Prize to Paul Krugman includes the statement:

Today, the general view is that the basic mechanisms specified by Krugman constitute an important complement to the traditional Heckscher-Ohlin theory. The truth, as in so many other instances, is that reality encompasses features of both theories.

(The Royal Swedish Academy of Sciences, 2008, p. 2)

Socrates would contend that it is better to acknowledge what we do not know rather than to cling tenaciously to unsupported and contradicted beliefs.¹⁹ In other words, it is wise to acknowledge the limitations of our understanding, rather than to proceed on the basis of false confidence. This can sometimes be of great practical importance, as with the acknowledgement that it was unrealistic to expect to “fine tune” an economy with the policy instruments available. Occam’s razor is used to describe the point that simpler explanations are better, *ceteris paribus*. However, there is a danger that, by focusing on simple explanations, there results an inflated sense of the extent to which issues are understood.

A pragmatic approach would result in a qualified use of theory-based understanding. Two key qualifications are:

- a) Accept valid criticisms as limitations of current understanding (and hence on our ability to intervene).
- b) Recognise that theories are all partial, they are analogies/metaphors, and they frame issues. Therefore, it is prudent to use a mix of theories.

5. CONCLUSIONS

As economists, we place a heavy emphasis on theory. This can lead us to see things in a simplified way. In particular, there is a danger that we may draw conclusions that have been demonstrated in a theoretical framework, assuming that they apply equally to the real world despite being detached from that world. It is important to recognise theory as an analogy or metaphor, where one structure is being considered as a representation of another. Simplification is an integral and important aspect of

¹⁹ See paragraphs 7-9 of (Plato, Approx 380 B.C.E.)

analysis, but its limitations should not be overlooked. Otherwise there will be a false confidence in the results.²⁰

While a theory may well be consistent with our observations, consistency may be a weak criterion for assessing the value of the theory. As Friedman has suggested, if there is one explanation that is consistent with the evidence, then there may be many consistent explanations. The two examples in this paper show four alternative explanations in one case and two alternatives in the other. The way in which economic theory is framed may limit our ability to see such alternatives. It may even limit our willingness to look.

The research process itself can influence the issues considered and the approaches taken. There may be a failure to observe flaws in the analysis, and in the resulting understanding, due to a lack of questioning of what may have come to be considered as the fundamentals of a discipline. When a newly observed phenomenon can be ‘explained’ using a dominant approach, this may be considered definitive, rather than one of several possible alternatives. When flaws are observed, there may be a reluctance to acknowledge their significance if this puts into question the value of the existing body of knowledge.

In summary, our understanding of economic phenomena may be less than is often claimed. There are reasons why this limitation may not be widely acknowledged. The consequence is a false confidence, and a reluctance to challenge accepted beliefs.

²⁰ As an example, it could be argued that an emphasis on econometric estimation results in an undue focus on and belief in the existence of a stable underlying structure to be estimated. This may prevent us from seeing structural weaknesses which can lead to major shocks or sudden adjustments, as observed with the 2007-onwards sub-prime crisis and its repercussions. The standard econometric approach to such events is to include a dummy variable, which does nothing to explain the causes of the crisis or the flawed assumptions about the structure.

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