Econ Journal Watch,
Volume 1, Number 3,
December 2004, pp 413-426.

"Credibility" in Context: Do Central Bankers and Economists Interpret the Term Differently?

JAMES FORDER*

A COMMENT ON: ALAN BLINDER. 2000. CENTRAL-BANK CREDIBILITY: WHY DO WE CARE? HOW DO WE BUILD IT? *AMERICAN ECONOMIC REVIEW* 90(5): 1421-1431.

Abstract, Keywords, JEL Codes

FOR MANY YEARS ALAN BLINDER HAS BEEN ONE OF THE outstanding analysts of the American economy and policymaking. In the 1990s he served as a member of the President's Council of Economic Advisers and then as vice-chairman of the Governors of the Federal Reserve. He has published and spoken widely on monetary policy and often expressed some measure of dissent, at least from what is widely held to be the consensus position of academic macroeconomists. In particular he has offered some of the most effective critiques of the "theory of policy credibility," and made his position on it perfectly clear. In Blinder (1997, 13) he said, "I firmly believe that this theoretical problem is a non-problem in the real world." Much the same message was repeated in Blinder (1998).

More recently, however, Blinder has taken a different tack. In particular, in Blinder (2000) he conducted a survey of academics and central bankers, asking them various questions about 'credibility.' Introducing this study, he said,

* Balliol College, Oxford.

> In a word, credibility matters *in theory*, and it is certainly believed to matter *in practice*—although empirical evidence on this point is hard to come by because credibility is not easy to measure. This paper seeks to shed light on two main issues: Why and how? Why is credibility so important to central bankers? And how can a central bank create or enhance credibility? (Blinder 2000, 1421)

The survey consisted of a number of questions as to whether 'credibility' is important; what purposes it serves; and how it can be established. In each case a question was framed so that the respondent could state his strength of agreement with it on a scale of 1 to 5. Blinder then calculated the average score of the academics and the policymakers, and compared them, expressing some surprise about differences he found between the two groups.

In this comment, I suggest that an explanation of these differences is to be found in the two groups of respondents interpreting the questions differently, and that this is traceable to their having different understandings of what is meant by 'credibility.' Blinder himself notes that this word is used in a variety of ways but he chooses not to seek to clarify the meaning for his prospective respondents, since, as he put it, they "might have other meanings in mind, and therefore recoil from mine" (Blinder 2000, 1422). I suggest that there must be serious doubt about the value of a survey that asks the importance and ways of acquiring a thing without specifying what that thing is, but more importantly there is a further danger. Without clarity as to exactly what is meant by 'credibility,' some of the answers to Blinder's survey might appear to give support to proposals which are in fact unrelated to what the respondents had in mind. Muddle over the meaning of a word thereby contributes to creating the impression of there being wider support than in fact there is for these policy proposals.

If this suggestion is correct Blinder's results would retain their interest, but it would show that they also need the most careful interpretation before any conclusion could be drawn.[1] In particular, the conclusions that some other authors have begun to put on them would be inappropriate.

[1] Comparisons with other problematic words in the economics literature, such as 'significant' and 'cause' may be apparent.

THE MANY MEANINGS OF 'CREDIBILITY'

In ordinary, everyday English, the word 'credible' has a number of related meanings. When a policy or a policymaker is described as 'credible' that can denote trustworthiness, or competence, or a wide range of other things. The *New Oxford Dictionary* for example gives as definitions both "the quality of being convincing or believable" and "the quality of being trusted and believed in." The quality of being believed *in* suggests clearly capability, good judgment, and related characteristics. It also might be that in policy statements, 'credibility' is substantially a matter of intelligibility and of the private sector appreciating the policymaker's objectives and their understanding of the way the world works.

When something or someone is described as 'credible' in any of these senses—of intelligibility, effectiveness, capability, competence—that would certainly be a description which conveyed approval. In so far as 'credibility' is understood in this ordinary English sense, it would be bizarre to favor 'incredible' or 'non-credible' over 'credible' monetary policy.

Among monetary economists, on the other hand, the term 'credibility' has a special meaning, originating from the usage of Robert Barro and David Gordon (1983a). They gave no actual definition of the word, but used it to characterise policy which the private sector believes will be carried out in the context of a particular reason that might lead them to believe that it will not.[2] As a result, 'credibility' has become associated with certain features of the formal models that now fill much of the monetary economics literature.

The Barro and Gordon model is based on a vertical aggregate supply curve with rational expectations, together with an assumption of labour market or other distortions which cause equilibrium unemployment to be above its optimal level. They also assume that the marginal costs of inflation are rising, but zero at price stability. A consequence is that from that starting point, small positive inflation surprises are desirable because they lower unemployment, thereby moving it towards the optimum. Crucially, however, they assume that at least in the normal run of policymaking, there is no mechanism by which the policymaker can commit to particular future policy actions. As they argue, a consequence of this is

[2] In a number of their usages, the policymaker's credibility is specifically made to be a semantic equivalent of its 'reputation'—for example, Barro and Gordon (1983, 108) 'loss of reputation or credibility." and "the government retains its reputation (or credibility)" (109).

that—again in the normal run of things—the private sector will not rationally expect the policymaker to deliver price stability since it would never be socially optimal for policy to conform to such an expectation. This gives rise to what is sometimes, following Kydland and Prescott (1977), known as the "time-consistency problem" which is that with expected inflation always positive, the policymaker can do no better than accommodate this expectation with the result that inflation is excessive, but there is no reduction in unemployment. The policymaker is, in effect, in the position of wanting to promise the private sector that prices will be stable but finding that such promises are, in the rational expectations context in question, ineffective in affecting expectations and therefore valueless.

The effect of this argument, as Barro and Gordon realised, is to focus attention on what can be done outside the normal run of things in order to induce the private sector to believe that policy will be set to achieve price stability. If the private sector can be made to believe this, policy will be improved because, although unemployment will remain above its optimal level, inflation will not. It is in this context that they used the word 'credible' to describe the characteristics of policy leading private agents to believe policymaker announcements about future inflation. In particular, they suggested that if one considers a "repeated game" version of the basic problem, reputational equilibria may exist with low inflation. Consequently they said that to the extent that an appropriate reputation can be established, 'credibility' for the low inflation policy is achieved. Later authors have, in proposing different solutions to the same problem, also described as 'credible' the policy, policymakers, or arrangements for making policy which are (in the models in question) successful in leading the private sector to expect price stability. Thus, in this usage a central bank's or policymaker's 'credibility' is the extent to which the private sector believe there will be low inflation.

One can clearly regard Barro and Gordon's sense of the word 'credible' as falling within normal English usage, since if the policymaker actually promises price stability, one might, in ordinary English, say that if such a promise is credible, rational agents believe it will be honoured. On the other hand, their usage picks out only a small part of the range of meanings of the word.

First, Barro and Gordon's usage does not in any way suggest general capability, reliability, or effectiveness: 'credibility' in their model is not a problem of policymaker being confused, unintelligible, or incapable; it is not achieved by those who are merely good at their job. Indeed, it is an assumption of their model that the policymakers they are considering are well-intentioned, fully competent and wise to circumstances,[3] and the point is to show that they nevertheless face a 'credibility' problem. So in Barro and Gordon's usage 'credibility' picks out only a characteristic something like 'honesty' or 'promise-keeping.'

But more than this, and most importantly, their idea of 'credibility' relates to promise-keeping only in the context of the particular incentive to deception that lies at the heart of the time-consistency problem. The issue is simply one of whether the private sector believes that the one particular incentive to create inflation described as the "time consistency problem" will be resisted. Policymakers who are believed to be likely to inflate specifically for the reason that it is in the public interest that surprises be created lack credibility. Those who are expected to resist this temptation have it. Therefore, other possible sources of confusion, dissembling, error, fudging, and other circumstances resulting in the breaking of promises—which are, unfortunately, common parts of policymaking, arising from, for example, the concealment of errors, the advancing of certain interests above others, and the achievement of electoral advantage generally—are not things under consideration anywhere in Barro and Gordon's discussion of 'credibility.'[4] But any and all of these considerations might be unendingly at issue in ordinary-English 'credibility.'

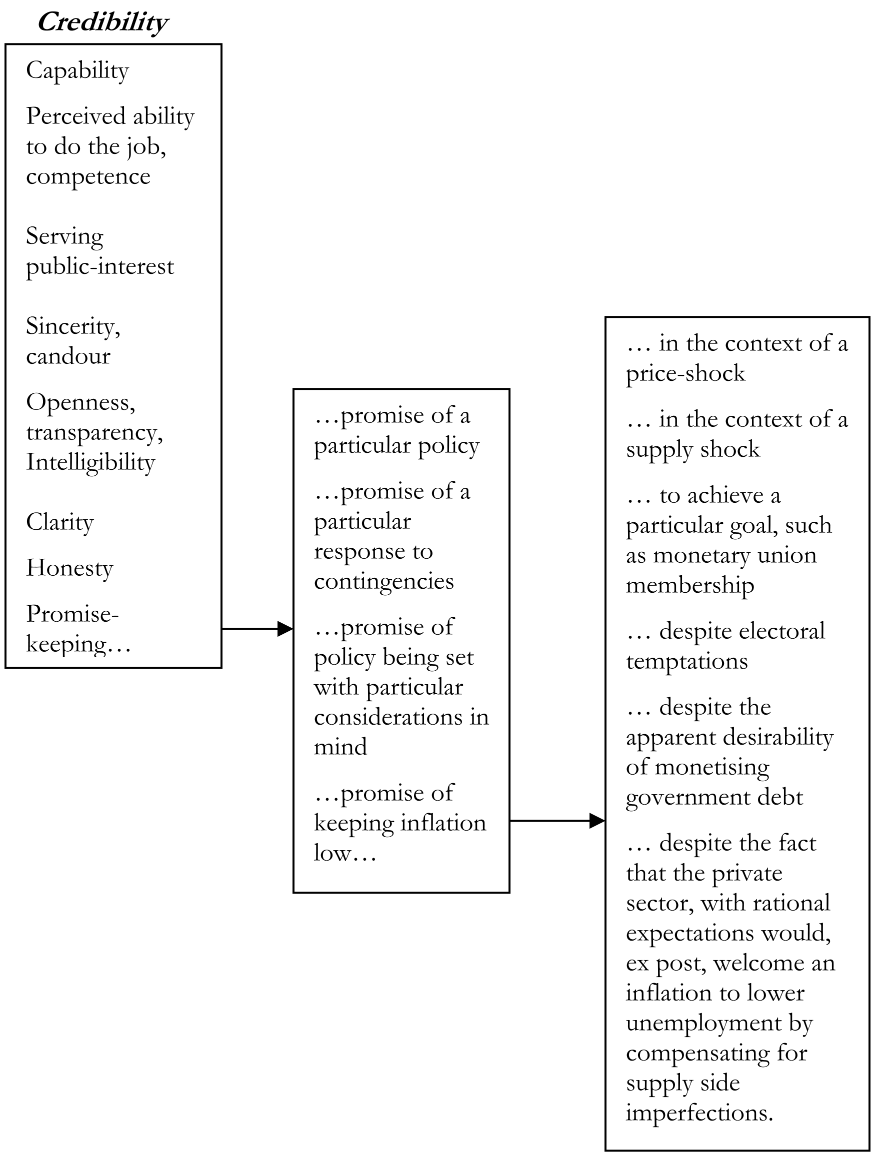
Figure 1 is an attempt to convey the many meanings that 'credibility' might have, and to show that the specific usage of that word in Barro and Gordon's analysis—in the bottom right corner of the figure—is a very special one, and may not be what all the respondents had in mind in discussing 'credibility.' It can be seen first that there are many senses of "a credible policymaker" which indicate that the policymaker is in one way or another doing a good job. *One* of these is that it is thought that when the policymaker makes a promise, it can be relied on. But there are many promises one might make, and only one of these is a promise to keep inflation low. And furthermore, there are many reasons why one might wish to make that promise. Barro and Gordon's discussion points to only one

[3] One could go further and say the model would lose its point without this characteristic: there is no difficulty in explaining excess inflation if policymakers are presumed not to be competent. The assumption that they "act rationally" is made specifically in Barro and Gordon (1983b, 590), on which Barro and Gordon (1983a) builds, and is implicit throughout the latter paper.

[4] Again, it would spoil the point of the argument if these things were under consideration. The power of the argument that equilibrium inflation is excessive arises from the fact that this is not attributable to such misfeasance. This point was made by Kydland and Prescott (1977).

such motive. That is that in their model there is *one particular* incentive to inflate, and the 'credible' policymaker is one whose promises not to give in to *that* temptation are believed. But that is a very special usage of the word.

Figure 1: Many Meanings of 'Credibility'



BLINDER'S OBSERVED LACK OF TEMPTATION

The possibilities—and dangers—of confusion over the meaning of the word 'credibility' can be illustrated by considering Blinder's well-known claim that, contrary to what the Barro and Gordon argument would lead one to expect, when he was a policymaker he never "witnessed nor experienced" a 'temptation' to generate surprise inflation (Blinder 1997, 13). In the abstract there seem to be five reasonable explanations of never witnessing such a thing. They are:

1. Central bankers do not believe even unanticipated monetary expansion can lower unemployment.
2. They do not believe that equilibrium unemployment is socially sub-optimal
3. They do believe equilibrium unemployment is excessive, but do not want to lower it, even if there were no costs of doing so.
4. They believe surprise inflation would destabilize a repeated-game equilibrium like the one Barro and Gordon analyse, thereby destroy credibility in their technical sense, and thereby raise expected inflation and reduce the net present welfare-value of future outcomes
5. Along with inflation and unemployment, central bankers have another argument, of overwhelming weight, in their utility functions, namely, the avoidance of the breach of trust that deliberately inflating would constitute.[5]

Any of the first three possibilities might well bear examination, but none of them seem to point to the significance of 'credibility' on any likely definition. For current purposes, then, I take it that the crucial issue is between the fourth and fifth. In either of these cases, the policymaker might be appropriately described as 'credible,' but the questions of why credibility is important, and how one might achieve it would have quite different answers.

If explanation four is correct, one could say that the credibility problem in the Barro and Gordon sense exists, but the actual mechanisms

[5] The avoidance of the appearance of incompetence could also serve as explanation (5), if a surprise inflation, though successful, were nonetheless deemed a case of incompetence.

for solving it are effective and taken for granted—the reputational effects are strong enough to deter surprise inflation. In that case, the maintenance and enhancement of reputation would clearly be a priority, and this might have implications for central bank appointments, the institutional status of the central bank, and its policy. The fifth case is crucially different. Here, even the one-period optimisation problem would be solved by a setting of monetary instruments consistent with stable prices.[6] There would then be no credibility problem in the Barro and Gordon sense at all: no temptation to inflate arises, so there is no problem to solve, and no solution is needed. The implication is that the central banker would not feel impelled to do anything with a view specifically to establishing Barro and Gordon credibility. This view seems to be shared by Blinder himself.[7] And the remarks of John Vickers (1998) point very much in the same direction. On the other hand, it is clear that this view does not in any way diminish the importance of finding central bankers who are manifestly competent, capable etc, and thereby sustaining 'credibility' in other important senses.

BLINDER'S SURVEY

Blinder's survey asked a variety of questions about the importance and sources of credibility, such as how important it is, in pursuit of which objectives it is important and by what means it can be acquired. I suggest one might well expect very different answers to many of these questions depending on whether the respondent treats the question as relating specifically to Barro and Gordon 'credibility.' I speculate further that central bankers have, like Blinder, never themselves felt nor witnessed among their peers a temptation to seek to exploit 'surprise' inflation, and that the reason is something like explanation five above. If that is correct, I suggest their natural response to questions about 'credibility' is to treat them, not as

[6] There would remain an issue about the determination of private sector expectations of inflation, and hence unemployment. Even if the private sector do not know the policymaker's preferences, a long enough period of price stability will presumably lead to unemployment returning to its equilibrium level.

[7] See for example Blinder (2000, 1427) where he says a central bank has a duty to be truthful, or Blinder (1997, 14) where he says that a sufficient solution to the time-consistency problem is to direct the central bankers not to aim at unemployment below the natural level, and that since they are responsible people, they will do as they are told.

questions about a problem they do not face, but rather as questions about 'credibility' broadly understood, meaning—roughly—"perceived capability, competence, and general honesty." Academic economists, on the other hand, generally lacking these experiences, but trained in formal models and the attendant vocabulary, tend more to treat the question as being about Barro and Gordon credibility.[8] In that case, the answer that 'credibility' is unimportant—a very odd response to a question about ordinary English credibility—becomes reasonable, since it is reasonable to doubt the value of the model. And indeed we see in Blinder (2000, 1422), not only did the academics rate the importance of 'credibility' lower than the central bankers, but their ratings had a much wider standard deviation: some people were dismissive of its importance.[9]

Blinder's question 2 asked the relationship between credibility and "dedication to price stability." Those answering a question about capability and effectiveness may feel that the control of inflation is its key measure, and they will think the relationship is very close. On the other hand, those answering about the Barro and Gordon sense of the word face a dilemma. For them, credibility is associated with the private sector's *perception* of the central bank's inflation aversity; therefore it is reasonable to answer that there is only limited association with actual inflation aversity.[10] This would again suggest that central bankers would on average give higher scores, which was the result of the survey.[11]

Questions 3 to 9 were about *why* credibility is important. The outstanding features of the answers in this section of the survey are that central bankers' scores were higher for every suggested reason, and their average scores were tightly packed in the range 4 to 4.39. Thus they think credibility is important for every reason suggested in the survey. That is certainly consistent with the idea that they are tending to answer about 'credibility' in roughly the sense of capability or competence. The economists' scores were lower, ranging from 3.19 to 4.17, which

[8] It is obvious, I hope, and certainly sufficient, that I am only conjecturing tendencies, not a great dichotomy between the two groups.

[9] On the 5-point scale, the average score given by central bankers was 4.83, and the lowest was 4. The economists gave an average of only 4.23 with a standard deviation of .85 as against .37 for the central bankers.

[10] The distinction is important in variations of Barro and Gordon's theme, such as, in particular, Backus and Driffill (1985). They consider the case of policymakers of various, but unobservable degrees of aversion to inflation and show that even a policymaker who is not particularly averse to inflation can sometimes establish reputation and thereby enjoy credibility.

[11] The average amongst the central bankers was 4.1 but amongst the economists only 3.31.

presumably again reflects the fact that they were thinking of the Barro and Gordon sense of credibility and some of them think it altogether unimportant.

Looking at the answers to these questions in more detail, with the alternative meanings of 'credibility' in mind, three otherwise puzzling results fall into place. First, Blinder notes the high standard deviation of the academics' response to the idea that credibility is important to achieve disinflation at low cost in increased unemployment—the "credibility hypothesis" as he calls it—and second that the central bankers were much (and significantly) more impressed by the idea that credibility helps to keep inflation low than they were by the credibility hypothesis.

Both of these results should be seen in the light of the credibility hypothesis being a clear theoretical implication of the models of 'credibility' in the Barro and Gordon sense. In the models, wages are set on the basis of a rational expectation of inflation. Where credibility is high, even when inflation occurs (due to exogenous factors, presumably), the public believe that the policymaker is committed to reducing inflation, and set wages on that basis. Inflation is then reduced without an increase in unemployment. On the other hand, where credibility is low, higher wages are set, and if inflation is reduced, this occurs only at the expense of raising unemployment. Therefore, in theoretical approaches like that of Barro and Gordon, high credibility is associated with small increases in unemployment during disinflations. Those who are impressed by the theory will presumably believe that this is an important reason to value 'credibility.' On the other hand, economists who are sceptical of the value of the Barro and Gordon analysis are presumably more conscious of the empirical work cited by Blinder contradicting the credibility hypothesis.[12] Indeed, that work may be the source of their scepticism. Hence again, with some respondents thinking along the lines of the models, and others rejecting them, there is wide divergence of views on this point, generating the large standard deviation in economists' responses.

On the other hand, those thinking of credibility in an ordinary way and particularly in a sense of meaning something like perceived competence, will certainly have reason to think that it is primarily valuable for avoiding outbreaks of inflation. Indeed, in many cases, allowing outbreaks of inflation might well be regarded as paradigmatic of monetary

[12] To which I would add Posen (1998).

policy incompetence.[13] Hence, central bankers rate this as a highly important aspect of credibility.

The third puzzle was that the largest difference in scores between the two groups arose from the idea that "credibility is important as a way to justify public support for an independent central bank." Economists gave this a rather low score and Blinder suggests it is because either they think independence is unimportant or that the public can be expected to support the independence of a non-credible central bank (Blinder 2000, 1427). Here I think he may have missed a third possibility. If we are using the word in the Barro and Gordon sense, one might say that the public are unlikely to understand what the 'justification' means, and therefore it cannot be effective in securing support. But in the ordinary English sense, credibility must be conducive to public support of independence—one can hardly imagine public support for independence being enhanced by incompetence and misfeasance. So it is no surprise to find the central bankers thinking credibility important to public support of independence.

The final part of the survey concerns the creation of credibility and asked a succession of questions as to how important certain things—such as independence or a record of honesty—are to the establishing of credibility. Here the outstanding result is that, taking the average of their scores, the economists and central bankers ranked the suggested means of acquiring credibility identically. That may not be a surprise even if the groups have a tendency to treat the question as asking different things. Blinder suggests that there is a puzzle here over the cases of the possibility of creating credibility by "living up to one's word" or by central bank independence. Both groups rated the former higher than the latter, whereas Blinder suggest that the economics literature places so much emphasis on central bank independence that one might have expected it to be at the top of the economists' list (Blinder 2000, 1427-8).

Some of the literature does indeed say that legislation creates credibility more or less directly, for example simply by granting independence to a central bank. But on the other hand much of it says that an independent central bank faces the same Barro and Gordon problem, so that ultimately only reputational solutions can be effective.[14] Some of the literature also alleges a link between central bank independence and low inflation, but that is consistent with (amongst other things) either the view

[13] There might be exceptions, of course, but it is unlikely to be said that every case of excessive inflation is adequately explained by external factors.
[14] Lohmann (1998) argues this specifically, many others imply it in one way or another.

that independence directly creates credibility leading to price stability, or that independence creates the opportunity to build reputation. The academics' ranking here may therefore simply reflect a certain interpretation of the message of the literature: they may think that reputational, not statutory mechanisms are the ones which are effective in building "Barro and Gordon credibility." Indeed, this view would seem to be supported by the academics' low scoring of the ideas that credibility can be built either by adopting a policy rule or through creating mechanisms for central bankers to suffer personal loss when inflation is high (Blinder's questions 15 and 16). In either case, the proposal would be to create credibility by a legislative, rather than a reputational solution.

CONCLUSION

If my speculation—that different groups had a tendency to read the questions differently—is correct, Blinder's survey would be no less interesting. But it would create a danger if its results are not interpreted with the utmost care. In particular the survey risks giving the impression that there are kinds of uniformity of thinking between academics and practitioners which in fact do not exist. One effect of this might be to suggest that there is wider support than in fact there is for policy and institutional proposals designed to enhance 'credibility' in the Barro and Gordon sense. It would be a gross misinterpretation to suppose that this is what is being supported by those who believe central banks ought to be open, honest, and intelligible about their intentions and understandings, and that it ought to be manifest that policy is made dispassionately and skilfully. One cannot therefore welcome the argument of Issing et al. (2001, 37) referring to the working paper version of Blinder's paper. They say, "Central bankers are highly conscious of the benefits of credibility. Blinder's (1999) survey documents that they attach to this concept a higher importance than academics," and proceed by treating this as giving authority to their view that credibility in the Barro and Gordon sense is important. They then go on to treat this as giving support to proposals for firm commitments of policy designed to solve the particular problem Barro and Gordon had in mind. Indeed, these are just the things that Blinder himself has said are a waste of time.[15]

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[15] See Blinder (1997).

ABOUT THE AUTHOR

James Forder is Fellow and Tutor in Economics at Balliol College, Oxford, Lecturer in Politics at Oxford University, a Managing Editor of *Oxford Economic Papers*, and a member of the Bar of England and Wales. He has written a number of papers critical of the theory of credibility and common interpretations of it, such as "The theory of credibility: confusions, limitations, and dangers," in *Neo-liberal Economic Policy*. ed P. Arestis and M. Sawyer. He has also been critical of the theory and practice of central bank independence, for example in "Some Methodological Issues in the Statutory Characterisation of Central Banks" in *West European Politics* 24(1): 202-216; "Interests and 'Independence': the European Central Bank and the Theory of Bureaucracy" in *International Review of Applied Economics* 16(1): 51-69; and "The Limits of 'Independence' and the Policy of the ECB" in *Public Choice*: forthcoming.

His email address is james.forder@balliol.ox.ac.uk