Through the Looking Glass: Central Bank Transparency

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Through the Looking Glass: Central Bank Transparency

Research on central banking is a growth industry. A computer search on the phrase "central banking," conducted on EconLit, turned up 980 references in the 1970s, 1,929 in the 1980s, and a staggering 4,921 in the 1990s. Performance like that does not quite match the stock market, but it is close. I will leave it to Bob Shiller to decide whether this growth reflects solid fundamentals or a faddish irrational exuberance.[1] But I will wager that the academic literature on central banking will not fall into a slump comparable to the Nasdaq.

In any case, all this quantitative growth has also brought with it substantial qualitative change. About eight years ago, at a conference celebrating the Bank of England's tercentenary—yes, it's older than Yale!—Stanley Fischer (1994) presented a thoughtful and lengthy paper entitled, "Modern Central Banking." Fischer's paper ran to 46 published pages—in a rather small font. It dealt with a wide variety of important topics. But it barely mentioned the subject of this paper, central bank *transparency*.

This observation is not meant as a criticism of Fischer, who was then as now a true expert, and who produced a masterful and thought-provoking essay for the occasion. It is, rather, an indication of how much the times have changed in a scant eight years, even in the stodgy world of central banking. In fact, transparency is probably the aspect of central banking in which change has been the most visible and dramatic over the last decade or

[1] See Shiller (2000).

so.[2] About 20 years ago, the late Karl Brunner wrote the following biting caricature of the typical central banker's imperious attitude toward openness and transparency:[3]

> Central Banking [has been] traditionally surrounded by a peculiar mystique... The possession of wisdom, perception and relevant knowledge is naturally attributed to the management of Central Banks... The relevant knowledge seems automatically obtained with the appointment and could only be manifested to holders of the appropriate position. The mystique thrives on a pervasive impression that Central Banking is an esoteric art. Access to this art and its proper execution is confined to the initiated elite. The esoteric nature of the art is moreover revealed by an inherent impossibility to articulate its insights in explicit and intelligible words and sentences.

Now fast-forward to the present. In 2001, I was part of a five-author international team that wrote a detailed report on central bank transparency (Blinder et al. (2001)). Inevitably, much of what I will have to say on that subject here overlaps considerably with that report. So when I lapse into the pronoun "we," I am referring also to my four co-authors. Here is how we opened our report:[4]

> Attitudes and policies toward central bank communications have undergone a radical transformation in recent years. Not long ago, secrecy was the byword in central banking circles. Now the unmistakable trend is toward greater openness and transparency. Increasingly, the central banks of the world are trying to make themselves understood, rather than leaving their thinking shrouded in mystery.

This represents quite a transformation from the world described by Brunner. I will argue below that it has been very much a change for the better—and that the trend ought to continue.

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[2] Two other aspects of central banking that have changed dramatically are taken up in the other two Okun Lectures: the trend toward decisionmaking by committee and the interactions between the central banks and the markets.

[3] Brunner (1981), p. 5. I first encountered this quotation in a notable paper by Goodfriend (1986), which was way ahead of its time.

[4] Blinder *et al.*, (2001), p. 1.

The last decade or so has witnessed an assault—mounted by some academics and a few central bankers—on the age-old notion that a central bank ought to be secretive and opaque. What happened to produce such sharp attitudinal changes? What are the main arguments in favor of greater transparency? And how can we evaluate the changes that have already taken place—and those yet to come? These are some of the main questions for this paper. But first, we must define our subject.

What is Transparency?

Academics have a fetish about precise definitions. So I began by consulting the dictionary for the definition of transparency. Mine (*Webster's Third New International Dictionary, Unabridged*) defines "transparency" as dictionaries are wont to do: "the quality or state of being transparent." Not very helpful. Fortunately, among the three definitions of the adjective "transparent" that follow immediately are: "free from pretense or deceit," "easily detected or seen through," and "readily understood." These will do. While I am personally attracted to the absence of pretense, that attribute seems extraneous to monetary transparency—and may not be terribly popular in central banking circles. So, for purposes of this paper, I will say that a central bank is transparent if its actions are "easily detected," its policies are "readily understood," and its pronouncements are "free from deceit." In brief, the bank should be open, intelligible, and honest, in stark contrast to Karl Brunner's prototypical secretive, cryptic, and dissembling central bank.

To apply this general definition of transparency to the specific context of monetary policy, I begin by sketching a series of increasingly stringent transparency standards that a truly modern central bank might think of meeting.

The easiest standard is *clarity*, or as Brunner put it, articulating its views "in explicit and intelligible words and sentences." Asking only for this, and nothing more, is not asking for much. But as we know, even our own Alan Greenspan, whom I would rate as the greatest central banker in history, has often failed the clarity test. Examples abound. One of them occurred just a few months before I delivered the Okun Lectures. A January 11, 2002 speech by Greenspan in San Francisco created a stir when it was widely *misinterpreted* as conveying great concern with the strength of the economy and hinting that the FOMC might therefore cut interest rates once again at its next regularly-scheduled meeting, later that month.[5] Well, it turns out he was *not* all that worried about the recovery, and the FOMC was *not* thinking about cutting rates. The markets were clearly wrong-footed by Greenspan's speech, though presumably unintentionally. It was clarity that was lacking.

But clarity is not enough. If I declare forthrightly that I am standing at a podium in New Haven, Connecticut wearing black socks, I haven't told you anything you don't already know—or care to know. So the second standard of transparency goes beyond clarity to *substantive content*. A central bank that is transparent by this more meaningful standard must convey pertinent information about the economy and monetary policy to those who care enough to listen.

[5] Alan Greenspan, "The Economy," Remarks at the Bay Area Council Conference, San Francisco, January 11, 2002.

Here, a short personal anecdote is worth telling. I became Vice Chairman of the Federal Reserve Board in late June, 1994. Within a few days, I had a visit from the Fed's long-time chief press officer, a fine man of deep experience who came to teach a rookie Vice Chairman the ropes. Trust me, his briefing was not to extol the virtues of transparency. In fact, at one point he informed me: "We don't talk about the economy." I looked at him incredulously and replied, with just a trace of sarcasm, "Then what would you like me to talk about? The weather?" Attitudes at the Fed (and elsewhere) have changed a lot since then.

The third standard of transparency raises the bar higher than mere substantive content. To clear this third hurdle, the central bank must leave itself *open to public scrutiny*. That need not and does not mean that its private records and internal memoranda must be posted on the Internet. But it does mean that the bank should provide the public with information about the nature of its deliberations, the reasoning behind its decisions (perhaps including some of the arguments pro and con), and the nature of the vote, if there is one. It probably also means that the bank should disclose most pertinent information about the inputs to its decisionmaking, including both its model(s) and its forecasts. Only a few central banks meet this third standard.

Last, and to my mind least, the most demanding standard of transparency would require that substantially all of the central bank's business be *conducted in the sunshine*, free for all to see—the FOMC on CNBC, if you will. For reasons that will be made clear shortly, my ideal central bank would meet the first three standards, but not the fourth—which I believe to be unnecessarily intrusive, damaging to the deliberative process, and therefore potentially harmful to monetary policy. As we put it in our report on

transparency (Blinder et al. (2001), p.2), "the bank should reveal enough about its analysis, actions, and internal deliberations so that interested observers can understand each monetary policy decision as part of a logical chain of decisions leading to some objective(s)." That about sums it up. Transparency can and should stop short of voyeurism.

The Political Case for Transparency

Although empirical evidence is notoriously hard to come by, there is a powerful *a priori* case for transparency in monetary policy. Succinctly stated, it comes down to this: that making the central bank more transparent both enhances democratic accountability and improves the quality of monetary policy.

Democratic accountability has not traditionally ranked high on the priority lists of central bankers, and in some cases it still does not. Milton Friedman once opined that central bankers' main goals are "avoiding accountability on the one hand and achieving public prestige on the other."[6] While Friedman was being a bit polemical, he had a point. It is an attitude that I always found difficult to square with democratic theory, and one that, thank goodness, has changed dramatically in recent years. More and more central bankers, and the governments that oversee them, have come to understand, first, that democratic accountability is a natural corollary of central bank independence and, second, that accountability requires transparency. Let me take up these two points in turn.

First, central banks in democratic countries exist not by divine right, but by authority of the government and therefore, as Jefferson might have put it, by the consent of the governed. Normally, the central bank is created by an act of the legislature or parliament

and is accountable to it. The European Central Bank (ECB), by the way, is a notable exception to this rule. It was created by an international treaty, which is next-to-impossible to change, and it is not accountable to the government of any country. The ECB *is* required to report to the European Parliament, but it is in no sense a creature of that body—which in any case is hardly the seat of power in the European Union.

All this is very different in the United States. The Constitution assigned to Congress the power "to coin Money, [and] regulate the Value thereof," and Congress delegated this power to the Federal Reserve in 1913 by ordinary statute. It can therefore take the authority back any day it chooses. Indeed, while almost no one realizes it, Congress has the power to overrule any interest rate decision made by the FOMC by passing a statute that the President will sign. (It has, of course, never done so.)

By delegating authority over monetary policy to independent central bankers, elected officials grant them significant power over the economy and therefore over the lives and well-being of the populace. Certainly few institutions in the United States have as much unfettered freedom of action as the Fed. Why do legislatures and parliaments voluntarily relinquish such authority? Presumably because they realize that independent central bankers with long time horizons provide a bulwark against inflation in a way that elected politicians cannot. So, at what might be called (figuratively, not literally) the "constitutional stage," lawmakers delegate authority over monetary policy to an independent central bank.[7]

In return for this broad grant of nearly-unchecked authority, the central bank owes the legislature and the people a full and honest accounting of what it is up to and why. It

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[6] Quoted in Fischer (1990), p. 1181.

should also, in principle, be punishable for failure and, in some ultimate sense remain under political control. In the United States, the latter is accomplished primarily in two ways. Congress, not the Fed, sets the basic goals of monetary policy, albeit loosely, and appointments to the Federal Reserve Board are made by the President of the United States with the advice and consent of the Senate. The Fed is not a self-perpetuating oligarchy.[8]

Second, accountability requires transparency, including clarity about objectives. Interested parties cannot monitor the central bank's behavior if they cannot observe it. They cannot evaluate the quality of the bank's analysis and reasoning if that analysis and reasoning is not made available. And they cannot appraise the bank's success or failure if they do not know what it is trying to accomplish. I once suggested defining credibility as matching deeds to words.[9] Well, such a correspondence is impossible to establish if there are no "intelligible words and sentences" to be checked against the bank's actions.

I thus categorically reject the profoundly undemocratic view, which one nonetheless sometimes hears expressed, that transparency undermines central bank independence. The independence of the central bank should be protected not by secrecy, but rather by legal arrangements such as long terms of office for central bankers and statutory independence from political influence. Protections like that—plus the political will to make them stick—should enable central bankers to "take the heat" for even unpopular decisions to raise interest rates.

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[7] The case for central bank independence is explored at length in Blinder (1998, Chapter 3) and in many other places. I will not dwell on this subject here.

[8] However, the presidents of the 12 reserve banks are not political appointees. They are appointed by their respective boards of directors, with the approval of the Board of Governors in Washington.

[9] In Blinder (1998), p. 64.

So the logical chain seems to me unbreakable: An independent central bank in a democracy must be accountable and, to be accountable, a central bank must be transparent. We could perhaps stop the argument for transparency there, and ask for a directed verdict. But there is also a powerful economic case.

The Economic Case for Transparency

To begin at the beginning, I have long believed—contrary to what was once received central bank wisdom—that transparency enhances the efficacy of monetary policy rather than undermines it. The reason is simple. Central banks these days work their will by manipulating some very short-term interest rate—in the United States, the federal funds rate. But the funds rate is not an important price for any economic transactions of consequence; it merely clears the market in which reserves are lent overnight from one bank to another. The modern alchemy that transforms this dull lead into lustrous gold is that changes in the funds rate somehow influence the interest rates and asset prices that really matter, such as bank loan rates, corporate bond rates, home mortgage rates, stock prices, and exchange rates. But the gears connecting the funds rate to these more important interest rates and prices are sometimes quite loose. Tightening the gears would clearly make the effects of monetary policy on the economy more predictable, and should therefore make the central bank more effective as a macroeconomic stabilizer.

But those gears are lubricated by *expectations,* which are notoriously slippery. Take the long-term bond rate as a concrete example. While the Fed controls only the funds

rate, let's assume it would like to alter the 10-year bond rate.[10] According to the *expectations theory of the term structure*, the 10-year rate depends on the sequence of one-day rates that are *expected* to prevail on each of the next 3,650 days or so. Those rates, in turn, depend on *future* monetary policy—in fact, in principle, they depend *only* on future monetary policy.[11] Thus *most* of the bond market's *current* reaction to an FOMC decision should depend on how the market interprets the implications of that decision for future monetary policy. If an interest rate increase is expected to be quickly reversed, long rates should barely move. If, on the other hand, a rate hike engenders beliefs that further increases are on the way, and/or that they will be long-lived, bond rates should rise sharply.

From the central bank's point of view, it is critical to anticipate how the market will react to its decisions, because those reactions largely determine the ultimate effects of monetary policy on the economy. I can tell you that, in my experience as a central banker, guessing how the markets would react to an FOMC decision was among our most difficult tasks. I imagine that it is a bit easier today, however, because the Fed now makes much greater efforts to inform the markets and to condition market expectations of Federal Reserve policy.

As the Fed has offered a wider window into its thinking, and as the market's understanding of the Fed has improved and deepened, market participants have grown more skilled at anticipating what the Fed will do. For example, Poole, Rasche, and

[10] I am talking, of course, about *nominal* interest rates. In the long run, monetary policy may not be able to influence *real* interest rates much, if at all. But in the short run, observed changes in nominal rates—especially those at the short end of the yield curve—are probably mostly changes in real rates.
[11] This point is rarely noticed. Any long-term interest rate can be decomposed into a sequence of expected future one-day rates, plus a term premium. Those expected one-day rates should, in principle, be fully determined by future monetary policy. Any other influence on long-term rates, such as expected inflation or expected future budget deficits, presumably works its will through future monetary policy.

Thornton (2001, esp. pages 29-31) offer empirical evidence "that the market has been able to better forecast Fed actions" (including being able to forecast further into the future) since the Fed began announcing its decisions immediately in February 1994. In principle, that enhanced ability should make the monetary policy transmission mechanism both more reliable and faster-acting.

Notice that the relationship is wonderfully symbiotic and, I believe, causal. The Fed gets better at predicting the markets' reactions *because* the markets get better at predicting the Fed's policy decisions. And transparency—especially clear communication with the markets—is the key to the latter. As the markets' ability to predict the Fed's monetary policy decisions improves, the lag between changes in monetary policy and changes in long-term interest rates should shorten.

A parallel point can be made about the expectations of future inflation that presumably influence wage- and price-setting behavior. Monetary policy will be more effective at managing inflation if wage and price setters understand what the central bank is up to, and react accordingly.[12]

Lest these ideas seem banal, I hasten to point out that they run counter to what passed for received central bank wisdom not so very long ago. Secrecy, even mystery, was the byword, as the Brunner quotation suggested. As late as 1993—which is hardly the Middle Ages—the Federal Reserve did not even disclose its monetary-policy decisions at the time they were made. Instead of an official announcement, and markets were forced to guess what the FOMC had *probably* decided—which gave professional Fed-watchers a clear advantage over amateurs.

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[12] In many theoretical models, the expected rate of inflation will "jump" in response to credible central bank pronouncements. But I remain dubious about this as a characterization of reality.

In the bad old days, it was widely believed that central banks were supposed to catch markets "off guard" in order to manipulate them. And an important part of the canon was the dictum that a prudent central banker should never give *forward-looking* information. Well, the information that I have just characterized as *essential* is in fact forward-looking. How else can you influence expectations?

There are also more subtle ways in which greater transparency improves monetary policy. Consider this analogy. Most college teachers will tell you that you never truly master a subject until you teach it. There is something about the need to explain a complicated piece of analysis to a roomful of bright young people that concentrates the mind wonderfully. It helps—one might say, it forces—the teacher to notice and confront weak points in the reasoning, to resolve ambiguities, to bolster the arguments, and to understand better the arguments on the other side.

Similarly, a central bank that is forced to enunciate its goals, its basic strategy for achieving those goals, and the reasoning behind its specific decisions, all in ways that *external* observers can understand, will automatically and serendipitously impose a certain intellectual coherence on its own *internal* deliberations. For example, as Laurence Meyer (2001), who left the Federal Reserve Board early in 2001, opined, "the internal discussion of policy would be more coherent if policymakers agreed in advance on an inflation objective." I could not agree more.

Conversely, a central bank board that cannot elucidate a clear rationale for its decision might well wonder whether its thinking is cogent and its decision is the right one. Sound policy is explicable; muddled policy often is not.

Modern economists would also mention the virtue of deepening the central bank's commitment to its goals by stating those goals publicly—a kind of Ulysses-to-the-mast effect. Possibly for this reason, greater transparency should make it easier for a central bank to alter its short-term tactics, or even its medium-term strategy, without engendering the belief that it has abandoned its long-term goals.

Furthermore, virtually all central bankers prize credibility, and transparency is one straightforward way to achieve it. After all, how can you demonstrate that you are true to your words if the only words you utter are inscrutable? A survey I did of 84 central bank heads a few years ago found that the vast majority rated credibility "of the utmost importance" and all the rest rated it "quite important," on a five-point scale that also included as choices "moderately important," "of minor importance," and "unimportant."[13] When it came to appraising ways to create or to maintain credibility, the central bankers ranked transparency right in the middle of a list of seven methods.[14]

Last but not least, greater transparency should also enhance and deepen public and legislative understanding of monetary policy, something that any honest central bank should welcome.

Transparency About What?

The preceding arguments create a strong presumption in favor of disclosure. The burden of proof should always be on those who would withhold information; the "default option" should be revelation. But a burden of proof, as the lawyers will remind us, is only a rebuttable presumption. There are sometimes good reasons to insist on secrecy. For

[13] See Blinder (2000), p. 1422.

[14] The ones ranked higher were: having a history of living up to its words, central bank independence, and having a history of fighting inflation. The ones ranked lower were: fiscal discipline by the government, imposing constraints by a rule, and offering personal incentives for the central banker to keep inflation low.

example, central banks must respect the confidentiality of proprietary information provided to them by commercial banks, of communications from other central banks and governments, and so on. Furthermore, some information is not pertinent: Alan Greenspan need not reveal his favorite websites nor his golf score. The objective should be transparency, not voyeurism. What, then, should a central bank reveal?

The report mentioned earlier (Blinder *et al.*, 2001) lists three main categories of information: information about the central bank's *goals*, information about its *methods of analysis*, and information about its *decisionmaking processes*. Let's start with the goals of monetary policy, where full disclosure should be the almost-inviolable rule. For how can a central bank be held accountable if its goals are shrouded in mystery?

Transparency about goals

A central bank's long-term goals are typically set forth in legislation, though perhaps only vaguely. It is the vagueness that raises the main transparency issue. I will briefly consider three cases, starting with one that leaves no ambiguity.

Inflation-targeting central banks have a single goal—low inflation; and they are normally given precise numerical targets by their governments. There is nothing wishy-washy about the Bank of England's mandate, which is to achieve 2.5 percent inflation, as measured by the Retail Price Index excluding mortgage interest rates. But most inflation targeters operate with a target *range* rather than a target *point*, which may create a bit of ambiguity. Is a central bank with a 1-3 percent range perfectly content when its inflation rate is 2.9 percent, or does it want to nudge inflation down to 2 percent, the midpoint of its range? Most appear to aim for the midpoint, but they should say so. In general,

however, inflation-targeting central banks face an easy test when it comes to goal transparency. And they pass it with flying colors.

There is some disagreement over whether the ECB should be classified as an inflation targeter in this sense. (I think it should be.) The ECB does have a single goal, but that goal is expressed vaguely in the treaty: "to maintain price stability." In an important step toward greater transparency, the ECB decided right away to define its goal precisely: an inflation rate between zero and 2 percent, as measured by the "harmonized index of consumer prices." Since everyone who cares is aware of this numerical goal, it is a simple matter to hold the ECB accountable for achieving its inflation target—although a critic might, once again, wonder whether the ECB is really indifferent between an inflation rate of 0.1 percent and one of 1.9 percent.

Transparency poses a sterner test for the Federal Reserve and other central banks with multiple goals, especially when they are vaguely defined. The Federal Reserve Act directs the FOMC to pursue "maximum employment, stable prices, and moderate long-term interest rates." That complex legal mandate sets forth multiple goals and falls far short of providing concrete objectives for monetary policy.[15] What is meant by "maximum employment?" What measured inflation rate constitutes "stable prices," and by what price index? How is one goal to be traded off against another? The Fed has steadfastly refused to answer any of these questions, except in the vaguest terms. For example, using the Fed's current favorite price index, the deflator for core personal consumption expenditures (PCE), inflation averaged 1.6 percent over the four quarters just preceding my Okun Lectures. Was that above or below the Fed's long-run objective?

[15] Most economists would say that the mandate embodies two goals, not three, because price stability more or less guarantees "moderate long-term [nominal] interest rates."

No one outside the Fed knew then or knows now. In fact, opinions probably differed even *inside* the Fed because the FOMC has never quantified its inflation target—not even internally. I believe not only that it should do so, but also that it should announce the number publicly. (These are two different questions.)

Defining the employment target is trickier. The phrase "maximum employment" cannot be taken literally, given that the Fed also has a price stability objective. Driving the unemployment rate down to World War II levels, for example, would surely ignite inflation. One reasonable interpretation, and the one that seems to guide FOMC thinking, would define the employment goal as pushing the unemployment rate down to the natural rate (if there is one), but not lower—that is, achieving the highest level of employment consistent with constant (and presumably low) inflation. As Meyer (2001, p. 9) recently noted, turning that concept into a specific number that the FOMC would announce is difficult.[16] But "that does not rule out... being more transparent about their estimate of the unemployment rate that is consistent with maximum sustainable employment." I agree. The Fed's practice leaves much room for improvement.

Having said that, however, I should acknowledge that the distinction between an inflation-targeting central bank and one with multiple objectives like the Fed is not quite as sharp as I have suggested so far. As many advocates of inflation targeting have pointed out,[17] an inflation-targeter that is willing to approach its target *gradually* also has an implicit output stabilization objective, albeit a vague one (unless the speed of approach is stated publicly and numerically).

Transparency about methods

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[16] One reason: The unemployment is not the only factor relevant to whether inflation goes up or down.
[17] See, for example, Svensson (1997).

Questions also arise, and practices differ, over how much central banks should reveal about the analysis that presumably underpins their policy decisions, especially their forecasts and their models. As a broad generalization, I think it is fair to say that central banks have been reluctant to tell too much. But practices have been changing, and the current trend is clearly toward more disclosure--a trend that should be both applauded and continued, in my view. To avoid tedium, I will deal only with forecasts; but similar principles apply to transparency about models.

Everyone knows that macroeconomic forecasts are not terribly accurate. But everyone also knows that they are indispensable to monetary policymaking. Given the long lags, there is little choice but to act on the basis of a forecast, however fallible. So every central bank makes forecasts, generally quite frequently. The Federal Reserve staff prepares a complete, detailed forecast for every scheduled FOMC meeting—eight times a year. The question is: Should these forecasts be made public? By now you can guess that my answer is yes. The reasons are many, and three merit a brief mention.

First comes the basic presumption that all pertinent information should be disclosed unless there is a persuasive reason to withhold it. The bank's forecast is surely pertinent. Is there any good reason to keep it secret? I think not, other than the potential embarrassment when forecasts turn out to be wrong. But using inaccuracy as an excuse for secrecy is tantamount to denying that the central bank should be held accountable. Objection sustained.

A variant of this argument sounds better, at least superficially: A series of poor published forecasts might undermine the bank's credibility, and thereby hamper its ability to conduct policy. But markets are surely sophisticated enough to realize that

macroeconomic forecasts often miss the mark. Only a central bank whose forecasts were systematically worse than the consensus would lose credibility—and in that case, it should. In fact, however, Romer and Romer (2000) found that the Fed's staff forecasts were consistently *better* than private sector forecasts. So this argument backfires on defenders of the Fed's tradition of secrecy. Besides, knowing that the central bank acted on an erroneous forecast might sometimes help explain monetary policy decisions that otherwise look wrong-headed with the magnificent wisdom of hindsight.

A second reason to reveal the central bank's forecast harkens back to my earlier discussion of the virtues of conditioning market expectations. One simple way to get the markets thinking more like the Fed would be for the Fed to publish its forecasts of the economy. Were the Fed to do so, market participants who were trying to predict interest rates would quickly embrace the Fed's forecasts as far more relevant than their own. After all, the Fed (a) presumably acts on its own beliefs and (b) has at least some (albeit limited) power to make its forecasts come true.

A third, and related, reason is educational. The central bank can explain its actions to the public better if it uses its forecast as a backdrop. ("This is what we expected to happen, so this is what we did.") For example, when the Bank of England's "fan chart" shows that inflation will probably rise above 2.5 percent under unchanged monetary policy, that forecast establishes the predicate for higher interest rates.

One objection that central bankers occasionally raise is that the staff's forecast may not correspond to the beliefs of the actual decisionmakers.[18] My answer is: So what? A large committee (the FOMC has 19 members) cannot possibly agree on a detailed forecast, so it is of interest to see what the staff is telling it. More important in the U.S.

context, a large portion of every FOMC meeting is devoted to an "economy round," in which committee members state and explain how and why they agree or disagree with the staff forecast. Were this discussion summarized in the published minutes along with the staff forecast, they would together convey a quantum of useful information to interested observers.

So once again, my answer is unequivocal. A transparent central bank should reveal the broad contours of its internal (typically, staff) forecasts as often as they are made. Notice the phrase "broad contours." The Fed's Greenbook, for example, contains quarterly forecasts of literally scores of variables. But the market could not care less about the Fed's forecast of, say, multi-family housing starts in the fourth quarter of 2003, or the trade deficit in services in the first quarter of 2004. It wants to know what the Fed thinks about the likely evolution of real GDP, employment, the inflation rate, and a few other key variables.

However, transparency about the forecast does lead to one very difficult issue. Any macroeconomic forecast that stretches beyond a quarter or two must embody some assumptions about future monetary policy. That is understandably considered a rather delicate subject for a central bank to speculate about in public, although the Reserve Bank of New Zealand seems to manage it just fine. The monetary authorities appear to have three main options.

The most obvious one is to publish a forecast *conditional on no further changes in short-term interest rates*, even if the bank actually expects to be changing rates in the future. That is not only a clean solution, it is also likely to reveal the need for an adjustment of policy—and so need not be thought of as deceptive. However, neither is it

[18] See, for example, Ferguson (2002), p. 6.

100 percent honest. And assuming that short rates will remain constant can lead to inconsistent forecasts of, for example, long rates, since long-term interest rates presumably embody *the market's* expectations of future monetary policy changes—and those expectations will often include some expected changes in monetary policy.[19]

The opposite extreme is to adopt the RBNZs policy, which is to project its own behavior over the forecast horizon—subject, of course, to numerous provisos. This practice raises transparency to a level that few central bankers are comfortable with, and the RBNZ has no emulators that I know of. Nor is it really practical for most central banks at present, since hardly any of them make even tentative judgments about what their future monetary policy decisions will be.[20] One might argue that they *should* do so; indeed I have made that very argument.[21] But the fact is that they do not. At least for now, the almost-universal rule is: Let's take it one meeting at a time.

An intermediate option is to use market expectations of what the central bank is likely to do—which is, of course, precisely what private sector forecasters do all the time. Every major central bank can follow this procedure, if it wishes to, since there are objective financial market readings of what traders expect them to do. Well, almost. In truth, different markets do not always agree, and there is more than one "consensus forecast." Furthermore, the market's macroeconomic forecast may differ from the central bank's Alas, it's an imperfect world.

[19] In long-run forecasting, the assumption that *nominal* interest rates are constant while inflation is drifting up or down can also lead to dynamic instability as the real rate moves away from equilibrium. So a constant *real* rate assumption may be better.
[20] It is noteworthy that the RBNZ is one of the few central banks where decisionmaking still rests in the hands of a single individual, rather than a committee.
[21] See Blinder (1998), pp. 13-18.

A true transparency hawk like me might long for the day when more central banks will follow the lead of the "extremists" in New Zealand. But, in the meantime, I would be content to see the Fed and other central banks meet the *lowest* of these three transparency standards: publishing *staff* forecasts based on *unchanged* short-term interest rates as often as those forecasts are prepared. That alone would be a great leap forward. In fact, armed with such a forecast and knowledge of the central bank's goals and procedures, astute outside observers ought to be able to forecast future monetary policy decisions pretty well. No one would misinterpret the central bank's *assumption* of constant interest rates as a true *forecast* of its future behavior.

Transparency about decisions and decisionmaking

It may seem self-evident that a central bank should announce its monetary-policy decisions as soon as they are made—if for no other reason than to avoid giving professional central bank watchers an unfair advantage. But, as I noted earlier, the FOMC steadfastly refused to do even this until February 1994.

Reading the Fed's tortured defense of its indefensible position from today's perspective is a bit like reading medieval scholastic dogma. But it was less than 13 years ago that Chairman Alan Greenspan told a House committee that requiring the Fed to announce its interest-rate decisions immediately "would be ill-advised" and "could impede timely and appropriate adjustments to policy."[22] In answer to a subsequent written question submitted by a committee member, he explained why. His answer ran to three long and tortured paragraphs, which I will not bore you with here. But it included the astonishing (from a contemporary perspective) notion that the Fed might want to

[22] Greenspan (1989), pp. 49 and 50.

conceal its policy change in order to forestall "outsized market reactions"[23]—and this from a man who believes in the wisdom of markets and disapproves of the nanny state. The sentiment reminds me of the climatic line from the play *A Few Good Men* when the accused marine officer screams at the prosecuting attorney, "You can't handle the truth!"

Nowadays, of course, immediate announcements are no longer an issue at the Fed—nor anywhere else. Virtually all central banks make their decisions public right away. But there are sharp differences over how deeply outsiders are allowed to peer inside the decisionmaking process. Here are three representative examples, arranged from least to most transparent:

- The ECB maintains that all interest-rate decisions are made by consensus—presumably by unanimity—and that votes are never taken. But there are skeptics. Can deciding on a uniform monetary policy for 12 countries with disparate macroeconomic conditions really be that easy? Are there never dissenters on the other side? (Press reports in 2002 suggested that there sometimes are.) Nor does the ECB ever publish minutes that might teach outsiders something about the nature of the internal debate.

- The FOMC has long disclosed how each member voted, and recently began to do so immediately. But the statements that accompany each decision are extremely terse, sometimes cryptic, and reveal little about the arguments that were made at the meeting—or even about the ones that prevailed. Fortunately, the FOMC minutes, which are published 6-7 weeks later, do convey some sense of the arguments pro and con—though they could say a lot more. And the Fed stands virtually alone in publishing verbatim transcripts of its meetings five years later.[24]

[23] Greenspan (1989), p. 70.
[24] The Bank of Japan's new policy is to do so with a 10-year delay, but that has not started yet.

- The Bank of England is the most open of the three. Its Monetary Policy Committee (MPC) publishes detailed minutes that make the nature of the debate clear with only about a two-week delay.

By now, it will surprise no one to learn that I prefer the Bank of England's model. A monetary policy committee should not emulate the college of cardinals sending up smoke through chimneys. Nor are its meetings grand jury proceedings. After redacting any confidential material that may come up (which is a comparatively easy task), all the major substantive points raised in the discussion can be, and I believe should be, made public. Verbatim transcripts, however, go a step too far, in my view, as they are likely to limit frankness and everyday banter, prevent people from taking "devil's advocate" positions, and otherwise stifle debate. They tend to produce script-reading which satisfies the classic definition of a lecture: The process by which the notes of the professor are transferred to the notebook of the student, without passing through the mind of either.

The most difficult transparency issue within the realm of decisionmaking is essentially the same one we dealt with in the case of transparency about forecasts. Suppose the monetary policy committee, at a particular meeting, decides not only on *today's* monetary policy, but also makes a tentative plan—whether vague or specific—for *future* monetary policy. Should those tentative future plans be revealed to the public? On this question, too, there has been substantial evolution in mainstream central bank thinking in recent years.[25]

The traditional view held that a central bank should scrupulously avoid tipping its hand in any way. So, for example, until May 1999 the Federal Reserve kept the "bias" in its directive secret until after the *following* FOMC meeting—by which time it was

irrelevant. In part, this attitude was justifiable—after all, it could be misleading to "inform" markets about decisions that might never be taken—although one wonders, with Karl Brunner, whether this was the real justification for such secrecy.

In any case, an alternative view has gained the ascendancy in recent years. It holds that a central bank ought to tell markets, politicians, and the general public which way it is "leaning." The Fed has been doing this in a formal way since May 1999 with a "balance of risk" sentence stating whether the FOMC is more concerned with inflation or weakness in the economy going forward. The ECB has been doing almost the same thing, albeit a bit less formally, at the president's press conferences which generally follow meetings of the Governing Council. Even where there is no explicit "bias" announcement, revealing the monetary policy committee's vote may carry a strong hint about where interest rates might head in the future. A 5-4 vote on the Bank of England's MPC, for example, conveys rather different information than a 9-0 vote.

Is it possible—and advisable—to go even further? As mentioned earlier, the Reserve Bank of New Zealand is the only central bank that does. Since June 1997, it has published a *contingent* three-year plan for future monetary policy. The RBNZ emphasizes that policy settings for the future are merely "projected"—and conditional on evolving circumstances. Should other central banks follow New Zealand's lead and offer more explicit guidance about the likely path of future short-term interest rates? There are coherent arguments on both sides.

On the one hand, I have argued repeatedly in this paper that the monetary authorities should reveal as much as possible and keep market participants well informed. Such arguments apply to future as well as to present monetary policy. Indeed, when we speak

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[25] The rest of this section is adapted from Blinder at el., (2001), pp. 37-38.

of conditioning market expectations, it is largely expectations about *future* monetary policy that we have in mind. Announcing the bias in the central bank's current policy stance, and explaining the concerns that led to that bias (as the Federal Reserve does in part), is one way to pursue this objective. But announcing the bank's current beliefs about what future monetary policy might be, provided things evolve according to the forecast (as the RBNZ does), would give the market even more relevant information. The pure logic of transparency surely pushes us in this direction.

But there are also some practical arguments on the other side. Most important is the point I made earlier: We cannot ask central banks to reveal information they do not have; and, for better or worse, almost none of them currently formulate contingent plans for future monetary policy—not even for internal use. Even if the central bank does formulate such plans, it is all but certain that the future will not unfold as anticipated, and central bankers do not relish changing their minds in public. Documented errors in forecasting would, after all, undermine the doctrine of central bank infallibility! More important (and more seriously), the monetary policy that is actually followed in the future will almost certainly differ from the announced (contingent) future policy path. So defenders of the *status quo* can argue that announcing a tentative future path does not actually convey much useful information. (I disagree.)

Perhaps the best a central bank can do is to "teach" the market its way of thinking. Then market participants can process incoming data in more or less the same way as the central bank does, and adjust their own forecasts of monetary policy accordingly. As suggested earlier, a forecast that inflation will rise if nominal interest rates are held constant may "look and feel" like an implicit forecast that the bank will have to raise

rates before too long. And that belief will presumably get embodied in long-term interest rates.

Delivering the Message: Methods of Communication

Once a central bank has decided *what* information it will reveal, it must next figure out *how* best to do so. There are five main vehicles for delivering information to the public, and most of them have already been mentioned: the statements that accompany policy decisions, the so-called "bias" announcements, the minutes of committee meetings, official tabulations of votes, and testimony and speeches by members of the monetary policy committee (MPC). The most appropriate mix of these various modes of communication depends sensitively on the institutional setting—especially on how monetary policy decisions are reached. So I need a typology first.[26]

At some central banks, such as the Reserve Bank of New Zealand and, for the most part, the Bank of Canada, decisionmaking authority still rests with a single individual, the governor.[27] But, increasingly, individual decisionmakers are giving way to committees. Here a further distinction is necessary.

Some monetary policy committees, such as the Fed's FOMC and the ECB's Governing Council, might be called "collegial"—meaning that they strive to reach decisions by consensus, with or without a formal vote. Individual members are expected to fall in line behind the group's decision, and accountability resides in the group. But other MPCs, such as the Bank of England's and the Swedish Riskbank's, are much more "individualistic"—meaning that members are expected to express, and presumably vote

[26] The following distinction and the nomenclature come from Blinder et al. (2001), especially Chapter 4.

for, their own preferred policy choice, much like justices of the U.S. Supreme Court do. And much like the justices, each individual is held accountable for his or her own vote.

Reasons for the observed shift from individual to group decisionmaking at central banks, and the relative merits of reaching decisions in each of these three ways, are fascinating questions themselves.[28] But for now, let's focus on a narrower question: How should information be conveyed under each of the three systems?

The case of an individual decisionmaker is the simplest. Since there is no committee meeting, there are clearly no minutes nor any vote to report. This places the burden of explaining the central bank's thinking squarely on the statement that accompanies each policy announcement. These statements should therefore be coherent, well-reasoned, and sufficiently detailed to explain why the governor decided as he did. If the central bank maintains a "bias" going forward, that too should be revealed in the statement. All this can and should be amplified in subsequent testimony and speeches. Pretty simple—though, as Brunner noted, not an integral part of longstanding central banking tradition.

With decisionmaking by committee, the communication task becomes immensely more complicated, for many reasons. But the principal issue can be stated as a simpe question: How do you handle disagreements within the committee?

In a truly collegial committee, which is roughly the system in the EU and perhaps in the US,[29] there is some justification for submerging differences, at least in public. After all, the group's decision is supposed to have emerged from some mythical "collective mind" after a careful weighing of the various pros and cons. In principle, if not in fact,

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[27] The Bank of Canada has a small committee, but it consists of the governor and his two top deputies, and it has no statutory authority.
[28] These issues are the subject of the second Okun Lecture.

everyone on the committee shares ownership of the decision, and the committee should therefore be able to speak with one voice—at least to outsiders.

On the other hand, when monetary policy decisions are made by an individualistic committee, differences of opinion are an essential component of transparency. Different viewpoints and even multiple voices are welcome because they help to reveal the underlying reality. As such, they are more likely to enlighten than to confuse outside observers.

Thus, for example, announcing the vote after each policy meeting is an essential aspect of transparency in an individualistic committee like those of the Bank of England and Sweden's Riksbank. In such cases, the numerical vote is likely to be a useful indicator of how the central bank is balancing the competing considerations. But in collegial settings like that of the ECB's Governing Council, it may be justifiable to suppress the vote—or at least to suppress the names of individual voters--in the interest of maintaining group harmony.[30]

The Fed is a hybrid in this respect. These days it reports each vote immediately, naming names. But the vote does not always reflect the true preferences of committee members because of a longstanding tradition that a member of the FOMC should vote to support the chairman's recommendation unless he or she disagrees with it very strongly. Tellingly, votes against the majority position are called "dissents," and they are relatively rare.[31]

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[29] *De jure,* the FOMC makes decisions by majority vote. *De facto*, however, one can argue that the dominance of Alan Greenspan is so great that monetary policy is, in effect, made by a single person.

[30] As mentioned, the ECB denies that it even takes votes. It can be argued that moving beyond a statement of the numerical vote, to identifying the votes of each member, might subject committee members to political pressure.

[31] They have been particularly rare on the Greenspan Fed. Over the two full years 2000-2001, for example, covering 19 FOMC meetings (including three teleconferences), there were only three recorded dissents.

Next, after votes, comes the statement accompanying each policy decision. I believe there should always be one, even then the decision is to leave interest rates unchanged. Announcing your interest rate decision without giving any supporting reasons suggests an imperious attitude that, while possibly appropriate for emperors, is certainly inappropriate for public servants in a democratic society. The Fed took a long time to come around to the view that "no change" is a decision just like any other—a view I tried unsuccessfully to promote while I was the Fed's Vice Chairman--but it now issues a short statement on such occasions. The Bank of England normally does not, however.

How much needs to be said immediately in the statement versus later in the minutes probably differs between collegial and individualistic committees. A collegial committee should be prepared to issue a substantive statement explaining its reasoning in "intelligible words and sentences" as soon as its policy decision is announced, which should be shortly after the meeting ends. When I was on the FOMC, it was often argued that it could take hours to get 19 people to agree on a statement—and this argument is still heard today. But a skillful chairman can walk into a room with a draft of the statement in hand, and then modify it as necessary (probably only slightly) to reflect the sense of the meeting. So I see this objection as more of an excuse than a serious barrier.

Important aspects of the central bank's reasoning and arguments that are *not* disclosed in the immediate statement should be disclosed in the subsequent minutes. If a collegial committee releases a statement with real substantive content after each meeting, then the detailed minutes—which come out much later—may not be of much interest to market participants. Indeed, even the very sparse press statements provided after each FOMC meeting seem to convey enough information that release of the detailed minutes 6-7

weeks later (just after the *next* meeting) normally elicits very little press coverage and negligible market reaction. Nonetheless, I think the FOMC minutes could and should be made more readable and useful.

The situation is quite different with an individualistic committee, however. Meetings of the Bank of England's MPC often end with no consensus on either the decision itself (which is taken by majority vote) or the reasons behind it. Reportedly, meetings are often free-wheeling affairs, quite unlike the FOMC's staid and ultra-polite conclaves. At the end of such a debate, it may be difficult to draft a meaningful statement to accompany the announcement; so the BoE rarely does so. I think they need to try harder; after all, the Bank of Japan manages to do it. But regardless, the primary vehicle for disclosure by an individualistic committee will probably be the minutes, which should therefore be published as soon as possible. These days, that happens after about a two-week delay at the Bank of England; and there is evidence that the markets react (at least slightly) to publication of the minutes.[32]

At some, but not all, central banks, either the immediate statement or the subsequent minutes state the bank's "bias" or its perception of the "balance of risks" going forward. This recent innovation flies in the face of the age-old dogma that central banks should never give forward-looking information about monetary policy. It is also a big improvement. As I have noted previously, providing such information is an excellent way to condition market expectations, which is a primary purpose of transparency.

[32] See Clare and Courtenay (2001). It should be noted that the MPCs votes are reported in the minutes. It could be that the market reaction is just to the numerical vote, not to the words.

The Special Case of Inflation Targeting

Inflation targeting is typically practiced with a high degree of transparency. Inflation-targeting central banks normally announce their numerical inflation target, publish explicit inflation forecasts, and issue lengthy "inflation reports" with much analysis and supporting detail. Indeed, proponents of inflation targeting often cite its extreme transparency as one of its most distinctive features and primary virtues. For example, Bernanke, Laubach, Mishkin, and Posen (1999, p. 10) write that, in their view, the "most essential" rationale for inflation targeting is that it "helps policy-makers to communicate their intentions to the public and to impose some degree of accountability and discipline on the central bank."

In this regard, a recent attempt to rank nine central banks from highest to lowest in terms of transparency seems to reach a surprising conclusion. The authors claim to find "remarkable variation in overall transparency among central banks that have adopted inflation targeting."[33] However, of the nine central banks they study, five are explicit inflation targeters (the Reserve Bank of Australia, the Bank of Canada, the Reserve Bank of New Zealand, the Swedish Riksbank, and the Bank of England); and four of these five rank among the top five in transparency.[34] That's a pretty good correlation. And knowing the histories of each bank, the correlation is no accident. Both commitment to a specific inflation target and a quantum leap in transparency were parts of an institutional design package intended to build credibility very rapidly.

[33] See Eijffinger and Geraats (2002), p. 20.
[34] The other central banks studied were the Fed, the ECB, the Bank of Japan, and the Swiss National Bank.

But is greater transparency, in and of itself, a sufficient reason to adopt inflation targeting? Despite the high value I place on openness and communication, I am not personally convinced. I fear that, in the U.S. context at least, a switch to inflation targeting would automatically downgrade the importance of the Fed's employment (or output stabilization) goal. Indeed, how else could such a rewrite of the Federal Reserve Act be interpreted?[35] I have long applauded the Fed's distinctive dual mandate and admired Alan Greenspan's skillful use of it. Both have stood the country in good stead. The starkly different legal mandates of the ECB and the Fed have, I believe, allowed Greenspan to gamble on growth in a way that the more cautious ECB (and the Bundesbank before that) was unwilling to do. This is one, though not the only, reason why the U.S. outperformed Europe in the 1990s.[36]

Supporters of inflation targeting will object to my objection, on several grounds. They will insist that I exaggerate the difference between *flexible* inflation targeting and the Fed's dual mandate, because flexible inflation targeting does not imply that the central bank has no concerns about short-run employment.[37] Instead, they will say, the stance of monetary policy should be truly symmetrical—equally opposed to inflation that is too low as to inflation that is too high. They might also point out that competent inflation targeting provides a natural safeguard against settling for an unemployment rate that is too high, say, because economists overestimate the natural rate. Even if no one knows

[35] In principle, the Fed could make the switch with no change in its legal mandate. But I believe that the Fed would seek legislative authority for such a major change.
[36] For more on this issue, see Blinder and Yellen (2001).
[37] See, for example, Svensson (1997). In truth, however, the concerns about employment are typically unstated and often hidden—a clear violation of transparency.

what the natural rate of unemployment is, inflation should be falling as long as unemployment remains above it—thereby signaling the central bank to ease.[38]

This is all true. But optics matter in the real world of policy. I doubt that the Fed would have permitted such vigorous growth in the 1990s if its mandate had been, say, to bring inflation down to 1 or 2 percent—period. In a world of low inflation, I also worry that inflation targeters will not be as adept at fighting *de*flation as they are at fighting *in*flation.[39] Once inflation is allowed to dip into (or near) negative territory, monetary stimulus loses much of its punch because of the zero lower bound on nominal interest rates.[40] That is one reason why missing a 1-percent inflation target by two percentage points on the low side is, in my view, worse than missing by two percentage points on the high side.

And last, but certainly not least, we should not forget the first principle of institutional conservatism: If it ain't broke, don't fix it. It would take a great deal to convince me that U.S. monetary policy since 1979—that's 24 years, under two different Fed chairmen—would have been better if only we had instituted inflation targeting back then and stuck with it through thick and thin. On the other hand, one might legitimately argue that a time span in which Alan Greenspan succeeds Paul Volcker at the helm is a bit like the New York Yankees' good fortune in being able to replace Joe DiMaggio with Mickey Mantle in centerfield. You cannot expect to do that consistently. (And the Yankees did not.)

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[38] See Orphanides (2000).

[39] In this context, price-level targeting may have an advantage over inflation targeting. See, for example, Wolman (1998) or Svensson (1999).

[40] The inflation targeters' reply is that deflation will never occur with proper application of inflation targeting and a target safely above zero.

The moving finger writes, and having writ, moves on

Central bank transparency is a moving target. The bad news is that the Federal Reserve is not nearly as open and communicative as it should be--it is far from the vanguard in terms of transparency.[41] What is left on the Fed's transparency agenda? Quite a lot, I would say. Ultimate targets should be decided upon and enunciated more clearly; forecasts should be published; statements should be longer and less cryptic; minutes should be clearer and more descriptive.

But the good news is that, like many other central banks, the Fed is moving unmistakably in the right direction.[42] While the worldwide migration of central banks toward greater transparency has been gradual, cumulatively it constitutes a near-revolution in central bank thinking and practice. In a real sense, the world that Karl Brunner plaintively described in 1981 no longer exists. And almost all of the progress has taken place in the last decade or so.

I will be so bold—or so foolish, take your pick—as to conclude this paper with a prediction. It is this: The unmistakable movement of the world's central banks in the direction of more, and more honest, communication is both irreversible and unstoppable. Once a step toward greater transparency is taken, it is well nigh impossible to step back in the other direction—which may be why foes of transparency occasionally dig in their heels so deeply to preserve the *status quo*.

But such rear-guard actions are doomed to failure. Opening the door to greater transparency is a bit like opening Pandora's box—but only in the sense that you cannot get it closed again. The nice thing is that central banks almost never want to. The

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[41] Eijffinger and Geraats (2002) rank the Fed (tied for) fifth out of nine major central banks.

experience in one country after another shows that each experiment with an aspect of transparency previously thought "unthinkable" quickly leaves central bankers wondering why they had not taken the step sooner. Here at least, there appears to be no conflict between theory and practice. Transparency works wonderfully well in both domains.

[42] For a comprehensive list of changes at the Fed in the direction of greater transparency, see Blinder *et al.* (2001), Section 5.1 or Poole *et al.* (2001).

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