Forecasting is an appealing activity that in agriculture is not only useful but inescapable. Anticipation of the future is implicit in the biology of plants and animals, not to mention the durability of tractors and cowbarns.

In a sense the scientific method is itself predictive. Relationships established from observation are expected, within tolerable error, to yield predictable outcomes upon replication of conditions.

Yet the idea of foreseeing the future has never lost the mystical touch, the Merlin image. As one reason, chance events are known to imperil the best tooled forecasts. A second cause for an aura of the occult is the irresponsibility so often exhibited by practitioners.

All this is canon. I suggest a more metaphysical treatment, opening up the issue of determinacy. If economic trends are something more than a roll of the dice a substantial degree of determinism is presupposed. Our collective future is judged not to be whimsical, but the outcome of forces that can be identified and measured with acceptable objectivity, and that may also be subject to management.

As always, those forces divide into the physical that by their nature are outside human control, and those subject to the will of mankind. The latter, carried to the ultimate, let us declare in a display of rodomontade that the future is what we individually and collectively make it. How valid is that declaration? How much vainboasting?

To pose the same issue in other phrasing, to what extent are physical data predictive of our future? To what degree will human behavior be in control; and is it predictable? What indeed is the metaphysics of determinacy?

The issue has captivated philosophers for ages and will not be dwelt on here. I turn to a more empirical judgment. In my observation, economists have not set a very good record of prediction. Otto Doering calls agricultural economists' record "unenviable." We could easily tick off several events of recent decades that were at best foreseen imperfectly.

Moreover, the current state of economic wisdom is not reassuring. Not since a comparable time in our economic history, namely, the beginning of the depression of the 1930s, have economists been in such disarray and disrepute. At the 1979 Extension Policy Conference I called attention to problems in economists' current credibility. Former Treasury Secretary Michael Blumenthal rebukes, "I really think the economics profession is close to bankruptcy in understanding the present situation" [Breimyer, Sept. 1979]. More recently I cited how Keynesians have been replaced by a mix of "monetarists, classical fundamentalists, radical economists, Post-Keynesians, institutionalists, and neo-Marxists" [Breimyer, 1980].

The March of History

Taking advantage of my long involvement in programs I turn to a brief historical sketch. One useful axis is macro versus micro; more exactly stated, this involves whether general or macroeconomic policies are primarily relied on to influence the welfare of agriculture, or whether policies are to be more agriculture-specific. Broadly, during the 1800s the thrust was macro. Lands were
opened up and canals and railroads extended to them, and research and education were given growing support. In the opening decades of the 1900s marketing programs came into being. They were more micro. But the first intense pressure for programs tailored to farmers came with the severe price break of 1920-21. The conservative response was to deny all entreaties except formation of cooperatives. Even support for cooperatives was partly pro forma. A student of mine who recently dug into the legislative history of the Capper-Volstead Act found that few sponsors expected cooperatives to generate much power. Although the precautionary Section 2 (against undue price enhancement) was added to the Act it was seen as only a gesture, unnecessary and harmless.

The doldrums of the 1920s brought the first true advocacy for farm relief (the term of the times). It was the McNary-Haugen plan. The plan was not enacted, but the Federal Farm Board, partly a conciliatory concession, became the first major agriculture-specific program.

It is popularly supposed that the New Deal period brought a deluge of federal programs that not only aided agriculture without regard for the rest of the economy, but enabled each commodity to feather its own nest. The impression is not really faulty but neither is it truly correct. The 1930s also brought the first awakening of interest in aggregate demand. Among many agricultural economists of the time the rationale was that commodity programs might be a necessary stop-gap but the real hope was for revived industrial prosperity that would put purchasing power in the hands of consumers. The apogee of this faith was the Hope-Flannagan Act enacted just after World War II. Agricultural marketing as made efficient by research would enable farm abundance to move to consumption at remunerative prices.

A majority of postwar agricultural economists embraced Keynesian concepts. I remember vividly the meeting of the American Farm Economic Association (its name at the time) at Pennsylvania State University in 1954. After Dean Lyman Jackson titillated the crowd with his parody on Lazy Fair (an indolent blond whom all classical economists admire), speaker after speaker purred assurances that “fiscal and monetary policy” would keep the economy on an even keel and agriculture need only trim the edges of its own slightly ragged affairs. I was an apostate then, and today I do not subscribe to either the budget-balancing fiscal faith or the monetarist theology.

During the 1960s, I suggest, agricultural policy was pretty pedestrian. But in the decade of the 1970s all agriculture became aware once again of the imperiousness of general economic forces. The catchword for the decade is inflation but this is a vehicle for various disequilibria including those in raw material supply, balance of trade and payments, dollar exchange rates — the list is long.

It would be a monstrous error to say that all eyes now turn to macro considerations and agriculture is left to fend for itself. I do allege that macroeconomic issues have moved into the spotlight once more. They dominate the economy including the agricultural portion. They ought to preempt our thinking. I have told many audiences that farmers’ principal concerns in our time are the general economic issues capsulized in inflation, energy, and depleting raw materials. Not since the Great Depression of the 1930s have general issues so clearly been in the forefront.

Major Macroeconomic Issues

The overriding macro datum in looking ahead, as everyone knows, is the slowdown in economic growth and the pesky persistence of general price inflation. On this I put myself squarely on record. The chances of resuming steady growth and of arresting inflation are nil. This summary judgment divides any audience but I believe the evidence to be supportive.

To return to my opening queries, do physical data or human incapacity underlie this outlook? Are prospects predetermined?
In the short run it's largely a question of human resilience. This is where my skepticism begins. Human beings are highly habituated, and their institutions tend to be inflexible.

One quirk illustrates. We make ourselves victims not only of addictions in style of working and living but also of our statistics. Our economic future will appear especially gloomy if we persist in our present method of measurement. If we continue to measure national productivity in terms of gross volume of physical output — big cars, big houses, big personal wardrobes — we are certain to show negative achievement. For my part I drive a small car, am discarding more household effects than I buy, and am traveling less while attending more symphony concerts in my home city. I am living better but doing damage to the GNP.

Still in the context of human short-run determinism, I remind of the discouraging drift to social disunity under stress. This seems to be innate in the human psyche. Most citizens acknowledge an obligation to contribute to macro stability but their hearts are macro. My favorite contemporary citation is Kevin Phillips’ “The Balkanization of America.” Phillips philosophizes that under stress citizens’ “loyalties narrow,” and eventually “society itself dissolves.” Phillips senses that unless the trend toward social decomposition in our country ends soon, “it bespeaks a fundamental reversal in the American experience.”

And so it is that although the overriding considerations are macro the obsession is with micro shielding. In economic affairs we see a new surge of indexing as a means of protecting against the thievery of a rising general price level. (But I ask, if most prices and incomes are indexed, what indeed is a “general price level”?)

Agriculture wants to index too. Agriculture is one of the original indexers. George Peek and Hugh Johnson taught the principle during the 1920s. They called it parity. If the parity idea faded for a while it never passed from view and is now being revived. Parity is an analog to indexing of Social Security and Civil Service annuitants’ payments, similar indexing of wage contracts, and what the late Arthur Okun called the invisible handshake (tacit or informal CPI adjustments).

The Food and Agriculture Act of 1977 presents a double standard for indexing. The parity formula is employed to set boundaries to loan rates for grains and cotton, and to establish a firm support level for manufacturing milk. Target prices are arrived at differently. For them, dollars and cents figures are specified in the law and are to be adjusted annually according to changes in cost of production.

A fundamental flaw in indexing for protection of farmers’ interests is stock-in-trade to agricultural economists: the more facile the indexing, the more are adjustments in farming practices impeded. To be sure, diverging rates of increase in various input prices induce some substitution among them. But even so, heroic efforts at indexing would go far to shelter the agricultural economy from forces that in the longer run must be responded to.

Two other facets come to mind relative to micro-macro confrontation in farm policy making during inflation. The first is a question. Will economic pressures be great enough to force a major reconsideration of the basic principles of farm policy?

I have in mind the ambiguity in objectives that has marked farm policy for countless years. To what extent is the object to achieve stabilization in commodity markets, versus to what extent is it the wish of Congress to defend farmers’ incomes? More and more, commodity price support and storage programs have served only the former objective. Although many farmers grouse, no pretense is offered that support prices, except perhaps for milk and some tobaccos, assure farmers an acceptable income.

Farm laws almost invariably name protection of farmers’ income as one of their goals. The term “parity of income” is sometimes written in. In current law the primary income-bolstering device is direct deficiency
payments made by the U.S. Treasury. The size of those payments is calculated as so many cents per quantity unit, a formula yielding almost no income redistributional effects. Yet we know that net incomes to farmers show an extremely skewed distribution.

The point I am leading to is that it may prove neither desirable nor practical to protect farmers against all inflationary pressures. If heroic efforts to do so should be abandoned, yet concern should continue to be expressed for the level of farmers' income, I suggest that issues in income distribution within agriculture could not be disregarded. They might be explosive.

I add quickly, however, that this issue could be mitigated or dispelled by a second consideration or facet which is the opposite side of the income-criterion coin. If we have trouble with income goals that are lavishly advertised and rarely specified, in recent years even worse problems have arisen in determining what constitutes income. I have in mind not farm-versus-nonfarm sources of current income flow but the very sizable component of asset appreciation in total returns to farming. This topic has been exposed widely the last year or two. A session I chaired at the 1979 joint meeting of the WAEA and AAEA offered good papers by Melichar, Robert and Edward Reinsel, and Plaxico, with discussions by McConnen and Harris. They are published in the 1979 Proceedings issue of the American Journal of Agricultural Economics. Plaxico and Kletke had previously commented on unrealized farmland capital gains in an article in the May 1979 issue of the same Journal, and in May 1980 they took on a couple of challengers. It is not necessary to review all the conceptual and analytical complications. My only comment is that sizable capital gains, made even more attractive by favorable tax treatment and accruing in doses of many billions of dollars annually even as farmers struggle with cash flow, complicate enormously any conceptualization of farm policy as a defense of farmers' income.

Supply Management

During many years, methods of production control dominated discussion of farm policy. They no longer do so. My judgment is that persistent, chronic overproduction, absent from the U.S. scene for a decade, will remain absent. To be sure, annual crop harvests will jump about like an errant yo-yo, and any successive two years of bounty will bring new cries from farmers that they are being victimized by sorcerer's-apprentice production. A year or two of lean harvests here or abroad will temporarily dispel their fears. And if biomass should catch on, the picture could change radically. I will touch on this possibility below.

The Resources to Agriculture

Not the outflow of farm products but the terms of access to productive resources will dominate farm policy in the future, according to my recently repaired crystal ball. Couched as a general proposition, this forecast will hardly be disputed. The particulars may be more in question. This is of course a longer term consideration. It is axiomatic that longer term issues deserve our most serious attention, even as we seem to expend our energies wrestling with shorter term ones.

High agricultural productivity since World War II has been built largely on inexpensive inputs of industrial origin, particularly energy. As an extender of land's productivity they constitute a substitute for it. In an article updating my original three-economies analysis I pointed out that postwar trends are being reversed, at least in part. An outcome is to throw a much heavier burden on farmland as the basic resource of agriculture [Breimyer, 1978]. It is conceivable that some magic new technology invented or stumbled upon will relieve us of the need to adjust to more costly energy. Nothing of that nature is in sight.

What this amounts to is that the economics of land, which since Ricardo has been the foundation stone to the economics of agriculture, will loom important once again and
perhaps ominous too. I add quickly the economics of water, especially critical in the West. The simplest conclusion to be drawn is that sometime in the future American citizens will decide to preserve the land they have. They will effectively restrain loss of prime farmland; and somehow or other they will insist on better protection — conservation — of the land now in use. The formula for dividing cost between landowners and the public is impossible to predict, but I doubt farmers will be paid for every conserving practice they ought to be employing voluntarily. When subsidy becomes too costly, mandate comes in.

But these are not the most engaging aspects of the question. I prefer to treat three others, all touchy. The first is water. Coming from the East where water is self-delivered I am not at home with all policy issues. I am struck, though, by the turmoil generated by any proposal to change the terms of public subsidy of irrigation water. To return to the metaphysics of my topic, I suggest that receipt of subsidized water once continued a few years converts into a property right. Call it the Breimyer rule: any public dispensation lasting seven unbroken years becomes property. It then is defended with all the weapons privileged classes have employed throughout history.

Number two among side issues is the economics of taxation as the land base becomes scarcer and more costly and the factor return to land (rent) looms relatively larger. At the 1979 annual meeting of the Southern Agricultural Economics Association I treated the topic in these terms:

...Taxes on real property are a unique social instrument....Taxes proportionate to the earning power of land in its highest and best use...reclaim for society some of the unearned income (rent) society itself generates, and they guide the land into that category of use.

Resentment at rising real estate taxes amounts to an attempt to deny, to thwart, the effect of increasing pressure of population on a fixed land base. For taxpayers, relief through lowered taxes is effective only for one generation. A reduction in rates becomes capitalized into an even higher price for the property....

Manifestly, in agriculture today the situation is complicated by an inflationary appreciation that lifts land values above their productivity and current earning power. Their new level anticipates — capitalizes — further appreciation. What tax policy is sound under those circumstances?...If we really believe in the sanctity of a market system we will accept appraisal at market value....

...the pressure is on to assess farmland at its current earning power and thus neglect its capital-gain-producing capacity...[Breimyer, July 1979].

I then raised questions as to what intensity of land use is to be assumed when current earning power is to be estimated for tax purposes.

My third side issue is one that I have publicized for decades. It captured the attention of Secretary of Agriculture Bob Bergland last year. It is anathema in parts of the West. It is, naturally, the organizational structure of agriculture. In the present ideological climate the likelihood of any effective policy to restrain replacement of traditional family farming is virtually zero. My most poignant personal regret is the perpetuation of the deceit that present policies are structurally neutral. Any notion that structural changes now underway are manifestations of some sort of natural economic forces is patent, viciously false. The truth is the exact opposite. Economists prate about economy of scale but the biggest payoff to scale is political, not economic. Present policy militates clearly toward a large unit agriculture that eventually will be class stratified.

The Biomass Issue

Finally, the biomass issue. In the Midwest this past year the possibility of producing industrial energy from biological materials was the hottest item on Extension’s hot stove...
circuit. It appeals. It can be defended on several grounds. Metaphysically, human beings somehow sense that they were put on planet Earth with sufficient resources for their collective survival. The great flow resource is energy from the sun. Only a minute portion of that reaching Earth is now utilized. Surely we can do better. Mankind has harnessed solar energy primarily as food, clothing, and wood for fuel and shelter. The idea of more ingenious utilization has not only great appeal but some validity.

The instant origin of interest in biomass is imminent exhaustion of fossil fuels. Fear of political cutoff of oil shipments from the Near East gives that interest even more immediacy.

But I suggest a third ingredient. Midwestern farmers got most excited this past year about producing fuel on farms. This traces in part to the agrarian handyman tradition. Monoculture threatens to rob farmers of need for versatility, particularly of manual skills, in which they have historically taken so much pride. The idea that a farmer can rig some copper tubes, build a fire under them, and then power a tractor, excites like a page out of Popular Mechanics.

My guesses are conventional. Somehow I feel that biomass offers promise. Converting corn to ethanol for mixing with gasoline does not appear to be the long run solution. Wholly new kinds of germplasm may come on the scene. I join most scientists on our campus in dating massive recourse to biomass as more likely in the next century than the present one.

Insofar as the biomass principle is sound, the significance to agriculture becomes enormous. My guess is that pressure to maximize productivity of land would be so intense as to force major changes. More obvious outcomes would be a virtual end to grain feeding of livestock and perhaps of poultry, and cultivation of vast acreages that now are idle or utilized extensively or even frivolously. One’s imagination can run riot. What will Jack Nicklaus’s golf score be when all fairways are steep? (Level land will be denied to golf courses.) Erodable lands brought into cultivation will require Chinese-style terracing. The political aspects invite such unsettling questions as whether the United States, once it finds it can produce bio-hydrocarbons for fuel, will assume any further obligation to supply food to foreign countries.

But the bigger jolt will be to our institutions of the land. The short phrase is that we will socialize land. Land can be treated as a fungible good akin to a slaughter hog, building block, or Sunday suit only when it is not alarmingly scarce. Biomass in large volume would make it scarce indeed.

For that matter, to return to metaphysical speculation, I could suspect that anything close to an open market economy where value and price are arrived at incidental to exchange of title to goods is feasible only in circumstances where marginal human effort yields substantial marginal return. I am not prophesying doomsday but I propose most seriously that we are already on the threshold of a stage in our national economic history where the conventions of old are under strain and in particular where the instruments of trade known as money are increasingly becoming fiat. The process is popularly known as inflation.

I opened this paper by asking about the cleverness of human beings in giving determinacy to their economic future. My speculative comments surely imply a considerable doubt that they do so rationally and prudently. Those reservations are accentuated by the prospect that in the face of longer run pressures that could readily transform the agricultural economy, almost all the debates in the next twelve months will be confined to the extent to which a farm law of 1981 will give indexed protection to farmers against the ravages of inflation. Rome may be about to ignite but we will fiddle; or, my preferred analogy, the alien hordes may approach from the horizon but we, like Archimedes, will be drawing parallelograms in the sand.
References


