VISION

Think Process, Not Ideology

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In his recent book, *Law's Order,* David Friedman, a professor of law at Santa Clara University, reviews a long list of legal matters ranging across fields as diverse as pollution control, contract law, marriage agreements, and criminal law. His observations focus on the contribution that economic principles can make to understanding those subjects, but underlying the observations is a sense that all is not well with the system. The consequences stemming from court decisions and the enactment of statutes have often differed widely from those intended and, indeed, may well have worsened the conditions they were meant to ameliorate. In light of Friedman's libertarian bent, his skepticism is not particularly surprising, but one cannot on that account simply ignore the examples he raises (and carefully documents on his associated Web site) or the generalizations he draws from them.

Less easily dismissed by those of a more liberal persuasion is another recent book by one of their own. In *That's Not What We Meant to Do,* Steven Gillon, dean of the Honors College at the University of Oklahoma, focuses more narrowly on five pieces of social legislation: the Social Security Act of 1935, the Community Mental Health Act of 1963, the Civil Rights Act of 1964, the Immigration Act of 1965, and the Campaign Finance Reform Act of 1974. Gillon's selectivity notwithstanding, his case histories come to the same bad end as those in Friedman's more sweeping analysis, and Gillon comes to the same conclusion: important and costly legislative acts can fall far short of accomplishing their stated mission. Presuming that our congressional lawmakers are, for the most part, competent and well intentioned, Gillon blames legislative failures largely

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on the unpredictability of future developments. Hence, he goes on to caution that, hereafter, greater care and humility be exercised in the drafting of legislation.

Obviously, these investigators are not the first who have studied Congress's output and found it wanting. How many times, for example, have partisans assured us that if only our laws were made *more liberal* or, conversely, *more conservative,* then all would be well? According to others, what is needed is that we limit legislation to far fewer areas; Congress need concern itself only with national defense and the protection of life, liberty, and property. Still others insist that no formulaic solution will help until we find ways of attracting higher-caliber candidates to political careers. Granted that each of these remedies would have an impact on future legislation, experience has taught us, I submit, that none of them is capable of fundamentally changing the quandary that gave rise to the two books I have cited.

The plain fact is that we are stuck with a government of laws created by imperfect lawmakers who, to one degree or another, are bound to be inadequately informed, short of omniscience, questionably motivated, and as capricious as the voters they represent. However much representatives in some idealized, unattainable circumstances might prefer to act in the commonweal, reality dictates that their first priority be to ensure their own reelection and their second to strengthen the position of their party. Granted, in propitious times, all three interests may coincide; usually they do not. And insofar as the scale of mischief making in Washington is concerned, in addition to the five examples Gillon selected, one could readily identify another fifty—or five hundred, for that matter. The question remains, then, What, if anything, can be done about it?

A more productive approach would be to focus less on *who* makes our laws and more on *how* those laws are made—to strive, in other words, for an improvement in the lawmaking process itself. And a good starting point would be to acknowledge that, given the restraints already noted, the bulk of new legislation is certain to be ill-conceived. If this admission seems a bit startling, we might well admit that it is, after all, only consistent with everyday experience in other areas. What proportion of new product introductions is commercially successful? How many patents actually result in products placed on the market? How many books receive a second printing? And, finally, we have to ask, Does this recognition of the inevitability of ill-conceived legislation lead straight to a demand that Congress take an extended leave of absence and that the doors to the Capitol be slammed shut? Not necessarily. All laws successfully making it through the legislature are in response to pressures of one sort or another emanating from the body politic, whether the source of that pressure be an aroused citizenry, a crafty lobbyist, a vocal association, a particularly dedicated minority, a sleazy attorney, or someone else. Just as surely as most laws are likely to be counterproductive, some small minority are probably well directed. In this light, the problem becomes one of selection. How do we see to it that bad laws die and good laws live on to benefit society? Put another way, what can we do to ensure the survival of the fittest legislative experiments?

Expressed in this form, the question leaves no doubt as to who must be consulted. There is only one preeminent authority on such matters. Prior to our consultation, however, we must briefly digress.

Mother Nature: Exemplar

Whenever I read about any of the magnificent sideshows Mother Nature has strung together along life's great midway—say, the miraculous workings inside the trillions of cells that make up our bodies or the exquisite balance of marine life in a coral reef—I can hardly resist rising from my armchair and giving the old girl a standing ovation and, while I'm at it, applauding the talented scientists who have brought her workings to light.

In contrast, when my reading material happens to be the daily newspaper, my impulse is to sink deeper into the cushions and hide my face out of embarrassment for belonging to the same species as the persons whose doings the papers report. It's not just the individual actions themselves, although, God knows, they are generally horrific enough. What drives me to despair is their familiarity. The mess in Washington that I have been discussing is, I suppose, as good an example as any other. It goes on year after year, administration after administration, with only changes in the casting of the more lurid episodes to break the monotony.

What it all boils down to is that Mother Nature has learned how to maintain order while achieving higher levels of sophistication, whereas our "progress" in this increasingly technological era seems to be leading us toward increased *in*stability. One cannot help but ask what nature is doing right and what we are doing wrong?

Doing What Comes Naturally

The popular image of Nature is that of a carefree flower child gamboling barefoot in the grass with nary a thought to worry her pretty head. Nothing could be further from the truth. Nature makes evolution look easy because she is so darn good at it. At any given time, she is hard at work screening her myriad of ongoing experiments through the application of a single, fundamental decision-making process at which, after eons of practice, she has become particularly adept. We have given a disarmingly simple, almost flippant name to this all-purpose, all-powerful tool of Nature: *feedback*.

Given the undeniable utility of feedback, it behooves us to examine it closely. To begin with, it must be recognized as a quantitative process with its own formalized set of rules. These are most easily explained by citing a familiar example, the ordinary home-heating system. A thermostat reads the air temperature of a room and compares that reading with a preset optimal setting. Assuming an initial room temperature below that of the preset, the thermostat orders the furnace to turn on. The furnace obligingly does so, and hence the room is warmed. The same thermostat then senses the rise in temperature and, depending on the degree of warming, sends revised instructions as to whether the furnace should shut down or continue to heat. Thus,

through a circular series of inputs from thermostat to furnace to room air and back again, the room temperature oscillates about its optimal setting.

The feedback loop I have described thus far may seem complete, but we are not quite done examining it. So elementary a system would cause the furnace to click on and off repeatedly as the temperature fluctuated ever so slightly around its preset value. Therefore, as a practical matter, we must add a control box—in this case, an incremental tolerance that is allowed to come into play before the furnace is given new instructions. Had the optimal temperature been set at seventy degrees and the control box at two degrees, then the room temperature would be expected to oscillate roughly between sixty-eight and seventy-two. Moreover, once the system was in actual use, we would probably want to refine it further by introducing variability into other parts of the system as well, including perhaps its very objective. For example, we might reduce the optimal nighttime temperature to sixty-five or vary the speed of the blower fan under various conditions to smooth the system's operation further. Generally speaking, the more dynamic the control box instructions, the more likely the system is to mesh with the real world situation.

In summary, a feedback system incorporates a number of elements serially connected in a closed loop. In its minimal configuration, it consists of a sensor (the thermostat in this case), a control box (the thermostat's programmed settings), a machine (the furnace), and the medium acted on by the machine (the room air).

Feedback in Action

Nature's feedback cycles are far more intricate than any we could devise. Not only do her loops contain long strings of elements, but the elements themselves may consist of subsidiary feedback loops that may be intertwined in turn with several others. Suffice it to say that in the end, over billions of years, Nature has evolved unbelievably complex networks that can perform such amazing feats as self-organization, self-replication, learned behaviors, and evolutionary development.

Although limited to simpler systems, scientists and engineers have nonetheless wrung near miracles from their application of feedback loops in such fields as electronics, chemistry, astronomy, biotechnology, nuclear energy, communications, and semiconductors, to name but a few. For that matter, the scientific method, which is at the heart of all technical endeavors, can itself be thought of as a feedback loop in which theories are circulated through peer review machinery under professional rules and then reexamined time and time again as new discoveries take place.

Consciously or unconsciously, the commercial world makes good use of feedback as well. At the core of every business is a loop that begins with the determination of the volume and profitability of sales. This information is then passed on to managers who use it to instruct the enterprise as to how many additional goods and services to feed back into the marketplace. At that point, the consumers again make their preferences known, and the cycle repeats. Obviously, information processing has

allowed businesses to tune these cycles to an ever finer degree of accuracy and sensitivity.

Social scientists have a more difficult job applying feedback because of the problems they encounter in measuring observed phenomena and in controlling their experiments. Nevertheless, there is an increasing awareness of the benefits of feedback in areas such as behavioral modification and an ongoing effort to take greater advantage of it. Even in the professions and the arts one can find feedback features in the interaction of the practitioners with their clientele.

In short, nearly every segment of our society utilizes feedback to the best of its ability. Given that we are Nature's children, this observation is hardly surprising.

And Then There Is Government

Alas, where feedback systems could do us the most good, they are the least used. Governmental institutions—wedded as they are to top-down administration, control over information, arbitrary decision making, and reliance on compulsory enforcement—are not likely to adopt feedback systems whose unpredictable results might prove inimical to their vested interests. Therefore, we are subject to the impulsive, unrestrained, directionless, and pigheaded actions that flow so abundantly from our nation's capital—actions that, as I indicated earlier, are the source of the newspaper articles that regularly turn my normally comfortable armchair into a pit of depression.

Government's defenders would argue that, contrary to my assertions, the democratic electoral process at the heart of our representative republic is itself a feedback system, and that process in effect legitimizes whatever happens after the election. After all, is not the electorate periodically given the opportunity to sense the political climate, compare its findings with its expectations, and then readjust the makeup of the legislative chambers via ballot box machinery? Well, yes and no. Although presumably we do obtain a valid count of the number of votes each candidate gets, we conveniently overlook the easily manipulated, politically biased, and often fraudulent process by which the candidate garnered those votes. In reality, we are getting only half a loop, which often proves to be little better than none at all.

Similar complaints can be lodged against whatever other vestiges of feedback manage to show up under governmental auspices. Of course, countless surveys attempt to measure the effectiveness of this or that program, reams of data are collected and analyzed, and funds are allocated on a conditional basis, but on closer inspection these measures also turn out to be mere fragments of systems. They achieve the pretense of legitimacy, but little else.

We should be able to enjoy a better-functioning democracy than one whose most eloquent supporters can offer no more enthusiastic endorsement than that it is the worst possible system except for all the others. Think about that claim for a moment. Would you rush out to buy a car or even a box of cereal on the basis of such a recommendation? We can do better, starting with Congress. Which brings me back to my original thesis.

Congress's failure to produce omniscient legislation is not the fundamental problem. Instead, the problem is the institution's refusal both to recognize that most of its measures are bound to prove ill-advised and to employ formalized, full-bore feedback measures in anticipation of that inevitable outcome. An enlightened Congress, on the other hand, would see to it that laws that proved unfavorable would shrivel of their own accord, whereas those that proved favorable would automatically expand in scope and functionality.

A Modest Proposal for Reform

It is only "natural" that government enjoy the same benefits that science has brought to so many other disciplines. To achieve that end, I propose that we launch a new Feedback Party, whose platform would be limited to one objective: the incorporation of feedback mechanisms into as many new laws as possible. As a further indication of our purpose, we shall direct attention to the fact that this party is the first one in the history of the country committed to a *process,* as opposed to an *ideology.*

How would this party function? Assume for the moment that the Feedback Party was actually successful in electing a few members to the House of Representatives just in time for them to consider a Republican measure promoting charter schools. Further imagine that, as so often happens, the House was more or less evenly divided on the issue so that the support of the Feedback Party members was crucial to the bill's passage. Such a situation would set the stage for a quid pro quo deal. In exchange for their support, the Feedback members would require that the Republican bill be amended to include a valid, quantitative feedback loop. Specified in such a loop would be the following key elements: (1) a *medium*—the initial group of charter schools to be tested and the cost of such testing; (2) a *sensor*—what group was to do the testing, what quantitative measuring stick was to be used and with what periodicity; (3) a *control box*—the standards by which the numbers were to be evaluated; and (4) a *machine*—the specific actions to be taken in response to the evaluation, whether it be the program's incremental expansion in case of its success, diminution in the case of problematic results, or outright cancellation in the event of demonstrated failure.

Of course, nothing would prevent the Feedback Party members from supporting with equal vigor a competitive measure the Democrats put forward to strengthen the public schools, provided of course that a similar set of feedback provisions were included in the Democratic bill as well.

Suppose the Democrats or the Republicans felt compelled to eliminate the scourge of drugs by cutting off the supply. Fine, the Feedbackers would say. Let us commission a group of analysts to break out the yardsticks. Those analysts might, for example, select one or more cities for which they would tally the dollars spent on interdiction and record the street prices of a popular narcotic. If the price trend proved to be favorable (drug prices getting higher) and the interdiction affordable,

the program would be extended. If, on the other hand, the price trend was unfavorable (drug prices not getting higher), other terms would automatically throttle the program back, thus opening the door to alternative strategies such as education, rehabilitation, or basic research into the brain chemistry of addiction.

To avoid any misunderstanding with regard to my insistence on *quantitative* measurements, let me add that the units in which the measurements are expressed need not be monetary. More to the point, I am not equating the social aims of government with the profit targets of business. In one case, the selected quantity might be SAT scores; in another, the number of square feet of housing available to each resident; in a third, the level of lead in children's blood; and so on.

Practical Considerations

As with any new proposal, a number of objections are bound to arise. Allow me to anticipate a few and try to respond.

First, doubt may be expressed as to the feasibility of reliably tracking the performance of a new law under my contemplated guidelines. Such a concern is clearly understandable. As things now stand, academics and think tanks already gather reams of statistics on various pieces of legislation, and congressional staff members and others seriously evaluate these data. The problem is that the interpretation of such statistics is anything but clear. Indeed, two different studies by equally qualified investigators might well point in opposite directions. Such an outcome is only to be expected when broad-ranging programs are cobbled together and then, after the fact, studies are attempted to make some sense of the tea leaves. Any scientist who attempted to make progress in that way would deserve to be called "mad." Whether the same characterization applies to those in Congress who attempt the same sort of sorry exercise, the reader can decide.

Why would legislation conforming to feedback principles avoid being bogged down in uncertainties? Because the legislation and its system of review would be designed at the same time as mirror images of each other. In the same way that scientists construct their experiments to eliminate irrelevant factors, so could lawmakers coordinate their laws and feedback mechanisms to produce meaningful results. By the same token, if the results of a proposed law could not be measured or if the results were too muddied by extraneous data, then the law would have to be rewritten to sharpen its focus or be shelved entirely in the event that rewriting is not practical.

A second question that might properly arise with respect to this proposal is how the union of law and feedback mechanism could be achieved in our amorphous, murky political arena. It is not difficult to imagine, for example, that the bickering over a single specification related to only one element in a feedback loop would cause the legislative process to grind to a halt—never mind the real world, in which Congress would have to wrestle with dozens of specifications of any number of elements for several feedback loops more or less simultaneously. This very real problem could

be solved by requiring that as soon as possible after determining the proposed statute's main objectives, the legislature turn the entire design process over to private research-development groups, reserving for itself only the limited right to (1) accept the completed design as offered, (2) reject it entirely, or (3) collaborate with its R & D authors on possible changes. On no account would the legislators be allowed to make a unilateral change, however minor, in the design.

A third objection could be directed against the unnaturally apolitical role of Feedback members themselves. And, no doubt, the acceptance of measures from all political parties might, from time to time, oblige individual FP members to hold their noses with one hand while voting their approval with the other. Nevertheless, no members need undergo a crisis of conscience while doing so, for the very nature of the feedback process would reassure them that an inefficacious measure would ultimately fall victim to its own sunset provisions. Given enough time, they would eventually see shoots of new, healthy legislation rising up through the moldering remnants of dead laws to create a living government that even Mother Nature could love.

A final and possibly fatal issue that must be considered is whether the aims of this seemingly far-fetched proposal would be politically achievable. A good case could be made in the affirmative. To begin with, the Feedback Party would need only a small handful of votes in the House to begin exerting a major influence. The question then becomes, Could enough popular support be assembled to elect that needed handful? Why not? According to the Bureau of Labor Statistics, nationally some 7.5 percent of the workforce (scientists, engineers, computer personnel, medical workers, technicians, and so forth) is already engaged in the kind of career that makes daily use of feedback and thus is already imbued with an appreciation of its workings. It is difficult to imagine that voters in this category would be anything but favorably disposed toward the application of feedback in the political arena. To this group can be added the large population of science-minded nonprofessionals who would probably be similarly disposed on the issue. One might hope that even a few dyed-in-the-wool party stalwarts would pitch in from time to time. Some normally Republican voters would surely recognize the opportunity to reduce the size of government by weeding out its unproductive activities, and the more farsighted Democratic voters might come to understand that their aspirations for greater egalitarianism are dependent on a credible bureaucracy—that is, one employing feedback. Finally, there is the multitude of disaffected voters who would favor any rational alternative to being forced to choose between two static political platforms, both of which are bound to contain elements they heartily disapprove. Given these voting blocks already in place and whatever sympathizers might be added once the Feedback Party made its case publicly, it is not difficult to imagine the existence of enough pockets of concentration of pro-feedback voters—college towns, hi-tech centers, research parks, and so forth—to send the few dauntless Feedback representatives to Congress. Note, too, that the Feedback Party is not (or at least should not) be subject to the usual objection raised to third-party

candidates in general—namely, that voters would fear that a ballot cast in these candidates' favor would be "wasted" because that party was preordained to lose. The Feedback Party, as I have argued, need gain only a handful of wins to become powerful enough to get the ball rolling.

And once the ball got rolling, it would in my estimation be difficult to stop. Indeed, looking ahead, I foresee the principle of feedback becoming so well established that it gives rise to a constitutional amendment requiring that loops be incorporated in all pertinent legislation. In such an event, the Feedback Party could either fold its tent with a few murmurs of self-congratulation or direct its attention to other governmental matters begging to be reformed.