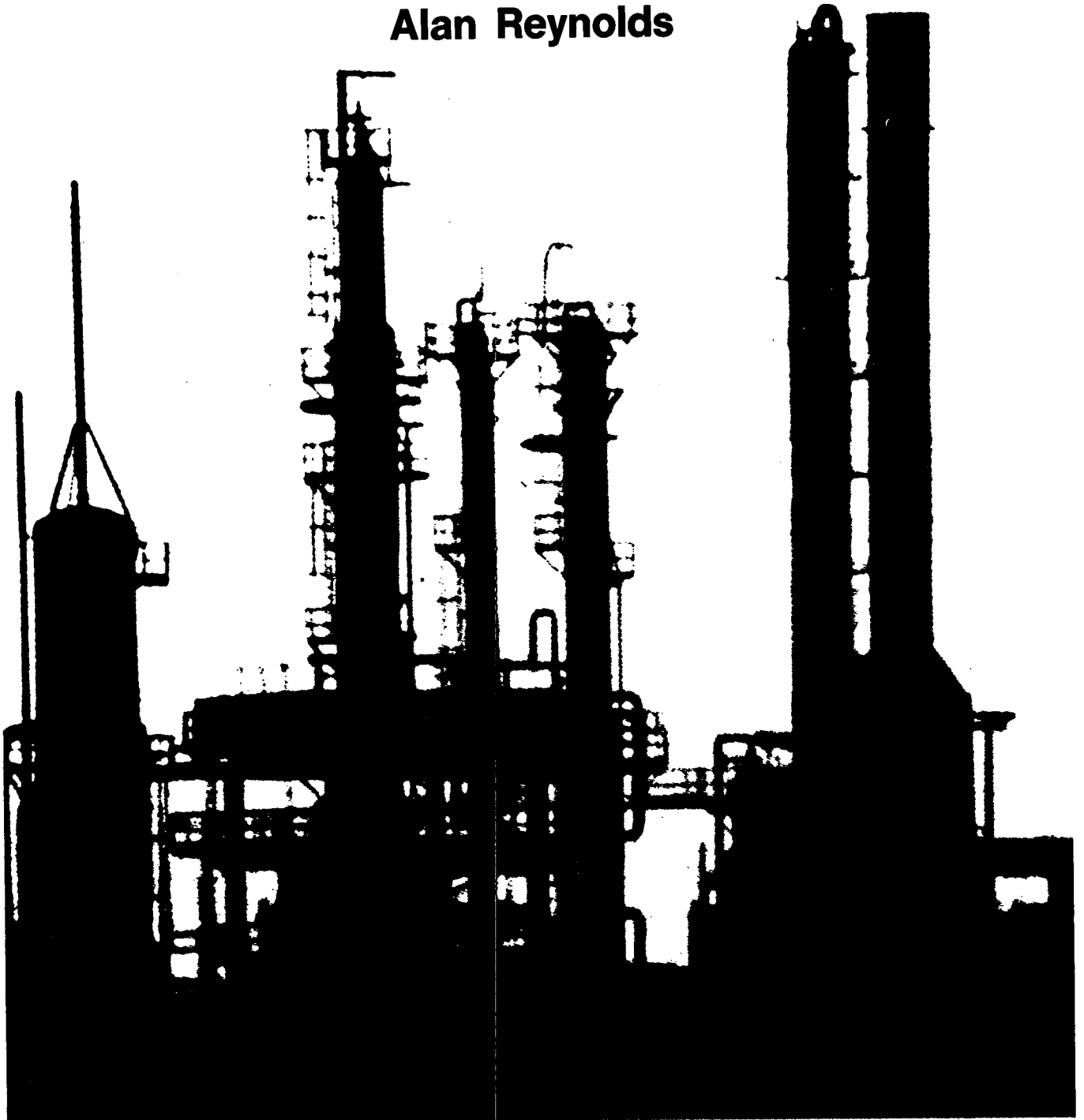

ENERGY CRISIS: Made in Washington

Alan Reynolds



Our energy problems were made in the U.S.A. OPEC never would have gotten off the ground without the diligent efforts of the Federal Power Commission (and the State Department). Given the FPC, the Arab embargo still would not have caused the long lines at gasoline stations without the help of the Federal Energy Office. But given these disastrous policies, and many more, we would nonetheless be well on our way to solving the resulting energy problems were it not for the Federal Energy Administration. There is no energy problem. There is just another problem of government regulation.

In the past few decades, a growing tide of regulations has increased the demand for oil while simultaneously restricting domestic supplies of oil, coal, nuclear power, and natural gas. Environmental regulations have pushed utilities and industries out of coal and into fuel oil and natural gas. Pollution-control devices on cars increased gasoline consumption. The Coal Mine Health and Safety Act of 1969 shut down many mines. Ambiguous laws blocked the Alaskan pipeline, offshore drilling, strip mining, and the construction of refineries. It takes nearly twice as long to get a nuclear power plant into operation in the U.S. as it does in France or Japan, and the four-to-six-year difference is entirely a measure of red tape. At the state level, government prorationing restricted oil production to some percentage of a somewhat arbitrary "maximum efficient rate."

None of these things, however, caused a "shortage" of oil and natural gas. A shortage always means that consumers want to buy more at some specific price than producers want to sell at that price. If the price were higher, initially, consumers would demand less and producers would supply more, and the shortage would disappear. Even at the peak of the Arab oil embargo, there would have been a massive surplus of unsold gasoline at a dollar a gallon. So, the myriad rules and regulations that increased demand and restricted supply simply would have increased oil and gas prices, in the absence of price controls, and the inflationary monetary policy in recent years would have contributed to the rise.

But the Federal Power Commission has controlled the wellhead price of natural gas sold to interstate pipelines since 1954, and domestic crude oil has been under some sort of price controls since even before 1971. The inevitable result was that demand outran supply

at the controlled prices, leaving a gap that could be filled only by larger and larger imports. That put foreign oil producers in an enviable bargaining position.

In the four years before the embargo, oil imports soared from 22% to 36% of U.S. consumption, and the proportion will probably hit 45% within a year. The share of these imports coming from Arab countries has risen even more rapidly, jumping from 12.2% to 22.5% of our imports between 1974 and 1975.

The Congressional response to this increased dependence on an unreliable foreign cartel has been to extend price controls to new oil and to roll back the total price, to attempt to extend price controls to intrastate sales of natural gas, to seriously consider breaking the energy industry into ineffectual fragments, and to compel taxpayers to

Why allow the boom in intrastate gas development to continue, figured the House, when with a simple violation of the Constitution, the whole country easily could be made miserable?

pick up the pieces left by this deliberate demolition of our energy industries.

Rather than deal with the natural gas shortage, Congressional committees have solemnly pondered the question of whether or not the shortage really exists—which is about as foolish an inquiry as one could imagine. To say that the shortage did not exist would be to say that all industries and households could get all the natural gas they want at the controlled interstate price. Yet 33 states now have strict restrictions on supplying gas to new customers, and curtailments of supplies to established customers have increased from 286 billion cubic feet in 1971 to 2.7 trillion cubic feet in 1975. Marketed production of natural gas declined by about 5% in 1974, and another 7% in 1975.

Had it not been for mild winters

and the reduced demand due to recession, the natural gas situation might already have caused more problems, more closed factories and cold houses, than the Arab embargo. As it is, the increasing shortage of natural gas has pushed more and more households and firms into the closest substitute—namely, imported oil. Even those who are lucky enough to get interstate natural gas are seeing a sharp rise in price as distributors are forced to include more and more imported liquefied natural gas or synthetic gas—either of which is several times more costly than deregulated natural gas would be.

Occidental Petroleum and El Paso Natural Gas are actually negotiating with the Soviets to develop Siberian gas for the U.S.—which is hardly the safest or cheapest route to a reasonable degree of energy independence.

An article in *Readers Digest* last August, by James Nathan Miller, urged the reader to "write your Congressman telling him to vote against deregulation." Why? Because natural gas reserve data are collected by gas producers and distributors, rather than by, say, journalists or fishermen. True, the reserve data have been checked by the FPC, FEA, DOT, ERDA, SEC, FTC, Bureau of Mines, and the U.S. Geological Survey. But Mr. Miller figures they are all soft on the industry and can't be trusted.

On June 10, 1975, the *New York Times* ran a prominent headline: "Gas Price Rigging Alleged by FTC." Actually, it was not the FTC, but the FTC's Bureau of Competition. The charge was that the American Gas Association had understated proved reserves in order to panic the FPC into letting gas prices rise. What the *Times* neglected to mention was that the Federal Trade Commission's own Bureau of Economics had demonstrated two months earlier that the Bureau of Competition complaint contained no proof at all, that what was offered as proof really showed that the AGA data overstated reserves, and that the complaint was "extremely ill-advised."

In fact, the American Gas Association, which collects reserve data, mainly represents 300 pipeline companies and distributors—not those who drill and produce the gas and are subject to FPC price controls at the wellhead, but those who get it from the wellhead to the home or factory. The major interstate pipeline companies have benefited substantially from FPC regulation of the price they pay for natural gas. Their net return on equity rose steadily from the time controls were

imposed—from 15.5% in 1955 to 29.3% in 1972.

In any case, the level of proved gas reserves is unimportant. It is just an estimate of how much gas is recoverable from discovered reserves with present technology at present prices. Improve recovery techniques, or raise the price, and proved reserves will increase. And there is lots more gas in undiscovered wells, under the oceans, and in the Rocky Mountains. At a higher price, it would become possible to use costly enhanced recovery methods to squeeze more oil and gas out of existing wells, and it would become possible to explore in hostile areas. There is no single magic price that will provide "enough" incentive and financial resources: the supply curve does not kink and turn horizontal at some price.

What is important about gas reserves is not the level, but the trend. We unquestionably have been consuming gas at two or three times the rate at which we have been adding to working inventories—proved reserves. We have been eating everything in the cupboard and not making enough trips to the grocery store. Any estimate of proved reserves which uses the same methods over time will show such a trend, although different assumptions about recovery rates and price could result in a different level of reserves at any moment in time.

The whole issue came to a head recently when a major Louisiana gas producer found itself facing two lawsuits at the same time—one brought by the FTC for understating reserves, and another by the FPC for overstating reserves.

An insight into the thought processes of those who claim that the natural gas shortage is a myth is provided in a recent pamphlet called "Questions and Answers About the Nature and Causes of the Natural Gas Shortage," distributed at taxpayers' expense by the staff of the House Subcommittee on Oversight and Investigations.

According to this report, the high demand for natural gas had nothing to do with price, but was due to "aggressive promotional campaigns." Falling supplies had nothing to do with price either, except that producers are supposedly "withholding" production in the hope that prices will rise. Such conservation practices sound rather sinister until we learn what is meant by "withholding." The report said: "If a natural gas resource is thought definitely to exist but is not explored, withholding of gas may be involved."

That is, failure to explore for gas is considered evidence of withholding, as is the failure to drill in explored areas in "a timely manner."

The pamphlet then cites a study that found a juicy example of such withholding: "Getty has been unwilling," the study found, "to commit substantial sums to accelerated production . . ." The subcommittee pamphlet leans heavily on a study by Lawrence Kumins of the Library of Congress, whose work on deregulation of both oil and gas prices deserves the Hobart Rowan Award for Economic Illiteracy.

Kumins figures that decontrol of natural gas prices would squeeze at least \$20.3 billion out of beleaguered consumers. That is a rather remarkable figure, since the total wellhead cost of FPC-controlled gas was only about \$4.6 billion in 1974. Kumins somehow assumes a deregulated price of \$2.50 per thousand cubic feet, which is twice

Imposing maximum gasoline purchases and restricted gas station hours ensured that people would form longer lines and get in line more often.

the average unregulated price of gas sales within producing states. Then he acknowledges that annual production would increase by three trillion cubic feet as a consequence of decontrol, so that three trillion times \$2.50 per thousand becomes \$7.5 billion of "additional cost" to consumers. Of course, this is not an additional cost at all, since the alternative is to heat homes and run factories with far more expensive imported oil and liquefied natural gas.

Kumins then simply adds a few such bogus price increases to the total price level of Gross National Product to show that inflation would rise by a percentage point or so. But even if people did spend that much more on gas, they would then have less to spend on other things, so nominal GNP and inflation would not rise.

Kumins also figures that decontrol would put hundreds of thousands of workers on the dole. Apparently, not

having that extra three trillion cubic feet of domestic natural gas, and instead transferring more wealth to the Arabs or Russians, is considered the best way to increase domestic production and employment.

Armed with this sort of non-analysis, the House passed an equally silly bill. Only small producers, who produce 30% of the gas, could be exempted from price controls in the House bill. This curious piece of favoritism is based on the Nader-Hart theory that "competition" requires a large number of firms, plus special breaks for high-cost producers, and an absolute legal prohibition of any price rivalry whatsoever. Small firms would have an incentive to stay small, in order to remain exempt from price controls, and big firms would become small through bankruptcy.

The House bill would also extend price controls to intrastate sales, sales that do not involve interstate commerce. The House figured that there is no point in allowing the recent boom in intrastate gas development to continue when, with a simple violation of the Constitution, the whole country easily could be made miserable. This is the egalitarian approach to shortages.

The Federal Energy Administration estimates that the average residential fuel bill would be \$205 in 1985 under the Senate gas decontrol bill, \$280 under existing FPC controls, and up to \$311 under the House control bill. The apparent paradox—that the more severe the price controls the higher the fuel bill—is easily explained. With decontrol, there would be larger supplies of natural gas to replace more expensive substitute fuels, and decontrolled prices would allow customers to bid gas away from use as an industrial boiler fuel in the Southwest into more efficient and higher-value residential uses.

Looking backward, Paul MacAvoy has estimated that past FPC controls had already created a natural gas shortfall by 1972 which was the equivalent of 1.8 million barrels of oil a day. Most of that gap was filled with Arab oil, and it is at least as large as the peak impact of the Arab embargo. In short, the success of the OPEC cartel is critically dependent on our own FPC regulations.

Given the energy problems caused by one set of government regulatory agencies—mainly the FPC and EPA—the natural "solution" was to set up another regulatory agency, the Federal Energy Office.

Freezing heating oil prices at off-

season lows after August 1971 caused a heating oil shortage in the winter of 1972. So, the FEO began facing the 1973 crisis by fighting last year's problem—forcing refineries to cut back on gasoline production in order to produce more heating oil. Heating oil supplies in February 1974 wound up 38% above the level of a year before, apparently in preparation for subzero weather that spring.

Then the FEO allowed price increases on gasoline only at the end of each month, so gas stations closed at the end of each month and the waiting lines grew even longer.

Then, FEO allocated gasoline to dealers on the basis of 1972 sales. That put oodles of gasoline where the people had been in 1972—in remote vacation spots, in areas where population had declined, and along interstate highways. But the people were staying close to home. State and local authorities contributed to the confusion by imposing maximum gasoline purchases and restricted gas station hours, thus ensuring that people would form longer lines and get in line more often.

The early decision that oil from older domestic wells was not really worth as much as foreign or new oil caused all sorts of problems for the regulators, problems that continue today. One problem is that production from older wells gradually declines unless costly "enhanced recovery" techniques are used. But such techniques would require selling the added oil at a huge loss if it had to be priced at \$5.25 a barrel. Paul MacAvoy estimates that this effect of price controls reduced domestic oil production by one-third of a million barrels per day in 1973. The Energy Research and Development Agency estimates that enhanced recovery could squeeze a million more barrels a day out of existing wells by 1985, but the required investments will never happen under any sorts of political price controls. Too much uncertainty.

A second problem was the 355,000 "stripper wells" that produce less than ten barrels of oil a day apiece, but together account for 11.5% of U.S. oil production. At \$5.25 a barrel, many of these marginal wells might as well be shut down, so they were exempted from controls in 1973. But this created a perverse incentive to keep production below 10 barrels a day and to avoid the use of enhanced recovery methods.

The main problem arising from keeping old oil at \$5.25, however, was that those refineries with access to more of that oil would be required by

the price control formula to price their refined products well below the prices charged by their crude-poor competitors. This is not really a David and Goliath match, as it is often portrayed, since big outfits like Mobil and Standard of Ohio refine much more crude than they produce, while smaller companies like Getty and Kerr-McGee have abundant supplies of domestic crude. The problem was how to get Getty to subsidize Mobil, or how to tax those who had developed domestic oil in order to subsidize those refineries who preferred to import their crude.

The FEO first tried a buy/sell program in which those refineries that were operating even further below capacity than average could get cheap price-controlled oil from those refineries that produced it. Those who were short of \$5.25 oil had every incentive to avoid buying imports or new oil, so that they would get cheap oil at their rivals' expense. Those who had rela-

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tively good supplies of \$5.25 oil had equally strong incentives not to scramble for scarce and costly imports, since if they seemed to have enough, some of their cheap crude would be sent to a competitor. Crude imports dropped to about 20% of a very small total, refineries ran at about 75% capacity, and FEO's bungling in 1974 was blamed on the Arabs.

The Socialist government of West Germany just let prices rise a bit, and there was no crisis. The Netherlands weathered the embargo in the same way, with no significant difficulty, no gasoline lines.

On February 25, 1974, *Newsweek* ran a lengthy expose of the FEO allocation fiasco, entitled "A Cure That's Worse Than the Disease." It got so embarrassing that the Federal Energy Office changed its name to the Federal Energy Administration, but the cure continued to be worse than the disease. In fact, the cure was and is the

disease—the solution is the problem.

In November 1974, the FEA scrapped the buy/sell program and instead adopted an "entitlements" program. Under this program, refineries who own an above-average share of old oil actually pay money to refineries who import a large share of their crude oil. The latter are called "independent" refineries (which is not to be confused with independent producers), but it might be more accurate to call them dependent refineries—dependent on OPEC. It is hard for people to believe that some oil companies have to pay their import-dependent rivals for the privilege of refining their own oil at a price far less than we pay to the Arabs. It is, of course, exactly like taxing producers of domestic "old oil" about \$3 a barrel and using the proceeds to subsidize imports.

One consequence recently made the news. Amerasia Hess has a big refinery in the Virgin Islands, which is U.S. territory, so Hess has gotten about \$300 million in entitlement payments. Other Caribbean refineries did not have that edge and were being driven to the wall, so entitlements now go to these foreign refineries, too. Now the U.S.-based refineries are hurting, because they foot the bill. So Congress exempted smaller refineries from making entitlement payments to fairly big outfits, like Hess. That gives these smaller refineries a cost advantage of up to 10 cents a gallon, so they can profitably sell their gasoline for a dime a gallon less than their competitors. A lot of gasoline stations may not survive this rigged competition, so we will probably get a new agency to deal with that problem.

In December, FEA chief Frank Zarb managed to convince President Ford to sign the Energy Policy and Conservation Act of 1975. Before the ink was dry, the FEA was asking the OMB for another \$600 million to deal with the administrative problems built into the act. The FEA's zeal for expanding its powers is already legendary. The agency had 4,000 employees by the end of 1976. Its press office uses 112 people and \$3.5 million to publish coloring book propaganda and to convince people that the FEA is the best thing since Santa Claus. The FEA overlaps all sorts of other energy agencies and has tried to grab the authority to allocate coal during emergencies of its own making. The original FEA "Project Independence Blueprint" was full of strange ideas like requiring that all new homes be electrically heated, which would double the cost of heat-

ing these homes, make them unsalable, and put an additional strain on our already inadequate electric generating capacity.

Little wonder that Mr. Zarb liked the Energy Policy and Conservation Act, sometimes called the Cold Homes and Dark Factories Act. It too is full of curious ideas, like forcing Detroit to build tiny cars while simultaneously trying to keep gasoline cheap so those cars won't sell. The law is also full of special subsidies and tax breaks, of the sort that this Congress usually calls "loopholes." And it grants truly awesome power to the executive branch: for example, "The President may by rule or order require the allocation of . . . supplies of materials in order to maximize domestic energy supplies." No domestic energy producer really owns anything any more.

The new law reneges on the administration's promise to leave new oil decontrolled, thus effectively expropriating part of the investments made because of that empty promise. The average prices of old and new oil are to be rolled back and then allowed to rise at a rate that may not even keep up with inflation in the cost of drilling equipment. Since old oil will naturally become a smaller share of the total as time goes on, and old oil supplies dwindle, a fairly constant average of old and new oil prices would really mean a declining price for new oil. Price controls may, at the President's discretion, end after forty months. But nobody really believes that they will. If producers believe it, they will wait until then to do much of anything in the way of expanding output. If they do not believe it, they will get into something more profitable—like running a newspaper or TV network and attacking obscene profits, while praising the social responsibility of subsidized losers. Diversification has already begun. Mobil's acquisition of Marcor being only one example.

There has been some controversy over whether or not the temporary rollback in domestic crude prices will actually result in a reduction of a penny or two in the price of gasoline, or whether it will just boost the profit margins of certain refineries. Gasoline prices had been falling anyway, despite rising crude prices, and oil companies had accumulated about \$1.5 billion in "banked costs" which they could not pass on to consumers because the market was soft.

If the rollback does not result in a comparable decline in retail prices, it will lower costs and boost profits for those import-dependent refineries who

qualify for entitlements. The result will be an incentive to increase imports and avoid domestic production.

If the rollback does result in lower prices of refined products, then demand will be higher, and demand can only be met with more imports. Either way, we end up legislating an increase in the demand for Arab oil—making it easier for OPEC to stick together and to hold our homes and factories up for ransom.

The new law requires that taxpayers build a crude oil stockpile, at a cost of ten or twenty billion dollars over the next seven years or so. Why can't private industry and speculation bear this cost? After all, a private stockpile would be very valuable in the event of an embargo. But because of price controls and confiscatory allocation, there are no property rights in oil inventories. So taxpayers get stuck with the tab, and the Arabs get to sell more oil to us to fill our stockpile.

There is a bill pending in the House that would freeze oil imports at the current level, even though domestic supplies of oil and gas are falling and population is growing. Import quotas would reduce supply and raise price exactly as an embargo did. Since there would be a growing unsatisfied demand for imported oil, OPEC could easily charge much more than they do now. They would get more of our money, and we would get less of their oil.

Then there is Mr. Rockefeller's Hundred Billion Dollar Plan, which presumably would be financed with moral obligation bonds. The idea is to get taxpayers to underwrite ventures which are too risky to attract sensible investors. They are too risky because they are based on the curious idea of using our most expensive energy resources first, and saving the oil and gas until later, when it will probably be obsolete. Some worthwhile ventures are too risky for another reason, a reason cited by Vice President Rockefeller himself: "Private capital sources are, for good reason, reluctant to make capital available for domestic energy-production projects, because of the uncertainty of government regulation . . ."

Then there is the idea of breaking up "big oil." Those refineries who were foolish enough to develop crude oil supplies in this country may be asked to divest themselves of these properties, if they can find some suckers to buy them. There have been lengthy Congressional hearings on this subject, and all of the competent testi-

mony demonstrates conclusively that all aspects of the industry are vigorously competitive, that vertical integration is irrelevant, and that forced divestiture would be a disaster for American consumers and a boon to the Arabs. Since each aspect of the oil business is competitive, firms gain no monopoly power by engaging in several of these competitive activities, such as production, refining, and distribution. Multiplying zero monopoly power times three is still zero.

Finally, there is the idea of a tax-exempt and subsidized Federal Oil and Gas Corporation (FOGCO)—which is dormant but by no means dead. Once Congress has finished demolishing the domestic energy industry, with whimsical changes in the rules of the game, there will not be anyone left to pick up the pieces but the U.S. taxpayer. When FOGCO was first proposed, as a "yardstick" by which to measure the performance of the oil and gas industry, Gulf Oil responded quite appropriately by trying to buy Ringling Brothers, Barnum & Bailey Circus—as a "yardstick" by which to measure Congress. □



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SORTING OUT SKINNER

Richard Crum



If, as has sometimes been dubiously contended, Western philosophy is a series of footnotes to Plato, our generation may devote much time to dotting the i's and crossing the t's of B. F. Skinner's *Beyond Freedom and Dignity*, whose basic theory is that social engineers can devise a system that will automatically reward socially desirable behavior. These rewards Skinner calls "reinforcers."

When the proposal is stated in oversimplistic terms, as above, one begins to wonder why someone hadn't hit on it before. Like all important ideas, it is basically simple. And in a way, like Existentialism, it has been known to the Great Thinkers and practised by the Great Teachers. The latter, at least, have always known that teaching is rapport.

Skinner's treatise can be seen as a systematic attempt to draw out the implications of a deliberately harmonious and consciously self-directed society. His proposed method is to build rewards into the environment so deftly as to give them the appearance of being automatic and natural.

Rewards for good behavior are superior to punishment for bad behavior because punishment is antihuman. It tends to generate guilt, cowering, self-doubt, or pent-up aggression. Rather than punish, in problem cases, Skinner would deprive of privileges, or isolate

the offender for very brief periods.

At a Quaker camp for conscientious objectors where I passed three years of my life, we had a good illustration of the usefulness of Skinner's proposals on substitutes for punishment. An assignee who had been "soldiering" (we said "goldbricking") on the job of cutting down trees would find one morning that when the axes were given out there was none for him. He spent the day alone while others trooped off merrily to the various clearings to chop down their trees.

One can see that Skinner's system of positive rewards for constructive actions might have enormously fruitful results in a classroom or the ward of a mental hospital. Skinner's claims on habit control seem to me not to be overstated. "The size of the reinforcer," says Skinner, "is less important than its immediacy and contingency." An animal or a gambler, for example, can indeed be hooked by repeated small payoffs.

It is good to see Skinner going beyond permissiveness, which, despite the excellence of its emphasis on spontaneity, too often leads to vacuousness, sloppy work habits, and alienation. One wants very much to believe that Skinner's positive-reinforcement (reward) methods, if employed with the young, might transform them into constructive and creative persons who

know how to enjoy the good life and make the world a better place for themselves, their peers, and those who come after them. The problem, in Skinnerian education, will be to perceive, in each individual case, precisely which "self-reinforcers" are to be tool-ed for that particular student, to bring out *his* peculiar gifts, talents, and bents. A sharp distinction should be made, however, between the successes attainable in schools and the application of Skinner's theories to society as a whole. Aside from the imputation of "benevolent fascism" which some critics have made, Skinner passes over in silence the central question of what kind, or rather kinds, of human beings are desirable. One applauds his recurrent accolades for diversity; but they remain largely verbal. Yet diversity is an imperative need. Friedrich Nietzsche said that when he was asked what is the way, he replied that there is no such thing as "the way."

Cecil John Cadoux, author of that magisterial volume *The Early Church and the World*, states in his exciting essay *Christian Pacifism Re-examined* that we ought always to be on guard against too-easy transpositions of ethical schemas from personal to societal relationships. Take, for example, the notion of an "international police-force." Policemen generally shoot the culprit—not innocent bystanders, as in