Currents

Uncivil Rights

For two years running, springtime in Washington has been marked by talk of quotas, disparate impact, and business necessity. Driven by five decisions the Supreme Court handed down in 1989, not to mention the professional civil rights establishment, congressional Democrats last year introduced their Civil Rights Act of 1990, only to see it fail by a single vote to escape a presidential veto. They are back again this year, as is the administration, with competing versions of "fairness in the workplace."

The ordinary person will be forgiven for doubting that the business of hiring and firing should be particularly complicated, but Washington is bound to make it so. The daily papers, in fact, have lately taken to publishing charts to help readers find their way through the competing legal mazes. Under the Democrats' bill, for instance, employers can be found guilty of discrimination if they fail to prove that their employment practices have a "significant and manifest relationship to the requirements for effective job performance," whereas the administration's bill requires the employer to prove either that his practices have "a manifest relationship to the employment in question" or that his "legitimate employment goals" are "significantly served by, even if they do not require, the challenged practice."

Things were not always so complicated. In fact, the idea behind the Civil War amendments to the Constitution, and the civil rights acts that implemented them, was straightforward and simple: blacks, just as other Americans, were to enjoy equal rights to buy and sell property, to make and enforce contracts, to sue and be sued, to be parties, to give evidence, and generally to enjoy the full and equal benefit of all laws and proceedings for the security of persons and property. In practice, this meant that employment had to be voluntary, either by contract or at will. When by contract, the mutually agreed upon terms would control. When at will, as most employment was, both employer and employee would be free to enter into a relationship or to end one at will—that is, for any reason, fair or unfair, or for no reason at all. No one imagined that there was anything such as a right not to be discriminated against in the Fourteenth Amendment's privileges and immunities, much less in its due process or equal protection clauses, or that it was the business of the law to inquire about an employer's motives, which were almost always complex in any event. Freedom of association, grounded in individual liberty, meant essentially the right *not* to associate, whatever the reason.

Did this arrangement permit discrimination? Of course it did. And discrimination there was, on all manner of grounds. Much of it was "legitimate" (Chinese waiters in a Chinese restaurant tend to make life easier in the kitchen), much of it was not. But we thought that those subjective calls were best left to the parties themselves to make, especially since the criteria the government might use in regulating hiring practices would likely be no better, and might be worse, than the criteria individuals themselves were using. Human prejudice being what it was, we thought that it was not the business of government to try to stamp out discrimination through forced associations.

In the South, of course, discrimination took on a particularly noxious character in the form of Jim Crow laws aimed at enforcing both public and private segregation by race. A principal target of the civil rights movement of the 1950s and the 1960s, therefore, was the discrimination that had been brought into being through the force of law. It was one thing to allow people not to associate if that was their preference and quite another to force them not to associate. Until such laws were stricken, freedom of association could hardly be realized.

The Civil Rights Act of 1964 at long last abolished what remained of Jim Crow. But the act did not stop there. Instead, it went on to bar all manner of private discrimination, as in Title VII, which prohibited discrimination in the private workplace on the basis of race, color, religion, sex, or national origin. That is where our current problems began, as a brief discussion will show.

To summarize, the 1964 act created, in effect, a right not to be discriminated against on the stated grounds, which amounted, by implication, to rolling back the right of association by saying that employers (but not employees) could no longer refuse to associate on any of the stated grounds. This meant, of course, that the employer's reasons for refusing to associate, however simple or complex, would now come to the fore. No longer could the employer refuse to associate for any reason or for no reason at all. Now, as a defense against the charge of discrimination, he had the burden of coming forward to show that he was refusing to associate only for a "good" reason. This meant in turn that the courts would increasingly get into the messy and, in principle, infinitely complex business of second-guessing the reasons why an employer may have hired, promoted, or fired as he did. And that led inevitably to quotas. To avoid the costly and often fruitless litigation that was aimed at defending their reasons for doing what they did, employers simply started getting their numbers right.

To understand more fully how Title VII works, we must first come to grips with the idea of *discrimination*, and with the question whether that term should be limited, as one might think, to intentional discrimination or whether it should include something more. This question arises because if we mean to prohibit only intentional discrimination, we shall have few, if any, enforcement actions under the act. Given the sanctions of Title VII, we should not expect an employer to broadcast his reliance in discriminating on any of the proscribed reasons. Moreover, for reasons at least as old as Descartes, it is difficult to get inside the employer's mind to discover his real motives. If we are going to prohibit anything more than blatant discrimination, then, we shall have either to find some way to infer discriminatory intent or to broaden the meaning of *discrimination.*

The Equal Employment Opportunity Commission, one of four agencies charged with enforcing Title VII, decided early on, in effect, to do both. Recognizing the difficulty of proving intentional discrimination, especially when employers might hide behind such seemingly neutral employment practices as job tests, degree requirements, or height-and-weight standards, the EEOC wrote guidelines that prohibited not only "disparate treatment"—the intent test—but those practices that had a "disparate impact"—the effects test—on members of a relevant class. More precisely, once a practice was shown to have a disparate impact—to select against blacks or women, for example—a prima facie case of discrimination was established. The burden then shifted to the employer to validate, modify, or eliminate the practice. Thus, in the end, whether the employer was intentionally discriminating was irrelevant. Because of the difficulties of enforcement, an inference of discrimination was made from the effects of the practice. If the employer could not justify that practice, he had discriminated.

Not surprisingly, the outcry over those enforcement procedures was intense and is by now familiar. Employers with no history of discrimination were incensed that the EEOC was presuming them guilty simply because their workforce composition did not reflect some seemingly arbitrary workforce pool. Disputes about the relevant pool were exceeded only by complaints about the demise of the presumption of innocence. When the Supreme Court sanctioned the EEOC's procedures in 1971 in *Griggs* v. *Duke Power Co.* and went on to say that the test by which employers might justify their practices was one of "business necessity," which lower courts later expanded, employers soon realized that they were at a disadvantage. While not impossible, the burden of demonstrating the validity of most selection procedures proved so costly and uncertain that the prudent course was simply to get the numbers right.

Thus, while quotas are no explicit part of the 1964 act—in fact, the act states that nothing in Title VII "shall be interpreted to require any employer . . . to grant preferential treatment to any individual or group"—quotas are in the act as a practical reality, as any employer who undertakes the costly and often fruitless litigation needed to defend his practices soon discovers.

If, indeed, quotas have been both the implicit and, increasingly, the explicit reality since 1964, why all the clamor in their name this year and last with respect to the proposed civil rights acts? Politics aside, many Republicans and conservatives seem of the view that the protection of civil rights went astray not with the 1964 act, which they believe outlawed only intentional discrimination, but with the EEOC guidelines and *Griggs*, which the Supreme Court seemed to roll back in 1989 with its decision in *Wards Cove Packing Co.* v. *Antonio*. Thus, their concern has been to stop legislation aimed at reversing *Wards Cove.* Yet *Wards Cove* hardly rolled back *Griggs*. It merely purported to clarify the respective burdens—important, perhaps, in particular cases—while preserving the fundamental framework. Indeed, that framework was implicitly established in the 1964 act itself, as the Court argued in *Griggs* when it cited the language in the act that "authorizes the use of 'any professionally developed ability test' that is not 'designed, intended, *or used* to discriminate because of race . . .' " (emphasis added by the Court). *Used* here is systematically ambiguous: it can be read to preclude tests that are used intentionally to discriminate; or it can be read to preclude use of tests that only unintentionally discriminate— if those tests cannot be independently justified. Doubtless the Court in *Griggs* misread the legislative history of that language when it concluded that the EEOC's construction—"that employment tests be job-related"—was "inescapable." But the seeds for the framework that emerged from the EEOC guidelines and *Griggs* had already been sown when the nebulous act of discrimination was made illegal in 1964.

What *Wards Cove* did, then, was to affirm that a plaintiff makes a prima facie case when, by comparing the composition of the at-issue jobs with that of the qualified population in the relevant labor market, he shows that one or more of an employer's practices has a significantly disparate impact on members of a relevant class. Once the plaintiff establishes his prima facie case by using liberal discovery rules to examine records the employer is required to maintain, the focus shifts to "whether a challenged practice serves, in a significant way, the legitimate employment goals of the employer." Here, the Court says: "[T]he employer carries the burden of producing evidence of a business justification for his employment practice. The burden of persuasion, however, remains with the disparate-impact plaintiff." Precisely what is meant by this is unclear, for the Court adds that "the plaintiff bears the burden of disproving an employer's *assertion* that the adverse employment action or practice was based *solely* on a legitimate neutral consideration" (emphasis added), yet continues that the burden "must remain with the plaintiff, for it is he who must prove that it was 'because of such individual's race, color,' etc., that he was denied a desired employment opportunity." Those substantive burdens are not identical: to disprove that the employer's action was based *solely* on a legitimate neutral consideration is not to prove that the practice was based on race, color, religion, sex, or national origin; it could have been based, in part, on a nonbusiness reason that was not related to the proscribed reasons. Moreover, as the dissent in *Wards Cove* points out, if the employer's burden "is to justify the practice by explaining why it is necessary to the operation of business," this is no mere "burden of production," no insubstantial "assertion." Nevertheless, the Court concludes by noting that if the plaintiff cannot persuade the trier of fact on the question of the employer's business necessity defense, he may still prevail if he can show that "other tests or selection devices, without a similarly undesirable racial effect, would also serve the employer's legitimate [hiring] interests."

"I'm so proud to be part of a profession that has never discriminated against women."

Thus, while seeming to clarify the respective burdens, *Wards Cove* in no way altered the fundamental structure implicit in the 1964 act. The plaintiff's initial burden—to "isolate and identify the specific employment practices that are allegedly responsible for any observed statistical disparities"—has been sharpened; but it is still a relatively easy matter to show such disparity and hence to establish a presumption of guilt based simply on the numbers. Once done, the employer still has the burden of coming forward with *some* level of justification—precisely what level is not clear, nor could it ever be in principle, given the subjectivity that necessarily surrounds such employment decisions. Finally, even if the employer does prevail at this stage, the plaintiff can still come back with suggestions for alternative procedures. If the court buys them, the employer must too. All of these considerations raise the fundamental question: Whose business is it, anyway?

Yet, even the administration's bill would "overrule" *Wards Cove* in the direction of increasing the employer's burden, as the Justice Department's press release and analysis plainly state. Working within the structure implicit in the 1964 act, that bill would resolve the burden-of-proof issue in favor of plaintiffs by making the employer justify a challenged practice by a standard of business necessity. Under the administration's definition of that standard, an employer would have to show that his practice "has a manifest relationship to the employment in question" or that his "legitimate employment goals are significantly served by, even if they do not require, the challenged practice." By contrast, under the Democrats' bill, which has passed the House at this writing, an employer would have to show that his practice has a "significant and manifest relationship to the requirements for effective job performance." Doubtless there are degrees of difference between those two standards, but only a lawyer billing by the hour could look forward to discerning what either standard means.

We come then to the nub of the matter. Suppose for the moment that we set aside much else in these bills—the compensatory and punitive damage provisions, the prohibition in the Democrats' bill of quotas (meaning that the employer who tries to protect himself from litigation through affirmative action only invites litigation from the other direction), and the latent bombshell of religious discrimination (keeping statistics on the racial composition of one's workforce, based upon appearance when necessary, pales in comparison with keeping statistics on its religious composition). We are still faced in the end with the question whether the government should be trying to so regulate the millions of personnel decisions that are made every day in the American employment market. Most Americans oppose racism and sexism. But the effort to encode and enforce that opposition has proven a nightmare for employers and many employees alike, however much it may have been a boon for lawyers, politicians, and civil rights professionals. Yet we seem bent on proceeding apace, despite every sign of failure—save if the real goal *is* employment by the numbers. Thus, after citing a *Fortune* poll in which CEOs admit that their companies have "specific quotas for hiring and promoting," the administration sanctimoniously adds that the use of quotas "represents a perversion of Title VII and of disparate impact law" and cites Justice Sandra Day O'Connor to the same effect.

If anything should be clear after careful, candid analysis, it is that quotas are *not* a perversion of Title VII: they are a necessary, inescapable product of this entire effort, through law, to stamp out discrimination in the workplace. Employment decisions have about them an inherent element of subjectivity. Yet it is precisely that element—not the underlying unobjectionable acts of hiring, promoting, or firing—that we are trying to regulate when we inquire about an employer's reasons or motives. Not surprisingly, as the business necessity language makes clear, that subjective element is difficult, if not impossible, to regulate—not least because the objective underlying act is *not* itself objectionable. When the law attempts to deal with the subjective alone, it is at its worst. We have here, in fact, a variation on the common law maxim that if an act is not actionable per se, it is not actionable simply because done from a bad motive. Thus, if we have a right not to associate per se, we have a right not to associate for a bad reason. To put the point the other way, proving motive, absent an underlying wrongful act, is so difficult and uncertain that when the law fastens on motive to make wrong what is otherwise unobjectionable, people are forced, as a defense, to try to objectify their behavior. That is precisely what getting the numbers right is all about.

None of this, of course, is to defend unjustified discrimination, which should be condemned at every turn. Rather, it is to defend the *right* to discriminate, which is a very different thing. It is fortunate that most Americans *do* condemn racism and sexism. But like so much else we condemn, from flag-burning to certain forms of "politically incorrect" behavior, there are better ways to do so than by resorting to the force of law. Imagine that Title VII was abolished tomorrow and that employers were told that they could discriminate at will. Would they do so? Some would, of course. But who would imagine that the executives from the Business Roundtable who sat down recently with the civil rights establishment to try to hammer out a new civil rights bill would start closing their doors to qualified minorities and women? And if they did, who would imagine that they could long afford to do so, either in the marketplace of financial survival or in the marketplace of public opinion—arguably the more powerful market in matters of this kind? Would the behavior of and responses to any other employer differ? Are those not the two markets in which all employers have to survive?

Forcing the regulation of employment decisions, however, gives rise to some fairly predictable consequences: employers' behavior changes from cooperative and constructive to defensive and even adversarial. Moreover, the misuse of force, which is inevitable when motives are second-guessed, breeds suspicion and resentment. Who can doubt what poll after poll is showing—that after more than a quarter of a century of efforts to impose fairness in the workplace, ethnic consciousness and hostility in America are at unprecedented levels? In the name of civil rights, attitudes and behavior are becoming increasingly uncivil. The time may be near to rethink fundamentally our approach to civil rights. If we are serious about equality, perhaps we should give serious thought to returning to the idea that civil rights are the rights we all—employer and employee alike—have equally in civil society. These rights include the right to full freedom of association. If it is respect that civil rights are ultimately all about, only free association can ensure that end.

Roger Pilon
Cato Institute

RCRA Lives, Alas!

In the 20 plus years that Congress, under the prodding of the environmental movement, has been enacting major pieces of environmental legislation, enough laws have been passed that nearly every Congress, almost every session, faces a major battle over reauthorization and amendment. Having just completed a protracted and harrowing battle over the Clean Air Act, we are faced with another struggle with another monster, the Resource Conservation and Recovery Act of 1976, better known as RCRA. RCRA is the behemoth of environmental regulations. It goes where it wants and does what it wants, often in glaring contradiction with the environmental standards required by other laws. Neither logic nor excessive economic costs will dissuade it.

RCRA had its origins in the millennial utopian vision and early hysteria surrounding the burgeoning environmental movement of the early 1970s, the so-called environmental decade, kicked off by Earth Day I and following Rachel Carson's admonitions that all man-made chemicals are hazardous, if not outright deadly. This movement embraced the naive belief that all environmental degradation could be halted and the planet saved by enacting legislation mandating zero pollution, zero discharges, zero emissions. That Congress enacted such legislation actually reflects far more poorly on legislators than on the idealistic environmentalists who were burying automobiles and holding mock funerals for Detroit and polluting capitalistic society. This was the era that saw diapers on logging horses in the watersheds above reservoirs in the Pacific Northwest (after the horses had replaced motorized logging equipment that produced hydrocarbon wastes). In addition, the fish-farming industry received threats of wholesale destruction when it was discovered that farmed fish discharged waste in the ponds that fed into streams.

The early experience with the Clean Water Act and the Clean Air Act, especially their onerous zero-emissions standards for many substances, saw many industries shift some discharges from outflow pipes and smokestacks into wet and dry sludges or ashes that were then deposited in waste dumps and landfills. This was an expensive process in itself and merely shifted pollution from some media to others. It also raised fears about pollution of ground water resources, drinking water, and exposure to toxic and hazardous materials in the nation's ubiquitous waste dumps. Thus, the excesses of earlier environmental legislation led to the "need" for additional regulations.

RCRA was designed, theoretically, to solve the entire problem of waste creation and waste disposal. It was enacted to establish the first comprehensive federal waste management system providing for "cradle-to-grave" management of hazardous waste, to establish criteria for municipal landfills, and to authorize a regulatory program for hazardous wastes, including inspection and enforcement authorities.

In 1980 RCRA was amended to require stiffer criminal penalties and to make states compile inventories of active and inactive waste sites. In 1981 Superfund was created to facilitate the clean up of abandoned sites where waste had been mismanaged. Superfund, initially funded at $1.6 billion, now has authorized funding of $15.4 billion. Congress also sought to prevent further mismanagement and called for additional federally funded cleanups. In 1984 the Hazardous and Solid Waste Amendments were enacted to restrict land disposal of wastes and to call for treatment instead. These amendments strongly emphasized command-and-control regulations through very detailed statutory requirements and specific deadlines. There was also an increased emphasis on the cleanup of past releases at hazardous waste management facilities around the country, including those from solid waste management sites.

Cradle-to-grave socialism is a vestige of the failed experiment with communism in the U.S.S.R. and Eastern Europe. It is the antithesis of the American system. At least it was until RCRA brought us the same socialism for all of the nation's hazardous waste, and for all practical purposes for all waste products. Clearly, this is an impossible task. The federal government is incapable of taking an adequate inventory of the nation's gold bullion stored in a very limited number of impregnable vaults. And now we are going to manage every drop of waste produced anywhere in the country? This is physically and economically impossible. Thus, it begets a completely arbitrary and capricious process.

The basic fault with RCRA is that it is far more of a philosophical document than an attempt to find rational solutions for serious environmental pollution problems. Life on earth produces "wastes" as specific resources are converted into other resources, whether it is termites converting wood into sawdust or mankind tossing his garbage into a hole in the ground. Until recently, the garbage dumps of past civilizations were treated as the treasure troves of current generations. Many were designated as world heritage sites or sites of national historic significance. But now, through a unique combination of ideology, ignorance, and fear, we have somehow created a conventional wisdom that all wastes are bad and must be eliminated. Zero tolerance is the key word. There is no safe level of wastes. An amazingly inflexible law with extraordinarily detailed regulations, demanding controls, and a glacially slow permitting system entails almost astronomically high costs. The reason that the costs are so staggering is that RCRA permits only the consideration of risks, not of costs.

Because RCRA considers only risks and not benefits or costs, it is often in conflict with other federal environmental laws. Furthermore, its definition of risk is independent of concentration, degree of toxicity, and likelihood of human exposure. The mere presence of any of a huge list of chemicals in any minute concentration qualifies that substance as a hazardous waste. By then creating a myth that there is no safe level of wastes, it would appear that the aim is to instill a climate of fear in the American public, especially in mothers, who when repeatedly warned that their children are even more at risk than the general public, set out on a very determined course of action to see that there are no waste dumps, landfills, or incinerators in their community. This fear creates and intensifies the NIMBY (not-in-my-backyard) syndrome across the nation. By closing existing waste facilities or preventing their expansion or upgrading and by preventing new facilities from coming on line, this fear exacerbates the few genuine toxic waste disposal problems that we have. This is the height of public irresponsibility by Congress, the EPA, and the environmental movement.

In practice RCRA has also made the environment patently less clean and less safe. Every day individuals, groups, and corporations produce waste products that must be removed, but not with RCRA and the EPA around. Companies routinely spend half a year to obtain the requisite permits to move hazardous wastes; the removal process generally requires a few days at most. No one can operate in such an environment. The wastes pile up, and there is no place to put them. Most businesses have only temporary facilities for storing hazardous wastes. In the face of a genuine need and a mounting risk, the quasi legals, the bootleggers, and even the midnight dumpers appear on the scene—in response to the EPA-created Kafkaesque nightmare. This is EPA's self-vaunted "technology forcing" in action.

With wastes piling up at the back door and a driver with a tanktruck knocking at the front door to see whether a company has any wastes it wants removed, managers are tempted to say "yes" and pay the driver to remove the waste from the premises. With no permits and an ever-smaller number of legal waste dumps, we can be assured that those wastes, whether hazardous or not, will be dumped along the side of some little-traveled, poorly marked, unlit road, or into a marsh or a stream, or down a minepit, an abandoned quarry, or an old well. We would all be much better off if those wastes went into a well-known, well-marked, easily monitored site—no matter how hazardous the wastes or potentially leaky the dumpsite—than if they were handled by Dumpers Anonymous.

Increasingly, emphasis in the RCRA process has shifted to the concepts of waste reduction, waste minimization, and recycling. The waste reduction and waste minimization concepts have been cast in much of the same aura of unreality that characterized the beginning of the environmental movement and its belief in mandated zero discharges. While there is an element of truth in the observation that much of the business world is too often careless in reducing waste and eliminating processes that might save it money, this has become another philosophical movement, with profits generated by waste reduction viewed as an end in itself. Thus, the less we produce, the less will be the waste, and the wealthier we shall all be. Clearly, there are some reality checks to that vision.

As the ads for the movie say, "Its baaaack!" It's time for RCRA reauthorization. And while many in Congress are anything but enthusiastic about another protracted conflict over environmental purity versus jobs and economic growth, many of the key members of Congress are determined to move a bill this year and certainly next year. Furthermore, EPA's own reauthorization briefing booklet adumbrates an ambitious program of continued empire building as well as continued usurpation of governmental functions clearly far better suited for the responsibilities of the states, counties, and communities across the nation, with their vastly different and divergent needs and abilities.

Over 140 bills addressing RCRA issues were introduced in the 101st Congress, and serious consideration of some of these bills is expected in both the House and the Senate. Rep. John Dingell, the powerful and acerbic chairman of the House Energy and Commerce Committee, is reportedly determined to move a bill. The three major RCRA reauthorization bills are those of Rep. Thomas A. Luken (the Pollution Prevention and Recycling Act), of Sen. John H. Chafee (the Municipal Solid Waste Source Reduction and Control Act), and of Sen. Max Baucus (the Waste Minimization and Control Act). These bills deal principally with industrial nonhazardous waste, municipal solid waste, special "large volume" wastes, pollution prevention, and recycling for hazardous and nonhazardous wastes.

Another six narrower but still significant bills deal with everything from waste minimization, tank spills, batteries, plastics, federal facilities, federal procurement practices, tires, bottles, recycling, medical waste, interstate transport of wastes, and products and packaging to revisions of the 1872 Mining Act.

The problem with periodic reauthorization and amendment, especially of environmental legislation, is that enough is never enough. The legislation becomes inevitably further extended, broader in application, tighter in scope, and infinitely more prescriptive and more expensive. To appreciate the insanity of this process, one only has to consider EPA's proposed rule for municipal solid waste landfill regulations under Subtitle D of RCRA. To achieve a tiny decrease in the number of cancer risks possibly associated with hazardous wastes, EPA is proposing to further tighten the 1984 Hazardous and Solid Waste Amendments regulations that cost the nation's counties and communities $11 billion annually and $14.1 billion per cancer risk avoided. The new regulations will raise these costs to $14 billion annually for counties and communities and $19.8 billion per cancer risk avoided. When one considers that the total research budget for the National Cancer Institute's efforts to find a cure for the half million cancer deaths in the nation each year is a mere $2 billion, one is forced to ask precisely what Congress, the EPA, and the environmental movement are trying to achieve. When hundreds of thousands of Americans are dying annually from cancers resulting from personal lifestyles such as smoking, drinking, diet, and sunbathing, and many of the rest are a result of the fact that the miracles of modern chemistry have made it possible for American men and women to live well into their seventies and eighties—long enough for cancer, which is clearly a disease of aging, to occur—one must wonder about the rationality of spending billions of dollars to possibly prevent one additional cancer case. If Congress and the environmental movement are truly worried about cancer, why do they not fund the National Cancer Institute and find the keys to preventing and curing cancer. What is the agenda here?

EPA has reported that the stricter new rules will force the closing of some 600 municipal solid waste landfills across the nation, approximately 10 percent of all the extant landfills. All this will do is exacerbate the problem. As we make people more and more fearful of wastes, we make it less and less possible to dispose of them. We cannot store them, we cannot dump them, we cannot transform them, we cannot incinerate them. We are trapped in a gigantic EPA-created catch-22. In such a critical situation big government will come to the rescue—with massive command-and-control regulations.

There is little hope that American communities and businesses will see through this charade and demand that something be done about it. So much ignorance, anxiety, and fear have been spread around that few understand what is happening. Furthermore, EPA has dispersed the winners and losers, pitting various groups against each other, in the tried-and-true process of divide and conquer. RCRA has caused recyclers to oppose waste disposers and big companies to oppose small companies. As the costs to run a waste facility approach the astronomical, and as the time to acquire proper permits to open a facility stretch out into the years, the problems only worsen. Only the largest and wealthiest waste management companies can succeed. We are slowly getting rid of all the thousands of mom-and-pop waste site operators. RCRA is also in the monopoly-creating business.

Of all the mind-boggling assortment of possible extensions of RCRA in this current reauthorization, there is the likelihood of regulating special "large volume" wastes, many of which would be classified as hazardous except that they currently enjoy exemption. These include the voluminous wastes from oil and gas exploration—and there are nearly one million well sites throughout the nation. There are also mining wastes, wastes from fossil-fuel burners, and even from cement kilns. Regulating these wastes, which many avidly advocate, could shut down the driving force of American industry. It would also make it nearly impossible to carry on mining and oil and gas production, something devoutly desired by much of the environmental movement, and thus would create vast de facto wilderness areas.

Is there any hope that someone, somewhere can come to lead us out of this race into insanity? It is difficult to find anyone with even the courage to point out the nature of this ghastly nonsense. Before Congress takes another step to ratchet down the controls on waste disposal another notch, perhaps it is time Congress paid heed to the words of Frank Blake, former EPA general counsel, who has cogently pointed out the madness of assuming that one can legislate away wastes: "You start from the fact that the concept of hazardous waste probably has more relationship to the concept of sin than to the chemical composition of the waste. Once touched by sin, you are forever tainted." Full circle to Rachel Carson. What the real world needs instead is a way of treating and storing the wastes that life on earth necessarily creates. We can ill afford to continue to bankrupt the nation by chasing a chimera.

Robert J. Smith
Cato Institute

Revising RESPA: Can Homebuyers Be Rescued?

There is arguably no financial transaction that is more anxiety-ridden, confusing, and frustrating than the purchase of a house. The real estate agents and brokers, mortgage brokers and lenders, appraisers, surveyers, title search and insurance companies, homeowners insurance companies, and attorneys create an environment filled with specialized jargon and seemingly endless fees. Many consumers move into their new home with a vague sense that they have paid too much for services they may not have needed, but unsure exactly where the problems lay.

The fundamental difficulty arises because most homeowners are relatively unfamiliar with real estate law and financial requirements. Purchasing a house is an infrequent event for the average consumer. We must rely on experts to guide us through the process, and that creates the potential for abuse.

Evidence of just such abuses led to passage of the Real Estate Settlement Procedures Act of 1974. The purpose of the legislation was to provide more complete and timely information on the nature and costs of the settlement process and to protect consumers from unnecessarily high settlement charges. RESPA has three basic provisions: it imposes certain disclosure requirements so that buyers and sellers are aware of what their respective settlement costs will be; it places restrictions on certain types of kickbacks or referral fees; and it establishes guidelines governing the size of escrow accounts lenders may require for the payment of taxes and insurance.

In 1983 the "controlled business arrangement" amendments were added. Controlled business arrangements refer to affiliate relationships or "direct or beneficial" ownership interests of one percent or more between companies providing real estate settlement services—real estate agencies and affiliated mortgage or title companies, for example. According to the amendments, referrals within a controlled business arrangement must meet three conditions to be considered legal. First, the consumer must be informed of the nature of the relationship between the two companies and of the settlement service provider's "normal charge." Second, the consumer must not be required to use the affiliated company or any other particular settlement service provider. Finally, the entity making the referral must not receive anything of value from its affiliate beyond a reasonable return on its ownership interest or franchise agreement. The Department of Housing and Urban Development has responsibility for overseeing the implementation and enforcement of RESPA.

Technological advances—including the desire by some lenders to reach into real estate offices through computer hookups—have created pressures to review, revise, and clarify some of the regulations and rulings promulgated under RESPA. Rules applying to the use of the new computer loan origination services and restrictions on the form of employee compensation within controlled business arrangements are among the questions at issue.

Attempting to follow the arguments being made by various interests over the nuances of proposed regulatory wording can quickly become as confusing as the legal jargon in a real estate contract. The debates over appropriate safeguards, prohibitions of certain fees, and restrictions on internal business arrangements and structures need to be put into perspective by stepping back a moment from the details of RESPA regulations and focusing on consumers' interests in this area. If the intent of Congress and the HUD regulators is really to benefit consumers rather than to protect the interests of individual service providers within the process, then all policy initiatives should be aimed at just two goals—increasing competition among suppliers of real estate services and increasing the availability of information.

Increasing Competition

It is a sure sign in Washington that there are excess profits in an industry when competing trade associations send representatives to hearings to make charges and countercharges about which way the playing field is tilted and who *really* has the best interest of consumers at heart. That is exactly what happened in hearings conducted in August and September of 1990 by the House Banking Committee's Subcommittee on Housing and Community Development. In many (perhaps most) markets, consumers are probably paying excessive fees for a whole range of real estate services, and the most direct antidote for excess profits is increased competition.

It is important to understand, however, that competition means more than just adding up the number of real estate agencies, mortgage bankers, S&Ls and banks, and title attorneys in town. Dynamic competition must include the ability of all of these service providers to innovate in the fees they charge and the mix of services they provide. Attempts by certain providers to build impenetrable legal walls between various settlement service industries will stifle competition, not enhance it. If the goal is to increase the quality and to reduce the overall costs of real estate services available to consumers, the regulatory and legal impediments to bundling and unbundling these services should be minimized.

There is no way that congressmen, HUD officials, professional economists, or real estate lawyers can predict whether a more efficient market will be created by providing one-stop shopping for real estate services or by providing specialized services. It might be that consumers would find themselves better served by a firm that puts together a package of service through owning a real estate agency, a mortgage lender, a title company, a homeowners insurance company, and so on. On the other hand, it might be more cost effective, and consumers might feel better served, if unbundled services were offered by providers—a real estate agency separate from a mortgage broker separate from an insurance broker. In all probability a mix of firms would evolve so that consumers embarking on the home-buying process would have a choice of using integrated or specialized service providers.

The point is that effective competition—and the concomitant advantages regarding price and service quality—can only occur when individual firms and entrepreneurs are free to define the types of service they will offer. In every industry where there have been efforts to enforce legally binding, restrictive definitions of appropriate lines of business, the result has been reduced competition and harm to consumers.

Just as the structure of competing real estate services firms should be left to the market, so should the fees charged and the decisions about who pays them. Until we allow actual competition, we cannot know what fees will be required or who will bear them.

A firm offering integrated services may be able to save enough on the costs of compiling information about a particular consumer or property, for example, that it would be willing to waive or substantially reduce many standard closing costs for consumers purchasing a package of services. At the same time, that firm might want to allow for payments between divisions or incentive bonuses paid to employees as a means of recognizing service rendered internally. Many vertically integrated firms in other industries often require intrafirm "payments" for raw materials or specialized services as a means of monitoring and controlling costs and generating new business.

Among firms offering more specialized services, new entrants into a market could well find that offering "referral fees" is an effective means of ensuring that their products and services will be noticed. For example, just as in any other line of business, mortgage brokers and real estate agents will be inclined to continue referring customers to

"SURE, REAL ESTATE PRICES ARE SKY-HIGH, BUT KINGS DON'T SELL THEIR CASTLES, AND THAT'S THAT."

lenders they have worked with in the past. Familiar lenders will generally offer more predictable loan approval processes and time tables. Why invest the time to learn about an out-of-town lender's products or practices unless there is some immediate compensation? But the new lender's loan products may represent an improvement for consumers. In this scenario referral fees would act much as advertising in other markets. By increasing the new entrant's ability to publicize his services, these fees would increase effective competition. As long as everyone can offer referral fees, there is no reason to believe that consumers will be harmed by such a system. There is also no reason to believe that the incidence of fees would not change over time. If we begin with a system in which realtors' offices or mortgage brokers must pay a fee to install a particular on-line computer service, for example, the day may come when lenders will install such computer systems free of charge to gain access to a particular customer base.

That said, it is also appropriate to require full written disclosure to consumers about business relationships, the fees charged, and who pays them. Disclosure is the key safeguard from the perspective of consumers. Other restrictions generally benefit one or another set of providers.

Finally, in the 1990 House hearings there was considerable concern expressed about how homebuyers become a "captive" of their real estate agents, who may then refer buyers to firms in which the agents have a financial interest or an ongoing relationship. In evaluating that concern, it is important to understand exactly when competition takes place.

Before selecting a real estate agent, consumers may often talk with friends and neighbors about their experiences, speak with different agents at open houses, and even set up formal interviews to discuss competing agencies' services and marketing plans. For most consumers an important part of the process of selecting a real estate agent is finding a professional they feel they can trust. It is in this selection process that competition takes place. But once an agent is chosen, we should not be surprised that consumers place considerable confidence, for good or ill, in their realtors' recommendations about everything from neighborhoods and schools to lenders and title companies. Similarly, no matter how careful one is in selecting a doctor, patients do not generally ask for competing diagnoses before taking an antibiotic. We seek out professionals in whom we believe we can trust.

Any time we depend on professionals, we are to some extent at their mercy, of course. But that is not cause for despair as long as consumers' options are kept open. Real estate agents are, in fact, potentially the most vulnerable to consumer discontent. They are the only people with whom homebuyers have an ongoing relationship throughout the entire process—from the decision to begin looking for a new house to the closing—and they are the actors within the process most likely to benefit from a happy homebuyer's referral or return business. For this process to work at its best, however, individual homebuyers discussing mortgage rates, closing costs, and time lags must have alternatives to compare. If the system is rigged from the beginning through rigid definitions of who can do what when for what price, consumers will continue to suffer. As one witness remarked to the subcommittee last summer, "a captive market is an exploited market."

Increasing Information

Of course, increased competition and increased information are in many ways inextricably linked. Making consumers aware of the availability of alternative sources and types of services would go a long way toward generating more adequate competition within the real estate services industry.

But there has been concern expressed about the most recent innovation in bringing information to consumers—the computerized loan origination services. These are computer programs installed in realtors' offices that allow real estate agents or a financial services representative employed by the realty firm to work with consumers in comparing and contrasting different loan options. Some of these systems display the loan products of only one lender, such as Citicorp's MortgagePower. Other systems display rates and products offered by competing lenders. Through the wonders of computer technology, consumers are able to rank alternatives by monthly payments, cash required at closing, or total costs over the life of the loan.

Of course, such computer display systems are not limited to realtors' offices. Mortgage brokers also use computer systems that allow them to compare competing mortgage products in an effort to find the best loan for their customers. Moreover, mortgage brokers often provide services that realtors with computerized loan origination do not.

In addition to the questions about who pays for the services provided through computerized loan origination, there is also undue attention being paid to the question of how many lenders are represented on these systems. The most important aspect of these computerized systems is that they provide more readily accessible information than consumers had before. In that sense they represent an undeniable improvement. We can only speculate about what these systems will look like, say, five years from now, but there is reason to believe that they will develop in a way that provides more information, not less.

Consider, for example, the other primary computer system used by realtors—the multiple listing services. No doubt each agency would, if given the choice, prefer to show buyers only those houses it had listed for sale and thus capture the entire commission. But once some agencies were willing to settle for half the commission in their attempt to gain customers by providing access to information about all the homes for sale in a particular area, all real estate agencies soon had to follow suit or lose business. Similarly, unless there are significant advantages to displaying the products of just one lender, and unless those advantages are passed along to consumers, homebuyers over time are likely to exhibit a preference for real estate agencies or mortgage brokers that provide access to a choice of lenders.

There is no reason for concern, however, even if some realtors and their customers are satisfied with a single-lender computerized loan origination system because, for example, loans can be approved in a matter of minutes. That does not mean that there is an absence of competition. Just as the insurance industry incorporates both independent brokers and brokers who write policies for only one company, there is no reason that an efficient, competitive market cannot encompass both types of computerized loan systems, each with its own advantages and disadvantages. Again, the only regulatory requirement should be that homebuyers be informed of the type of system their realtor or broker uses and that they be allowed to choose freely where to obtain the information.

Finally, it is important that policymakers not judge the desirability of proposed changes against their ideal of a perfect world. As much as we might wish it were otherwise, consumers signing loan contracts and paying for settlement services today are not diligently searching for the best deal. A July 1988 Federal Trade Commission study cites evidence that in at least one major city, more than 80 percent of homebuyers entered into a loan agreement with the first lender they contacted without doing any comparison shopping. Such results are more likely the norm than the exception. The purchase of a home is a time-consuming experience, and people consider their time valuable. That is precisely why it is easy to find evidence that buyers can be "steered" to selected lenders. Keeping this real world in mind, we should accept regulatory changes as long as they offer a reasonable probability of making *some* consumers better off by making additional information more readily available without making worse off those consumers already disinclined to shop for the best value.

In short, no one who has ever purchased a home can doubt that the current system is subject to abuse. It is difficult for consumers who enter a process only a few times in their lives to judge accurately the quality of the services they are receiving. But wrapping the system up in restrictive regulations and red tape only makes the situation worse. The best way to ensure that consumers' interests are protected is to do everything possible to promote increased competition among suppliers and increased information for consumers. Homebuyers will be protected by disclosure requirements—not by regulations that limit their options by outlawing innovations among real estate services suppliers.

C.E.

Global Warming: The New National Academy of Sciences Report

In April 1991 the National Academy of Sciences released *Policy Implications of Global Warming*, a report that many say represents a major shift in "official" thinking about the enhanced greenhouse effect. In fact, a close read reveals much greater complexity.

As most academy documents, this is a committee product, and it therefore attempts to accommodate the range of opinion of the participants. Consequently, depending upon which aspects of the report one chooses to emphasize, it can be interpreted either as a very conservative document—emphasizing great scientific uncertainty and recommending modestly expensive policies—or, because it recommends action, as a repudiation of the perceived U.S. policy of caution and forbearance on global warming.

In fact, it is *two* reports. One is a very cautious summary of the science (or nonscience) surrounding global warming, and the other a series of policy recommendations that are made despite the first section. This dichotomy is hardly surprising, given the makeup of the various subsidiary panels that generated the final document. The chair of the "synthesis panel" was former Senator and Governor Daniel Evans of Washington, and by my best guess only one of the fourteen panel members is a bona fide climatologist by training. Seven may best be characterized as environmental administrators, with a strong bent towards the United Nations.

Committee science is a risky undertaking. Thomas Kuhn's wonderful *Structure of Scientific Revolutions* (required reading at my alma mater, the University of Chicago—let it never be deconstructed) demonstrates that science tends to advance when a few individuals exploit inconsistencies in a prevailing paradigm. Doing science by committee is therefore guaranteed to be behind the times, as dissenters are not likely to be represented.

At any rate, on the science side, "[t]he panel concludes there is a reasonable chance of the following:"

Scientific Conclusion #1: In the absence of greater human effort to the contrary, a greenhouse gas concentration equivalent to a doubling of the preindustrial level of CO_2 will occur by the middle of the next century.

Where should these "greater human efforts" concentrate? It is the developing nations—not economic powers such as the United States—that are dramatically increasing their contributions of CO_2. In fact, the academy report demonstrates that after allowing for our large area and bicoastal population, the United States is the most efficient producer of carbon dioxide per unit of economic output (meaning that we emit the *least*) in the world.

A look at the report's accompanying table, reproduced here as Table 1, is instructive. The centrally "planned" economies produce the most greenhouse gases per unit of economic output. The United States—with the largest transportation needs of any nation—produces approximately one-third, or 1.0 metric ton/$1,000 GNP, of the centrally planned output of CO_2. All of the nations that produce less than the United States are smaller geographically. Japan, often cited for its efficiency, is second from the bottom of the table, but almost all its citizens live near each other, and the country is highly nuclear. France, the cleanest of all, is also the most nuclear and emits .34 metric ton of CO_2/$1,000 GNP.

Because of our transportation needs, without nuclear energy it is unlikely that the United States will get much below .75 ton. And even with nuclear energy Americans will still use a lot of cars, trains, and planes to travel long distances, so we probably shall not get much below .5 ton. "Reforestation" is a temporary fix, as mature (nongrowing) trees do not accumulate carbon.

Now how much does this mean in terms of global warming? If we accept the climate models (obsolete ones from the mid-1980s) that fuel the popular vision of catastrophe with their mean global warming of 4.2°C for a doubling of CO_2, our reduction would cut global emissions by 10 percent, good for, say a .2°C reduction in warming. (It has to be one-half of the 10 percent figure because the other (non-CO_2) greenhouse gas increases account for about 50 percent of prospective warming.) We shall also limit chlorofluorocarbons, as noted below, and that will buy an additional .4°C or so. Under the apocalyptic climate scenario, one would never notice this small a reduction in temperature unless he had been told that it had happened. In fact, some policymakers are finally asking what must be *the* most politically incorrect question about mitigation of global warming: Is it really worth the effort?

Perhaps the most interesting aspect of all this is that the industrialized democracies should not be the target. They are the most efficient producers of goods and services with respect to carbon dioxide emissions. Rather, the communist nations are the ones that produce the most CO_2 per unit of economic output. That will not change until their economies are much more efficient, that is, no longer centrally planned. Thus, action on global warming would be more effective if it involved destabilizing communism abroad rather than imposing collectivist ideals at home.

There is, of course, another means of reducing carbon dioxide emissions in the West: economic stagnation. In a country with the transportation needs of the United States, this could easily be accomplished with a large carbon-based energy tax. Although this seems absurd, the desirability of stagnation was the point of the keynote speech at the Interparliamentary Conference on the Environment chaired by Sen. Albert Gore last year, when the audience was informed that "sustainable economic growth" was impossible to achieve without destruction of the global environment.

Scientific Conclusion #2: The sensitivity of the climatic system to greenhouse gases is such that the equivalent of a doubling of CO_2 could ultimately increase the average global temperature by somewhere between 1°C and 5°C.

The operative points here are *ultimately* and the specified range of temperature. In fact, this NAS report has *reduced* the lower limit of expected change from previous reports and has broadened the expected range. Translation: The uncertainty about global warming has *increased*, as has the length of time that warming may take.

Why? If the warming of the past 100 years (.5°C) is taken to be a response to human greenhouse alterations—an argument that is made more often than not in environmentalist literature—the expected warming for a doubling will be only slightly more than a degree—something again that no one would notice unless he was told that it had happened. On the other hand, if very little of the observed slight warming is thought to be from the greenhouse effect (a view that is more prominent in the scientific literature, because much of the warming of the past 100 years was before most of the greenhouse gases were emitted), then the time frame over which warming will take place will be very long—probably long enough to spread it out beyond the political statute of limitations—somewhere around 200 years.

Scientific Conclusion #3: The transfer of heat to the deep oceans occurs more slowly than within the atmosphere or the upper layers of the ocean. The resulting transient period, or "lag," means that the global average surface temperature at any time is lower than the temperature that would prevail after all the redistribution has been completed. At the time of equivalent CO_2 doubling (2050) the global average surface temperature (increase) may be as little as one-half the ultimate equilibrium temperature (increase) associated with those concentrations.

Table 1: Carbon Dioxide Emissions per Unit of Economic Output

Country	Emissions (metric tons CO_2/year)	GNP (billions of $/year)	Emissions/GNP Ratio (metric tons CO_2/year)
China	2,236.3	372.3[a]	6.01[b]
South Africa	284.2	79.0	3.60
Romania	220.7	79.8[a]	2.77[b]
Poland	459.4	172.4	2.66
India	600.6	237.9	2.52
East Germany	327.4	159.5[a]	2.05[a]
Czechoslovakia	233.6	123.2[a]	1.90[b]
Mexico	306.9	176.7	1.74
U.S.S.R.	3,982.0	2,659.5[a]	1.50[b]
South Korea	204.6	171.3	1.19
Canada	437.8	435.9	1.00
United States	4,804.1	4,880.1	.98
Australia	241.3	246.0	.98
United Kingdom	559.2	702.4	.80
Brazil	202.4	323.6	.63
West Germany	669.9	1,201.8	.56
Spain	187 7	340 3	.55
Italy	359 7	828 9	.43
Japan	989.3	2,843 7	.35
France	320.1	949.4	.34

[a] Estimates of GNP for centrally planned economies are subject to large margins of error. These estimates are as much as 100 times larger than those from other sources that correct for availability of goods or use free-market exchange rates.

[b] The emissions/GNP is also likely to be underestimated for centrally planned economies.

Source: National Academy of Sciences, *Policy Implications of Global Warming* (Washington, D.C.: 1991).

This is an admission that the time to the expected warming of 1°C to 5°C may be very long indeed, for the atmosphere responds in such a way that the second half of the warming will take approximately twice as long as the first half. Translation: if the doubling time for the effective increase in CO_2 is 2050, the associated warming would not be fully realized until *2150*. Does anyone seriously believe that we are prescient enough now to understand the society and technology that will exist then? Should we alter our way of life dramatically now, when we do not even know that such a world may in fact find adaptation to warming quite easy?

Suppose that this was 1890 and that a paper just published said that a doubling of carbon dioxide would raise the temperature five degrees (such a paper was published by Svante Arrhenius in 1896). If someone said that in the next 100 years, as a result of the intellectual capital generated along with that increase, human life expectancy would increase by 42 percent, corn would routinely yield 150 bushels per acre, and people would fly around in aluminum tubes at 600 miles an hour while listening to a Beethoven symphony played from a box in their shirt pocket, he would have been dismissed as a lunatic. But that is what happened. To say that over the next 150 years similar developments will not take place—including the continued technological control of ecosystems—flies in the face of history. Might it not be a bit cynical of us to compromise future development by purposefully limiting economic growth now?

Scientific Conclusion #4: A rise of sea level may accompany global warming, possibly in the range of 0 to 60 cm. (0 to 24 inches) for the temperature range listed above.

This projection represents a dramatic reduction in estimates of sea level rise from the highly publicized (and scientifically irresponsible) projections of up to 25 feet that were fashionable a decade ago. The reason for this change is that the National Academy of Sciences has finally recognized something long known to mere climatologists: if the polar regions warm slightly, snowfall (and ice depth) increases dramatically. Right now, the winters there average around -40°C, and it is literally too cold to snow. Warm that up a few degrees and the air will hold more moisture, which must fall as snow at those temperatures. Evidence? The Greenland ice cap is growing, and the only air mass that shows significant warming is the Siberian Express—which has warmed up from −40°C to −38°C. This will represent no great loss to Florida citrus.

Scientific Conclusion #5: Several troublesome, possibly dramatic, repercussions of continued increases in global temperature have been suggested. No credible claim can be made that any of these events is imminent, but none of them is precluded.

This is the new argument being generated as climate models cut back their expected warming and the planet itself warms so little: "Yes, but we cannot discount the possibility of surprises in the future." Try this: imagine a future *without* surprises.

The chapter "Recommendations" begins, "Despite great uncertainties, greenhouse warming is a potential threat sufficient to justify action now." The following are recommended:

1. Continue the aggressive phaseout of CFC (chlorofluorocarbons) and other halocarbon emissions and the development of substitutes that minimize or eliminate greenhouse gas emissions.

This is the course that the United States recently proposed to the draft climate treaty meeting in Chantilly, Virginia, last February, because it is the most efficient way to reduce warming emissions in the near term. An additional advantage is that the putative cause of global stratospheric ozone reduction is also eliminated. While this latter issue is somewhat complicated by the fact that the cancer-causing type of radiation that stratospheric ozone blocks is *decreasing* (it should be increasing) at the surface, chlorofluorocarbons remain a very exotic, long-lived chemical that people will gladly replace if the substitution process is not prohibitively expensive.

2. Study in detail the "full cost social pricing" of energy, with a goal of gradually introducing such a system.

This recommendation has generated the most controversy, and with good reason. Among other things, it implies a degree of central command and control of the energy economy that most will find onerous, as well as inefficient. Nonetheless, the operative words here are *study* and *with a goal*, which are far short of direct implementation.

3. Reduce the emission of greenhouse gases during energy use and consumption by enhancing conservation and efficiency.

The NAS report calls for such measures as more energy-efficient building codes, improved efficiency of the U.S. automotive fleet (via CAFE and taxation), improving appliance efficiency standards, and "encouraging public education and information programs for conservation and recycling."

The question remains as to how these programs are to be implemented. It seems that energy efficiency is economically desirable, so is it necessary that the federal government mandate it so? Apparently. The next recommendation says, "The United States should adopt a systems approach that considers the interactions among supply, conversion, end use, and external effects in improving the economics and performance of the overall energy system." Maybe global warming really *is* the last redoubt of the central planners.

You get the idea. Finally, the report suggests that global deforestation should be reduced (which does *not* mean limiting timber harvests; rather, it means managing forest resources in a way that increasing amounts of carbon dioxide are captured by trees), that we should research how to adapt crops to different climates, and that we should build dams and levees with the consideration that climate *does* vary, which incidentally, it will do with or without the greenhouse effect.

But perhaps the most interesting of the recommendations calls for serious investigation of so-called "geoengineering" to combat climate change, including fertilization of the southern ocean (which is currently limited by iron availability) to stimulate the capture of carbon dioxide, and the possibility that maybe we could enhance cloudiness (and thereby reverse warming) with purposeful emissions.

Why is this so interesting? Because it is an admission that we cannot stop a major warming without draconian economic interference. In fact, if warming is going to be bad—and both the observed data and the climate model suggest more and more that things are looking otherwise—we shall have to actively fight our way out of it with high technology rather than with a foolish and ineffective romance with self-induced poverty.

Patrick J. Michaels
University of Virginia

The Total Cost of Regulation?

"We estimate the annual net cost of all regulations to be roughly $44 billion, less than one percent of the Gross National Product." That is the conclusion of a major new study of the total costs and benefits of federal regulation. The authors of this study are Robert Hahn, a resident scholar at the American Enterprise Institute and an occasional contributor to *Regulation*, and John Hird, a professor of political science at the University of Massachusetts. The study was published in the winter 1991 issue of the *Yale Journal on Regulation.*

Most readers of *Regulation* will probably conclude that the authors of this new study have grossly underestimated the costs of regulation. This study, however, merits the attention of the *Regulation* audience, both for its contributions and its limitations. This note summarizes the approach, conclusions, and limitations of this important new study. Those who wish to pursue this issue further should read the original article.

The new study by Hahn and Hird is the third similar compilation of the total cost of federal regulation. The common approach of these three studies was to summarize and evaluate the estimates of the costs of specific types of regulations from the studies then available, make a "best guess" estimate in those cases where the available studies provide a range of estimates, and then sum these estimated costs across the range of regulations included in the study. The first of these studies, by Murray Weidenbaum and Robert DeFina, estimated that the total cost of federal regulation was about $66 billion in 1976, about $126 billion in 1988 dollars. The second study, by Robert Litan and William Nordhaus, estimated that the total cost of federal regulation was somewhere between $35 billion and $91 billion in 1977, about $63 billion to $164 billion in 1988 dollars, a wide range but one that is consistent with the prior estimate by Weidenbaum and DeFina. The Hahn and Hird study, in contrast, estimates that the annual net cost of federal regulation was about $44 billion in 1988.

Distinctive Characteristics of the New Study

The new estimates by Hahn and Hird differ from the prior estimates for four primary reasons.

First and most important, the new estimates represent *net* costs. The total cost of federal economic regulation in 1988, for example, is estimated to be $217 billion to $256 billion. Most of this cost, from $172 billion to $210 billion, however, consists of transfers—costs to some parties that lead to increased incomes to others. Subtracting these estimated transfers from the estimated total cost leads to an estimated net cost of federal economic regulation of about $46 billion. Similarly, the total cost of federal social regulation is estimated to be $78 billion to $107 billion. These regulations, however, are estimated to yield benefits (in terms of the value of improvements to health, safety, and the environment) of $42 billion to $182 billion. Hahn and Hird make a "best guess" that federal social regulations led to an annual net benefit of $2 billion in 1988. Their estimate, thus, of the annual net cost of federal regulations is the difference between their estimate of the net cost of economic regulation and

"DID YOU HEAR THE ONE ABOUT THE GUY FROM THE ENVIRONMENTAL PROTECTION AGENCY WHO TRIED TO ENFORCE THE NOISE CONTROL ACT?"

the small net benefit of social regulation.

Second, a substantial part of the cost of federal economic regulation in the mid-1970s was eliminated by the subsequent deregulation in the late 1970s and early 1980s. Hahn and Hird estimate that the annual net savings from the reduction in economic regulation range from $34 billion to $43 billion (in 1988 dollars).

Third, the Hahn and Hird study includes estimates of the costs of several types of federal economic regulations not included in the prior studies: trade barriers, agricultural price supports, postal rates, and telecommunications.

Finally, the number and quality of the studies of economic regulation has increased substantially since the prior estimates were made.

In summary, the Hahn and Hird study leads to a substantially lower estimate of the annual net cost of federal regulation than the prior estimates of the total cost of these regulations. This new estimate, however, does *not* indicate that either the net or total cost of federal regulation has declined in the intervening years. The Hahn and Hird study is not comparable to the prior studies in the four dimensions summarized above. The costs of some types of economic regulations clearly declined, but the cost of other types, most importantly including trade barriers, clearly increased. The costs and, possibly, the benefits of social regulations, most importantly including the 1977 amendments to the Clean Air Act, clearly increased. We do not yet have an adequate basis for estimating the cost of federal regulation over time. Another lesson from each of these studies is that the estimates of the costs, transfers, and benefits of many types of federal regulations differ substantially among the available studies. As a consequence, we do not yet have an adequate basis for a federal "regulatory budget," however desirable that might be in disciplining the total cost of regulation.

Limitations of the New Study

Can the annual net cost of regulation really be as low as $44 billion? The answer to that question is clearly "No" for several reasons, most of which are recognized by the authors of the new study. The study by Hahn and Hird has six major limitations.

First, the study does not cover all of the major types of federal regulations in 1988. The most important of these excluded regulations include the regulation of banks and other financial institutions, electric power, the disposal of hazardous wastes, and the cleanup of abandoned hazardous waste sites.

Second, the study does not include the major new federal regulations approved since 1988. The most important of these are the 1990 amendments to the Clean Air Act and the new Americans with Disabilities Act.

Third, the study does not cover the many types of regulations by state and local governments. The most important state and local regulations are the regulation of insurance, occupational licensing, land-use controls, and selective rent controls.

Fourth, in many of the component studies on which the Hahn and Hird study (and the two prior studies) are based, the estimates of the efficiency costs of regulation include the effects on allocative efficiency (the combination of final output) but not the effects on production efficiency (the costs of producing a given output). There is growing evidence that many regulations reduce production efficiency as well as allocative efficiency.

Fifth, the Hahn and Hird study reflects a peculiar asymmetry in the treatment of economic and social regulation. Economic regulation is assumed to generate transfers but no benefits to the general public; such benefits are probably small, but the potential types of these benefits should at least be acknowledged. Social regulation, in contrast, is assumed to generate benefits but no transfers. Since these regulations, however, are uniform across people with quite different preferences for "social goods" such as safety and environmental conditions relative to other goods and services, these regulations generate transfers from people who have low relative preferences for social goods to those who have high relative preferences for these goods. A symmetric treatment of economic and social regulation should probably account for costs, benefits, and transfers for both types of regulation.

Finally and most important, the new study (as well as the two prior studies) assumes that no resources are expended to seek a favorable change in regulation or to defend oneself against an unfavorable change. Those of us who live in Washington probably overestimate the magnitude of these "rent-seeking" and "rent-defending" costs, because that is the source of much of the income in political capitals. But the potential magnitude of these costs is huge, an amount up to the level of the efficiency costs plus twice the magnitude of the transfers resulting from regulation. The actual level of these costs is probably much lower than the potential costs—primarily because of the asymmetry among groups in the costs of organizing effective political activity—but it may still be large. Unfortunately, there is still no plausible estimate of the magnitude of these costs that is attributable to regulation. The primary implication of this point is that the net cost of regulation is surely higher, but by some unknown amount, than the estimates from this study—and may be much higher.

The uncertainties specific to this type of study suggest that these estimates of the cost of regulation should also be checked against other types of evidence. Several studies based on macroeconomic data, for example, suggest that one-tenth to one-quarter of the reduction in productivity growth in the late 1970s was attributable to the increase in regulation in that period. Several recent studies suggest that the combination of conditions that lead to the unusually high employment of lawyers in the United States may reduce U.S. GNP by about 10 percent.

In summary, the new estimates by Hahn and Hird of the net cost of regulation in the United States should be regarded as a lower bound. Other types of evidence, however, suggest that the upper bound on this cost may be as much as 10 times higher. Good regulatory analysis and policy will continue to be important to our economic growth and general welfare.

W.N.

Level Playing Fields: International Standards, Product Certification, and the Global Marketplace

"I don't think they play at all fairly," Alice began . . .
"they all quarrel so dreadfully one can't hear oneself speak—
and they don't seem to have any rules in particular;
at least if there are, nobody attends to them—and you've no
idea how confusing it is."—Alice in Wonderland

Executives of U.S. companies trying to make sense of product standards in other countries must often share Alice's frustration. Standards governing the manufacture, design, safety, or performance of products can vary substantially across national borders, but exporters must abide by these rules no matter how irrelevant, divergent, or obtuse they seem. For those doing business in foreign countries, the game of "international trade" is not played on a single level field, but on many uneven fields, each with its own set of rules and referees.

Although the growth of multinational corporations, the rise of newly developed countries, and repeated GATT negotiations have helped soften classic trade barriers such as tariffs and quotas, product standards continue to pose problems for exporters in two basic ways. First, national standards often favor domestic industries and discriminate against foreign producers. Second, requirements that products be "certified" as complying with national standards are often coupled with procedures that limit access to or complicate the certification process.

Divergent National Standards

Some product standards are justified by a perceived need to protect consumer safety, consumer health, or the environment. Other standards are adopted to ensure product compatibility or to "uniformly define and accurately describe products." Product standards are not automatically barriers to international trade, of course, and most industries support a certain amount of voluntary standardization. Indeed, one electronics industry representative acknowledged, "Standards accepted by an industry can ensure compatibility and reduce development risks for manufacturers." Because standardization has generally taken place at the national level, however, the standards of different countries often reflect national practices and conventions rather than the state of the art for any given industry.

This bias often arises simply because product standards are developed by using information available from domestic manufacturers and end users. Indeed, in the United States many standards are developed by the industry members themselves. One nation's standards need not be "better" in the sense that they provide a greater degree of safety or are more environmentally friendly than those developed elsewhere, but if incorporated into procurement orders or government regulations, such standards can become barriers to trade. Even when they are not intentionally discriminatory, divergent national standards can raise development and production costs by forcing manufacturers to adapt products to the differing regulations of each country.

The development and adoption of generally recognized international standards is a logical solution to this dilemma. This is not a new idea—international standardization in the electrotechnical field began early in this century—but it was not until the founding of the International Organization for Standardization (ISO) in 1947 that a more extensive program of internationalization was begun.

The ISO was founded to facilitate "the international coordination and unification of industrial standards." Membership, limited to the national body that is "most representative of standardization in its country," has increased from the original 25 members to 73 as of January 1990. In addition, some 14 other countries have established less formal relationships with the ISO, and the organization has consultative status with the U.N.'s Economic and Social Council. Over 70 percent of the ISO's members are governmental or legal institutions, and the remainder are private organizations with strong links to their respective national governments. The scope of the ISO's standards program covers all fields except the electrotechnical field, which is the responsibility of an affiliated organization, the International Electrotechnical Commission (IEC). The ISO has published more than 7,000 international standards.

ISO standards are not universally accepted, however. Countries can be selective about which standards they adopt, and divergent national standards are often retained when domestic interests advocate such action. Various national standards-setting institutions have also resisted ceding authority to the ISO.

In fact, the United States has not wholeheartedly supported the ISO. In 1988 the United States ranked fourth behind France, the United Kingdom, and West Germany in the number of ISO secretariats held. Few U.S. firms have aggressively participated in the organization's efforts, and in fact, fewer than 30 of the almost 40,000 voluntary standards in the United States are ISO or IEC standards.

But this is changing. The increased interest of U.S. companies in foreign markets and the efforts of the U.S. government to lower trade restrictions are focusing attention on the problems of technical trade barriers. In addition, the decision of EC countries to harmonize their divergent technical standards by the end of 1992 has resulted in the fear of a "fortress Europe." Consequently, many non-European nations, including the United States, are looking to the ISO to help ensure continued access to European markets.

In Europe most national standards institutes are governmental or government-endorsed organizations. Consequently, standards are frequently issued as formal regulations, and compliance is usually mandatory. In addition, European standards often emphasize design specifications rather than product performance.

EC 1992 has moved the Europeans toward regional standardization, and several quasi-private organizations have been established to oversee the process. The European Committee for Standardization (CEN), for example, is a nonprofit international association, designed to mirror the ISO, but with jurisdiction over standards in Europe. Although technically a private institution, CEN's primary members are the various national standards institutions of the EC countries, and CEN's program of work is largely dictated by the Commission of the European Communities and the EC parliament.

The centralized nature of the European system and the fast-approaching reality of EC 1992 have precipitated a reexamination of the U.S. domestic standards system. In this country standardization is largely a private-sector activity, and standards are promulgated mainly by trade associations or private organizations such as the American National Standards Institute (ANSI) and the American Society for Testing and Materials (ASTM). Spurred by a powerful consumer rights movement, U.S. industries have generally been willing to contribute the financial and technical resources necessary to develop voluntary standards. Meanwhile, liability considerations and the incorporation of the standards into procurement specifications and contracts assure industry compliance. Finally, the development of standards by private industry has resulted in government regulations that emphasize performance and safety rather than design.

The significant differences in the U.S. and European standard-setting systems have led the National Institute of Standards and Technology (NIST), a branch of the Department of Commerce, to suggest the formation of a single government-sponsored Standards Council of the United States of America (SCUSA) that would serve as the official approving body for U.S. standards and certification processes. SCUSA, as originally proposed, would also provide a focal point for standards-related trade negotiations and would finance U.S. representation before international standards bodies.

This proposal has been widely opposed by existing standards development organizations. During NIST-sponsored public hearings on the proposal, 207 of the 291 commenters endorsed the current process for developing standards. Although many of these commenters welcomed increased government participation, financial support, and technical assistance in the face of new international demands, few individuals supported the introduction of formal government oversight. In fact, approximately half of those testifying endorsed ANSI as the major focal point for U.S. standardization and as the organization that should represent the U.S. system internationally.

ANSI already serves as the main representative of the U.S. standards community internationally. As the U.S. member body in both the ISO and the IEC, ANSI coordinates the efforts of the approximately 20,000 individuals who participate in the development of U.S. positions on international standards. ANSI also represents the United States before the Pacific Area Standards Congress.

Some individuals and agencies within the federal government (particularly NIST) have argued that only governments can effectively negotiate with other governments. These skeptics question the ability of a private institution to represent adequately U.S. interests before international standards-setting bodies. ANSI's experience with the European standards community indicates this may not be a problem. ANSI has been granted observer status on the European Telecommunications Standards Institute, and efforts are underway to gain similar status before CEN and CENELEC. ANSI already serves as the distributor of CEN/CENELEC standards in the United States and acts as an official commenting body when European draft standards are circulated for public review.

In addition, the European Community has indicated a willingness to defer to existing international standards and to develop standards in conjunction with the ISO whenever possible. The ISO may thus be able to function as a mediator between the European and U.S. standards communities. Its membership in the ISO puts ANSI in a position to influence European standardization activities and to promote U.S. interests.

It seems unwise at this point to overhaul or supplant the existing U.S. standards development system. Rather, the U.S. government should continue to support and cooperate with the system for promulgating voluntary standards that is evolving under the auspices of ANSI and the ISO. No system is perfect, of course, but for U.S. exporters, participation through ANSI and the ISO in the development of European and international standards will help secure improved access to European markets. More widely accepted product standards will not address the entire problem, however. The problem of testing and certification must also be resolved.

Testing and Certification

Setting standards is one side of the coin—ensuring that products meet those standards is the other. When imported products must be certified as complying with national standards, but foreign producers are not afforded the same access to the certification process that domestic producers enjoy, an additional trade barrier is created.

Organizations that promulgate standards generally do not certify compliance with those standards. In the United States, for example, product certification schemes run the gamut from simple to complex. Many potentially hazardous products or classes of products must be certified by government agencies before they can be sold. Sometimes the responsibility for testing and certification is entrusted to testing houses or laboratories such as Underwriters Laboratories (U.L.), an organization that dominates third-party testing in the United States. Because of the voluntary nature of most U.S. standards, however, "self-certification" by manufacturers is usually permitted.

European countries also have diverse systems for testing and certification. When European unification is complete, however, most products sold throughout Europe will need a "CE" (Communité Europééne) mark signifying compliance with all essential EC standards. Because mutual acceptance of product certification among community members is a stated goal of the European Community, member countries will be required to permit the importation of products with the CE mark. Whether an equivalent degree of acceptance will be extended to non-EC manufacturers is uncertain.

Self-certification is theoretically possible under EC directives for certain "nonregulated" products (though it is not always clear which products are not regulated). To self-certify a manufacturer must test the product and then issue a "Declaration of Conformity" stating that the product complies with relevant CEN/CENELEC requirements. All testing must be documented so that if any EC country challenges the declaration, the documentation can be reviewed. The manufacturer could be required to submit the product to a qualified laboratory for testing. Most U.S. manufacturers would prefer to self-certify the products they export to Europe, but some producers who have tried self-certification have complained that bureaucratic red tape leading to costly delays in marketing is hindering such exports to the European Community. As a practical matter, therefore, manufacturers will generally need to submit their EC-bound products to third-party testing laboratories for certification.

The European Community intends to accredit testing houses for certification purposes, but because legal responsibility for final certification can only rest with EC entities, only European-based laboratories will be so recognized. Thus, U.S. manufacturers will need to submit products to European laboratories for testing. This will not only create logistical problems, but many U.S. businessmen also worry that they may be forced to undergo more costly and time-consuming approval procedures than their EC-based competitors. Certification issues loom as one of the most pressing problems for U.S. exporters.

Some in the United States have advocated the development of an official "U.S." mark, similar to the CE mark, to identify foreign products approved for import into this country. Such a mark, it is argued, would strengthen the U.S. government's position in bilateral or multilateral trade negotiations.

Such an approach would be a radical departure from current U.S. practice, however. The constitutionality of a federally sanctioned mark that would guarantee product acceptance throughout the United States regardless of local or state regulation is questionable. Further, Underwriters Laboratories, among others, has charged that the proposal would be "an exercise in bureaucracy."

U.L. has also warned that pressing for European accreditation of U.S. testing houses could have undesirable consequences as the European Community would surely expect a quid pro quo. According to U.L., "This would mean that products certified by all 'notified bodies' in Europe—twelve, twenty, fifty, or hundreds of such bodies—must be accepted in the U.S. by federal, state, and municipal authorities, as well as by certification organizations." Such a move would require the complete restructuring of the U.S. system for regulating products.

Rather than press for European accreditation for U.S. laboratories, U.L. has argued for the development of a system of equal access based on bilateral agreements between U.S. and EC testing organizations. Products could be tested at U.S. laboratories for compliance with EC standards, but the actual certification would be issued by an affiliated, accredited European testing house. EC officials have indicated that such arrangements might be acceptable.

A similar arrangement already exists for registering quality-assurance programs. Testing organizations and standards institutions from five countries —the United Kingdom, Japan, Australia, Israel, and the United States—have formed a network to allow producers in one country to register their ISO-based quality-assurance programs in another country by using the facilities of the domestic network member. As the U.S. member of the network, Underwriters Laboratories has become a "gateway" for U.S. manufacturers who want to register their quality assurance programs in any or all of the other countries involved. Because Britain is a member of both this network and the European Community, this system may provide the means to register these programs throughout the European Community after 1992.

If this system could be expanded to include more countries and to cover a wider variety of standards, the problems of testing and certification as a technical barrier to trade would be significantly lessened. The U.S. government's role in product certification, as in standards development, would be one of negotiating with other governments and consulting with domestic industries rather than complete control of the certification process.

Conclusion

The European Community's challenge to the U.S. standards system has stimulated responses that fall roughly into two broad categories. The first type of response might be termed the "revolutionary" approach—advocating the wholesale change of U.S. standards development and product certification systems. Typified by NIST's SCUSA proposal and by the call for a U.S. mark, such approaches would involve remaking the U.S. system by employing strong government supervision over standards development and product certification. The philosophy behind such strategies seems to be that reciprocity can only be achieved between "like" government systems.

Implementing federal supervision over the hundreds of trade associations, public interest groups, and professional societies that draft and publish U.S. standards would be a daunting task requiring the creation of an extensive bureaucracy, however. Such a move seems both inadvisable and unnecessary. Furthermore, it is far from clear that the EC standards system is one that should be emulated. At present the system is just an "ideal" in the first stages of implementation, and a recent "green paper" on the development of European standards discussed several factors that are hindering the progress of European standardization. There are the delays in the drafting of standards and a burdensome "preunification" workload for CEN and CENELEC. In addition, national standards organizations and regulatory agencies in several EC countries have been dragging their feet—ignoring commission directives and refusing to adopt CEN/CENELEC standards. Given these difficulties, the United States should be cautious about following Europe's lead.

The second, "evolutionary" response to the growth of international markets is typified by ANSI's increased participation in ISO/IEC and by U.L.'s new agreements with foreign testing organizations. This response attempts to build on the existing standards system rather than to remake it. Systematic changes, though still required, would be less dramatic, and they would be introduced gradually. Current domestic leaders in standards and product certification would continue to play major roles as U.S. industry adapts to the global marketplace.

Such an approach was recently advocated by the Advisory Committee for Trade Policy and Negotiations (ACTPN), a panel of industry representatives that assists the U.S. trade representative. ACTPN advised American companies to work through their industry trade associations and ANSI to influence international standardization and to gain access to European and East Asian markets. ACTPN has also suggested that the federal government establish programs to promote voluntary standardization and encourage greater participation by U.S. industry in the development of international standards. Finally, the panel has recommended that the U.S. trade representative persuade the European Community to support and adopt more ISO/IEC product standards.

In light of the current difficulties with the GATT talks and the failure of intergovernment negotiations to curb the "luxuriant growth of nontariff trade barriers," an evolutionary approach may be the most prudent strategy with the greatest chance for success. This is certainly the belief of most of the U.S. firms that have historically borne the costs and burdens of standardization. The multinational nature of many of the companies may give them a more global outlook than some sectors of the government. Certainly they have the most to lose if attempts to ensure free trade fail.

Carol Dawson
and Joe Lewelling
George Mason University
International Institute

Fare Is Fair in Airline Deregulation: Restrictions and the Pursuit of Allocative Efficiency

The liberal use of ticketing restrictions, eligibility requirements, and travel requirements in the airline industry is often said to be a textbook example of price discrimination. These pricing practices are often considered discriminatory because they compel business fliers to pay higher prices than pleasure fliers for seats on the same flights, and this arrangement seems to violate the "law of one price"—that is, the proposition that all consumers will pay the same price for the same product under competitive conditions. On this basis, many policy analysts and several members of Congress have come to regard highly restrictive fare structures as an unintended outcome of deregulation—an outcome beckoning reregulation or industry pricing "guidelines."

That airline travel and ticket restrictions are tantamount to price discrimination remains a similarly unchallenged supposition in most academic circles. If competition could only be intensified, it is argued, price differences between business and pleasure fliers could be markedly reduced—or perhaps eliminated altogether. In the September 1985 issue of *Regulation,* I, too, implicitly supported this view and applauded the apparent decline in "price discrimination" in air travel since deregulation in 1978.

Recent advances in microeconomic theory and new airline industry marketing developments, however, have convinced me that highly restricted airline fare structures do much more than price discriminate. Restricted fare structures serve to enhance efficiency because consumers are differentially costly to serve, even though their flight reservations may appear to be quite similar. Much so-called price discrimination in air travel is not really price discrimination at all, but cost-based pricing not unlike that practiced by insurance companies and electric utilities.

The Limits of Conventional Wisdom

The mistaken belief that heightened price competition would foster simple, unrestricted fare structures was fueled by the rapid growth of airlines such as People's Express, America West, Midway, Florida Express, and Southwest between 1982 and 1985. These carriers offered simple two-part, peak-offpeak pricing structures that ignored how far in advance consumers made reservations, how long they stayed at their destinations, and the local demand conditions. The myth that simplicity and competition were economically compatible ideals was augmented by the actions of major airlines to match the simple structures selectively.

That simplified structures were abandoned virtually nationwide by 1986 came as a surprise to many analysts. Between 1983 and 1988, the number of fares "published" per market by the average carrier rose from eleven to fourteen. Among new entrants, the number of fares per market more than doubled—rising from about five to eleven. Nevertheless, the transition was anything but easy for most market participants. Airlines with heavy investments in simplified structures understandably resisted the change; it necessitated costly new reservation systems and ticketing procedures. Complex structures also hindered an airline's efforts to advertise prices through easy-to-read timetable displays and newspaper ads and increased the airline's reliance on costly full-service travel agents. Moreover, consumers had grown to like simplicity: People's Express Airlines, for example, was roundly criticized by its passengers when it decided to introduce minimum-stay requirements to its discount fares in early 1985. Similar negative reaction faced Southwest and Continental Airlines.

These selective advantages aside, the fate of simplified fare structures apparently was sealed with the introduction of highly successful Ultrasaver fares in January 1985. These aggressively priced excursion fares, introduced by American Airlines and matched quickly by other major carriers, carried stringent cancellation fees (50 percent) and advance-purchase requirements (thirty days). Major carriers could profitably sell them, despite their higher operating costs and broader range of on-board services, for considerably less than new entrants could sell their simpler unrestricted fares.

Some observers purport that the movement away from simplified fare structures is an outcome of declining competition and has nothing to do with efforts to improve allocative efficiency. This alternative hypothesis, however, is unsatisfactory on several counts. It cannot explain why airlines are relying heavily on restricted structures, even in the midst of dramatic fare wars—such as between Chicago and Detroit, where battles for market share routinely drive one-way fares as low as $19. Nor can it explain why complex structures are growing in popularity in countries where government regulation prevails. Finally, it cannot explain why other industries that are highly competitive, such as hotel and car rental industries, similarly are moving toward restricted pricing schemes.

Fare Restrictions and Schedule Quality

Economists increasingly recognize that restricted and hierarchical fare structures bolster efficiency by helping airlines exploit the economies of density of airline services. Economies of density suggest that airlines can, up to a point, reduce unit costs by expanding the number of passengers using a particular flight segment. For example, when traffic expands so that a narrow-body Boeing 737 aircraft can be replaced with a wide-body DC-10 aircraft, costs per passenger carried are reduced significantly.

Exploiting economies of density is accomplished primarily through hub-and-spoke systems, which allow airlines to consolidate passengers on many routes into larger aircraft through centralized hubs. Hub systems allow large, efficient aircraft to be operated even from relatively small metropolitan areas. To many, this may come as a paradox, as hub flights seem *less* efficient than nonstops because of greater flight distances and apparently higher costs for fuel, meals, and baggage handling. Fare structures that employ restrictions and require consumers to make connections at hubs consequently may also enhance efficiency.

Most business passengers and some pleasure passengers, of course, strongly prefer nonstop services to more time-intensive hub services and willingly pay premium prices for them. These opportunities for higher fares affect airlines' decisionmaking by enticing them to offer nonstop services, even where such services are more costly to provide than hub services. If relatively few passengers are willing to pay premiums for nonstops, however, the differences in cost between nonstop and hub service and, consequently, the differences in price paid by consumers may be too great to assure profitable operation of such flights.

It is precisely in these situations that highly restricted fare structures serve an important, if unexpected, efficiency-enhancing role. They allow nonstop operators to consolidate passengers who value the convenience of nonstops with those who do not on the same flights, while charging premium prices only to those who value the nonstop convenience. This multipart pricing scheme allows nonstop operators to better exploit economies of density that lower unit costs and potentially provide benefits to all fliers. Business travelers, who greatly value nonstops, benefit because the price they pay is still lower than "stand alone" levels—those they would pay if pleasure passengers did not jointly use the same flights. Pleasure passengers, who may not value nonstops enough to pay a premium for the convenience nevertheless gain from the availability of this otherwise unavailable flight alternative. The efficient solution often calls for business passengers to pay higher prices than pleasure passengers simply because they value more highly the convenience of nonstops.

For quite similar reasons, airlines may scale prices according to the consumer's demand for schedule frequency. High levels of schedule frequency hinder an airline's efforts to exploit economies of density by requiring the airline to use smaller and more costly aircraft. To provide high levels of frequency while exploiting economies of density, consequently, carriers will consolidate passengers of varying demand for frequency on the same flights and use restrictions to allocate the costs of improved schedule frequency to those who value these improvements most.

Table 1: Passenger Preferences for Schedule Quality

Type of Passenger	Importance of Departure Time
Business	7.9
Mixed Purpose	6.4
Pleasure	4.2
Meeting Minimum Stay	5.2
Not Meeting Minimum Stay	8.0
Meeting Advance Purchase	5.9
Not Meeting Advance Purchase	6.6

Passenger on-board surveys support the view that passengers have vastly different preferences for schedule quality and that restrictions can help airlines assess these preferences. Table 1 shows various passengers' ratings of the importance of schedule quality; ratings are on a scale of one to 10, with 10 being the highest. Not surprisingly, business travelers are found to place a much higher value on departure time convenience that pleasure fliers (7.9 versus 4.2). Moreover, to ascertain these varying preferences for schedule quality, the survey shows that airlines can reliably use minimum-stay and advance-purchase requirements. In short, the survey shows that business and pleasure passengers are asking airlines to provide fundamentally different products, but because efficiency is served when airlines serve both business and pleasure travelers jointly, airlines will use fare restrictions to extract different amounts from these groups. These pricing arrangements would prevail even in an environment of perfect competition.

Fare Restrictions and Efficient Peak-Load Pricing

Another reason airlines rely so heavily on fare restrictions is to establish efficient price differentials between peak and offpeak periods. Just as electric utilities do, airlines must allocate their capacity costs to those consumers who travel when that capacity is needed most. In the airline business such peak-load pricing is especially important because operators cannot cost-effectively adjust their output over short time intervals. For example, airlines that attempt to provide substantial service during lucrative travel periods—such as weekdays between 4:00 P.M. and 6:00 P.M., holidays, and summer days—are invariably forced to accept vast levels of unused capacity during softer travel periods.

Most firms, such as hotel operators, face relatively simple peak-load pricing problems because they serve only one distinct market. Airlines, however, jointly serve many geographically distinct markets as travelers on many overlapping routes use the same seat inventory. This renders efficient peak-load pricing exceptionally complex. Each combination of flights between all origins and destinations has a potentially unique optimal or economically efficient price, and a staggering number of price levels may be needed, even for a relatively small airline. For example, efficiency may dictate that a carrier operating a single daily flight between a hub and 50 spoke cities offers as many as 1,825,000 fares annually (50 origins × 50 destinations × 1 flight daily × 2 directions × 365 days/year). Because such efficient peak-load pricing would be confusing for consumers and undoubtedly would drive away business, airlines must settle for simpler fare structures that are approximately correct, although inevitably inappropriate in some situations.

Where a consumer's ability to meet restrictions is correlated with his likelihood of traveling during the offpeak period, restrictions are a cost-effective means of simulating optimal peak-load prices. Restrictions that require passengers to travel on Saturdays, nights, on specific flights, and on holidays, for example, may help shift price-sensitive consumers to offpeak flights. On-board survey data support this premise. They show that passengers who meet a wide variety of restrictions select flights with lower average load factors than passengers who meet no restrictions. (Load factors are measures of the percent of seats filled on a flight.) For example, Table 2 shows that passengers meeting *no* restrictions select flights with an average load factor of 67 percent. Those who accept a Saturday-only travel restriction, however, use flights with an average load factor of only 50 percent; those meeting minimum-stay requirements select flights with load factors of 61 percent; finally, those meeting midweek travel restrictions, night restrictions, and holiday travel restrictions each select flights whose load factors are 56 percent or less.

Airline managers recognize that restrictions will be more effective at predicting the peak-load costs for some types of passengers than others. For example, they know that pleasure travelers who meet minimum-stay requirements tend to travel during the offpeak period when costs are low, while business travelers who meet this same restriction tend to travel during the peak period when costs are high. Thus, it would be inefficient to offer offpeak prices to all passengers who meet this restriction.

Through the bundling of restrictions, airlines can minimize this kind of "adverse selection." For example, they can simultaneously use cancellation fees as well as advance-purchase, offpeak travel, and minimum-stay requirements to limit sales to a specific target population. The popular midweek Max Saver—a fare consisting of all four of these restrictions—is a good example of this. This Max Saver "bundle" attracts passengers who fly at offpeak times and select flights with load factors of only 53 percent—or 14 percentage points below those selected by passengers who meet no restrictions. High-cost business fliers account for only 15 percent of its use.

Capacity control systems are used in conjunction with ticketing and travel restrictions to facilitate peak-load pricing by limiting the number of discount seats available on certain flights. As airlines become more adept at using capacity controls, the value of many restrictions have declined, such as the once-popular night discount. Capacity controls cannot, however, completely replace conventional fare restrictions anytime soon: they drive up search costs for consumers and require large amounts of managerial attention. Restrictions remain a much simpler managerial tool.

Table 2: Restrictions and Peak-Load Pricing

Restriction Satisfied	Expected Load Factor of Flights Selected (%)*
None	67
Advance Purchase	69
Cancellation Fees	66
Minimum Stay	61
Midweek Only	56
Saturday Only	50
Night Only	49
Holiday Travel	41

*Based on a sample of fifteen flights operated by a major air carrier.

Fare Restrictions and Uncertain Demand

A third major role of restrictions in enhancing efficiency is to help airlines manage unpredictable fluctuations in the demand for their services. This is important because airlines must set prices and flight schedules in advance without precise knowledge of demand conditions. Much as insurance companies examine risk factors such as consumer age and location to limit liability, airlines use ticketing and travel restrictions to attract a mix of passenger clientele that reduces the risk of seats going unsold.

The role of restrictions under conditions of uncertain demand is rather complex, so a brief review of elementary price theory is useful. When demand is uncertain and prices must be set in advance, prices will inevitably be set either higher or lower than the optimal level; inefficiency in this situation is unavoidable. If airlines set prices excessively high, planes will depart with empty seats, and efficiency suffers because seat inventory is wasted. If prices are set excessively low, the quantity of seats that consumers demand will exceed the supply available and a shortage will occur. Seat allocations during shortages will be inefficient because seats will not necessarily be allocated to the highest-value users (for example, they may be allocated on a first-come, first-served basis). Shortages also compel consumers to expend resources in socially unproductive ways in competing for scarce seats, such as making speculative reservations or booking flights earlier than they would otherwise prefer.

University of Chicago economist Dennis Carlton has developed a framework for understanding the implications of uncertain demand on industry pricing behavior. Carlton's framework, if applied to the airline business, suggests that when consumers decide to remain loyal to particular airlines (as they will tend to do when search is costly), they must take into consideration the likelihood their preferred airline will have seats available at the time they wish to travel. Availability, therefore, is an important product characteristic that consumers—especially those who must fly frequently—will keep in mind when developing airline preferences. Consumers who find comparison shopping difficult will develop preferences for airlines that offer high levels of seat availability but relatively high prices, such as American. (American maintains one of the industry's lowest average load factors.) Those who do not mind comparison shopping will develop preferences for airlines with low fares but low levels of seat availability, such as Southwest.

Just as consumers must choose carriers wisely, however, airlines also must select their passenger clientele wisely. Airlines will naturally prefer a loyal consumer base with stable and predictable demand patterns, because these characteristics render availability less costly to provide. Consequently, airlines will develop pricing schemes that effectively charge consumers for the degree of uncertainty they impose on demand forecasts. For example, if the expected fluctuations in demand for one passenger group exceed that of another, airlines may find the former group more costly to serve and may charge them higher prices. Airlines also may offer discounts to groups who help alleviate uncertainty by agreeing to volume quotas, such as corporations, governmental agencies, and tour operators.

The differential riskiness of serving various passenger groups is demonstrated in on-board airline industry surveys. A sample of 7,500 passengers surveyed on 40 flights shows that pleasure traffic fluctuates between flights less than business traffic. Thus, pleasure fliers may be somewhat less risky for airlines to serve. Interestingly, the results also show that restrictions of the Max Saver are fairly reliable tools for sorting according to demand uncertainty. Max Saver traffic fluctuates only slightly more than pleasure passengers as a whole, and less than other passengers.

Airlines similarly may manage uncertainty—and bolster allocative efficiency—by attracting a diverse mix of passengers. Data from the passenger survey reveals that attracting a mixture of business and pleasure passengers can significantly reduce overall demand fluctuation. Thus, efforts at hedging risk may explain why airlines often offer some highly discounted seats for pleasure fliers even on prime business flights. Similarly, it may explain why airlines are so eager to serve diverse markets, such as senior citizens and students, who exhibit travel patterns vastly different from the average consumer. That a diversified portfolio of passengers may help reduce the risk of wasting seat inventory might also explain why airlines specializing in either business traffic (Metrolink, McClain, and First Air) or pleasure traffic (People's Express and Braniff) have failed almost without exception.

Restrictions also can alleviate uncertainty regarding passenger "no-shows." Cancellation fees, for example, effectively discourage passengers from making unneeded reservations. Airlines may also use restrictions to help streamline last-minute bargaining at the airport gate, where they must compensate passengers who accept later flights in the event of a seat shortage. Fare restrictions can help ensure that passengers who are willing to accept later flights—such as discretionary passengers—are present when errors in no-show forecasts occur. Having made inflexible commitments at their destinations, business passengers can accept later flights only at high cost.

Fare Restrictions and Optimal Price Changes

A final role of restrictions in enhancing efficiency is to provide airlines with accurate information on the need for price changes. In the airline business such information is critical because pricing decisions are not so simple as conventional microeconomic models sometimes suggest. Unlike other producers, airlines cannot simply auction off seats to the highest bidder, because potential buyers of air services are separated by time and locations. Moreover, as previously described, supplying air services is risky because capacity is largely fixed in the short run and demand fluctuates unpredictably. As a result, even in those limited situations when airlines have sufficient information to justify price changes, these changes are characterized by trial and error.

During early phases of the booking cycle, such trial and error is a most precarious exercise, as airlines face great uncertainty in establishing the price at which supply meets demand. Airlines must forecast the demand for seats based upon a very small, and often nonrepresentative, sample of bookings. Restrictions can help alleviate such uncertainty by revealing information about the types of consumers that have made bookings. For example, cancellation fees may reveal whether reservations are made for business or pleasure—information instrumental in forecasting demand.

Restrictions also facilitate allocative efficiency in more subtle ways. They can encourage passengers whose bookings are useful in projecting total demand to book before those passengers whose bookings have a largely random character. In that way airlines can acquire needed demand information and can set efficient prices while plenty of seats are left to be sold. Airlines also may use restrictions to help organize their vast data bases of booking information. For example, they may establish ticketing rules that require pleasure travelers to book fourteen days in advance in all markets—a restriction costing pleasure fliers little (they plan ahead anyway) but providing airlines with a systematic cut-off point to assess the need for pricing changes during the booking cycle's final phase. Similarly, because analyzing booking information takes time, advance-purchase requirements that spread out the reservations process may facilitate price changes.

Conclusions

Unorthodox and highly idiosyncratic pricing strategies in the airline industry, built upon ticketing and travel restrictions, undoubtedly will remain a controversial aspect of airline deregulation throughout the 1990s. As we have seen, however, these complex pricing arrangements can enhance efficiency in a wide variety of subtle ways. Yet it remains premature to speculate about which of these efficiency-enhancing roles are most or least important, as economists are only beginning to study them in earnest.

These conclusions are not intended to suggest that efficiency is the only motive behind fare restrictions. Research suggests that the market power held by individual airlines may indeed be a potentially important determinant of pricing strategy. Such evidence does not, however, contradict the more general proposition asserted here: fare restrictions are essential to allocative efficiency in both competitive and noncompetitive markets.

For consumers, it may come as no surprise that ticketing requirements, eligibility rules, and travel restrictions are vital components of competitive airline markets. But acclimating policymakers and policy analysts to this reality remains a more difficult proposition. New regulations to restore rationality and fairness to industry pricing, or guidelines to limit the price differentials between business and pleasure fliers, are being proposed inside the Beltway with disturbing regularity. A refresher course in microeconomic theory is clearly in order. Highly restricted fare structures are fully consistent with competitive and efficient markets.

Joseph P. Schwieterman
DePaul University
Graduate School of Business

Workplace Fairness: Reinstatement Rights Cannot Guarantee Jobs

The Workplace Fairness Act (H.R.5) would make it illegal for an employer to hire permanent replacements in a strike. This bill passed the House in July, and the companion bill, S.55, is now before the Senate. At first blush, this bill would seem to give employers a stronger incentive to bargain in good faith to reach a settlement without a strike, and if struck, to end the strike earlier. Although strikers could not be assured that all prestrike positions would still be there, they would no longer have to fear losing jobs to replacement workers. The sponsors claim that the delicate balance in the collective bargaining process has been upset. This legislation is allegedly needed to reverse a 1938 Supreme Court decision. A reassignment of job rights would enable organized labor to bargain on an equal footing. It would, however, limit an employer's ability to maintain its position in an increasingly competitive world market. The net outcome could be that unionized labor would not lose jobs to replacement workers but to those in competing foreign and domestic nonunion firms.

Rights to Strike and to Hire: The *Mackay Radio* Doctrine

Section 7 of the National Labor Relations Act provides, "Employees have the right to engage in other concerted activities for the purpose of collective bargaining or other mutual aid or protection." The law apparently supports a broad legal right to strike, but this right is qualified. Violent or wildcat strikes and other unfair practices on the part of a union fall outside the law. On the other hand, an employer is legally entitled to continue operations by using supervisory or temporary employees, stockpiling goods before a strike, locking out employees when timing is critical, and, most important, hiring permanent replacements, a right established in a Supreme Court ruling in *NLRB* v. *Mackay Radio and Telegraph Co.* (1938). The Court ruled that a company was not obliged "to discharge those hired to fill the places of strikers who upon the election of the latter to resume their employment to create places for them." A worker who participates in a legitimate *economic* strike (rather than one in response to an unfair labor practice by the employer) ordinarily expects to be reinstated when the strike is settled. These expectations have, for the most part, been realized, but under the *Mackay* doctrine, the employer is not legally bound to do so. Further, employers cannot offer extraordinary inducements to strike replacements (*NLRB* v. *Erie Resistor Co.* (1963)), and they must give preference to former strikers in filling poststrike vacancies (*NLRB* v. *Fleetwood Trailer Co.* (1967)). In two recent decisions the Court ruled that newly hired replacements and union members who crossed picket lines did not have to give up their jobs when strikers returned to work (*Belknap* v. *Hale* (1983) and *TWA* v. *IFFA* (1989).

Legislating Reinstatement Rights

Since 1938, an employer has had a legal right to hire a strike replacement, a right that has not been challenged for fifty years. Prompted by a strike at International Paper Co. in Jay, Maine, in 1988, then-Rep. Joseph E. Brennan stated: "If workers can be fired—and I haven't been able to figure out the difference between permanent replacement and fired—as soon as they go out on strike, how can any worker anywhere ever fully exercise the right to strike or withhold their services? When management knows that workers will not strike when workers are intimidated by the threat of losing their jobs permanently, where is management's incentive to really negotiate with workers?" These threats were present at every strike that took place from 1938 to 1987, but they were rarely exercised. The Honorable Mr. Brennan and many of his colleagues evidently felt that things have been different since 1988. They accordingly passed the Workplace Fairness Act, which would reverse the *Mackay Radio* decision by making it illegal to hire a permanent replacement.

Brennan and his colleagues claimed that more and more employers were turning to permanent replacements to continue operating during a strike. A Government Accounting Office study reported, however, that permanent replacements were *not* hired in 83 percent of the strikes taking place in *both* 1985 and 1989. Only 4 percent of strike vacancies were filled by new hires in 1985 and a slightly smaller percentage in 1989—hardly a strong indication of "increasing use of permanent replacements" at least over the period from 1985 to 1989. A third of managers reported that they would hire permanent replacements if struck. (We regretfully do not have data for the early 1970s to compare with these data for the late 1980s. Thus, it is impossible to establish a trend.)

The real reason for H.R.5 lies, I suspect, in the declining importance of private-sector unions, whose membership coverage has declined from 34.1 percent of private-sector employment in the late 1950s to 13.4 percent in 1988. According to economists Michael L. Wachter and William H. Carter, the wage premium enjoyed by private industrial unions climbed from 22.8 percent in 1973 to 30.4 percent in 1985. The unions in the service sector did not fare so well; the union wage premium fell from 13.2 percent in 1977 to 9.8 percent in 1988. Private-sector unions are less militant than they used to be. The Wachter-Carter index of strike activity fell

"Another setback—the mediators just went out on strike."

from 97.1 in the late 1950s to 11.5 in 1988. These developments, however, cannot be explained by the *Mackay* doctrine.

Frequency and Duration of Strikes

Consider a situation where employers refuse to bargain because in the event of a strike, they can continue "business as usual" by hiring permanent replacements. Additionally, any strike will be more violent and protracted. This scenario presumes that most employers will make use of the *Mackay* doctrine. Passage of the Workplace Fairness Act would raise the strike costs to employers and would possibly lead to fewer disputes and shorter work stoppages. With rights to reinstatement strengthened, however, employees may perceive lower contingent strike costs, which would prompt them to demand higher wages. H.R.5 thus lowers strike costs to employees and raises them to employers. As a consequence, one cannot predict in advance how the Workplace Fairness Act would affect the frequency and duration of strikes.

According to Professor Cynthia Gramm, strikes were longer when employers hired permanent replacements. Her samples were quite small, however—35 strikes in the United States and 24 in New York. In Canada the Province of Quebec enacted legislation in 1977 to outlaw the use of replacements in strikes. Two careful studies by economist Morley Gunderson and his colleagues that were based on a considerably larger sample of 7,546 strikes revealed that prohibiting replacements led to a higher incidence of strikes as well as to longer strike durations. I am persuaded by Gunderson's findings that enactment of H.R.5/S.55 will result in more and longer work stoppages than in the past.

Balancing Bargaining Power through Rights to Jobs

Unions in the private sector are in deep trouble. The win-loss ratio in union certification elections has been falling. The union share of total private-sector employment dropped from 34.1 percent in the 1955 to 1959 period to 13.4 percent in 1988. The surviving industrial unions were, as noted earlier, still able to raise the relative union wage premium, however. The success in raising relative union wages can partly be explained by the change in the returns to skill and schooling. The spread between the wages of blue-collar high school graduates and those of white-collar college graduates increased in the 1980s in response to technological advances and pressures from increased international trade competition. The ratio of union to nonunion wages rose through 1985 because real nonunion wages for comparable male blue-collar high school graduates fell in relation to wages of more highly skilled and educated workers. The surviving unions were able to raise their relative wages without resorting to strikes. The index of strike activity (1967 = 100) was only 16.7 from 1983 to 1988 and 11.5 in 1988. Unions are allegedly placing less reliance on the strike weapon because of the fear of being permanently replaced.

The Workplace Fairness Act would remedy this situation by a reassignment of job rights. There is no assurance that the supply of poststrike jobs at the firm would be the same as the number of prestrike positions. The poststrike supply would likely be smaller because (a) existing competitors will expand their market shares, (b) new competitors may enter during the strike, (c) the strike settlement may put the employer at a cost disadvantage so that the firm demands fewer workers, or (d) the employer may have filled some positions with permanent replacements. H.R.5 cannot guarantee a job, but it is supposed to raise the chances that a position will be available if and when the strike is settled. At least two arguments are made to justify a striker's *right* to be protected from competition by nonunion replacements or union picket line crossovers. First, a striker through his investment in training and service to the firm has a property right to the position. I shall return to this point below. Second, it is only *fair* that those who bear the strike costs ought to reap the rewards of having first dibs. In a recent article in the *Labor Lawyer*, David Westfall argues, however, that if an employer elects to fill a vacancy created by an economic strike, all qualified applicants have a right to compete for it. Further, under prevailing labor law, union members have the *right to refrain* and need not participate in a collective action against the employer. The rights to compete and to refrain would be erased if H.R.5 became the law of the land.

The NLRA sanctions the right of a union to negotiate a collective bargaining agreement fixing the wages, hours, and terms of employment. The employer retains the right to set the level of employment, including the legal right to hire workers during a legal, economic strike. Most employers have not exercised the right to hire permanent employees in the midst of a strike. Even in the late 1980s, no permanent replacements were hired in five of every six strikes. This reluctance to take advantage of the *Mackay* doctrine can be traced to the fact that strikers who are screened, recruited, and trained are usually more productive than a team of raw new replacements. An employer's willingness to participate in a lengthy protracted strike depends on the size of this productivity gap, the union's demands, and the chances of reaching a mutually agreeable contract. The supporters of H.R.5 embrace the tacit assumption that a union's contract demands are never excessive. Walter Kamiat, the general counsel for the AFL-CIO, put it as follows: "Ultimately . . . employees cannot harm their employer's firm without harming themselves. This fact provides a limitation on the bargaining demands of the union as well as on the union's willingness to strike. . . . It is simply not in the employees' interests to burden the employer with costs that will render the firm unable to compete and thus unable to provide secure employment." Strikes arise because the parties disagree about what a firm can afford to pay, what an employee ought to receive for performing certain tasks, what constitutes a reasonable work load, what provisions are made to assure job security, or simply, what is a fair division of the spoils of a regulated monopoly. When these issues cannot be resolved, the impasse results in a work stoppage that is costly to both parties.

Enactment of H.R.5 would almost surely increase the frequency and duration of strikes. Proponents believe that outlawing the use of permanent replacements would redound to the benefit of union members. This belief may, however, be illusory. The costs of more and longer work stoppages have to be covered by higher prices that put the employer at a competitive disadvantage to domestic and foreign nonunionized firms. H.R.5 would raise the strike costs to employers, possibly to the point where the employer may never settle. It may simply file for bankruptcy or sell its assets to a competitor. In this event *all* of the prestrike positions will be lost, not just those jobs filled by permanent strike replacements. The Workplace Fairness Act can prevent an employer from hiring replacement workers, but it cannot guarantee that those *jobs* will still be there to provide employment for returning strikers.

Walter Y. Oi
University of Rochester